

2004

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

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Version 3/15/04

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

1. STEELHEAD

1.1. Broodyear 2003 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 runt. 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, 2004 there were a total of 1.8 million steelhead on station, 161 mm average total length, 11 fpp. 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 12, 2004. Onsite release is expected to occur the week of April 19. DNFH expects to release a total of 1.75M steelhead at an average total length of 200 mm. *Thomas Trock*

1.1.1.3. Fish health status - July started the IHNV/Coldwater Disease epizootic. Low water in the river combined with larger numbers of spawning adult spring Chinook with high levels of IHNV contributed significantly to the problem. When it was used, treatment with the antibiotic Florfenicol significantly reduced the coldwater bacteria, allowing the fish's immune system to take care of the IHNV. Numerous happy, well fed sea gulls also contributed to the spread of the pathogens. ICH has caused the usual problems during this fall, especially in SYS II. This system was taken off of reuse for a period in December. All systems continue with a weekly system wide treatment with 25–50 ppm formalin continuous treatment. A 60 fish sample will be tested for viral, bacterial, and parasitic pathogens prior to release. *Kathy Clemens*

1.1.1.4. M&E - CWTs for system contribution and early return groups, and 1,500 PIT tags for Fish Passage Center emigration timing. Prior to release 500 marked fish from each mark group (tag code) are checked for tag retention. 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 800 thousand. BY-04 smolt release has been set at a range from 960k to 1.16 million including*

360k for tribal supplementation. Adult return goal for the program is 14,000 steelhead.

- 1.1.2.1.Production status / projected release - The estimated number of fish to be released in spring 2004 is 1,037,100 (676,500 clipped and 360,600 un-clipped) at a range of 4.5 to 7.8 fish per pound, for approximately 199,286 pounds of fish (8.4 to 7.0 inches). (**Table 1**) *Jerry McGehee*
 - 1.1.2.2.Fish health status - For Egg Disease Certification, all females are sampled for IHN virus. Eggs from any females that test positive are destroyed, and only eggs that test negative for IHN 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. Preliberations samples performed on 20 fish sample prior to release. *Flavobacterium* isolated in BY'03, treatment with OTC not warranted. *Doug Munson*
 - 1.1.2.3.M&E - 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** - *The 550,000 un-clipped steelhead released into the SF Clearwater are part of 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 theory 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 – 360,600 from Clearwater Hatchery will be released into the South Fork tributaries and Lolo Creek. The planned Hagerman NFH release of 200,000 unclipped steelhead into the SF Clearwater River will not occur in 2004 because of the potential of introducing New Zealand mudsnails. However, this production will be made up from Dworshak reared steelhead, the 100,000 non-adipose clipped steelhead slated for direct released from Dworshak plus an additional 100,000 from Dworshak to replace the Hagerman release. (**Table 1**) *Howard Burge*
 - 1.1.3.3.M&E - Beginning with 2004 releases FWS-IFRO will be uniquely marking groups with PIT, CWT, and elastomer tags to evaluate acclimated vs direct release affects using Red R as study stream. Releases will include 50k acclimated and 50k direct for comparison and an upriver group and pooled (25k+25k=50k) 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 2004 Steelhead

1.2.1. Dworshak

- 1.2.1.1. Projected adult return - Based on the 1,890 expanded I-salt returns the predicted total steelhead return to the Dworshak NFH rack in 2003-2004 would be one of the highest in the hatchery's history at 20,049. However, in-season hatchery "B" steelhead estimates at both Bonneville and Lower Granite dams have been revised downward and using these revised numbers we would predict 7,000-8,000. Jon Hansen (IDFG-Salmon) estimated 6,017 II-salts to Dworshak NFH rack, just based on actual rack returns. (**Table 2**) *Ralph Roseberg*
- 1.2.1.2. Ladder operation - The ladder was open September 26-November 6, 2003, for the collection of 523 early-return adult steelhead. It was reopened two-three days/week until November 28 to collect coho. Fall Chinook trapped were given to NPTH with NMFS approval. Based on the predictions of returns FWS is planning to operate the ladder on an intermittent basis to keep from over loading the holding ponds with fish excess to our brood stock needs. Intermittent ladder operation also keeps steelhead in the river where they are available for sport and tribal harvest. The ladder will be reopened February 20, 2004 for the collection of mid and late returning steelhead. Surplus adults will be outplanted by the Nez Perce Tribe late in the season. *Thomas Trock*
- 1.2.1.3. Adult fish health - 61 males were injected with LHRH prior to spawning, using the injectable form. The implant is no longer approved by FDA. One injection and the lower dosage did not provide as desirable results as did the implant. Fish are treated three times per week with formalin for fungus, under a veterinary prescription. *Kathy Clemens*
- 1.2.1.4. Adult outplanting/marking - Since ladder opening is not planned until February 20 any excess steelhead collected will be put in a separate holding pond until the NPT can 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 2004 we will need to expand collection numbers for CWT recoveries. Like 2003 we will use the (16 year) 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 Bill Miller will coordinate with Bill Horton. *Thomas Trock*
- 1.2.1.6. Adult M&E - III-ocean steelhead - System contribution and Clear Creek CWT's are being recovered. II ocean steelhead - Blank wire, early return, system contribution, are being recovered. I-ocean steelhead - Early return progeny and system contribution wire being recovered. FWS-IFRO is radio tagging un-clipped adult steelhead 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. *Ralph Roseberg / Howard Burge*

1.2.1.7. Spawning/egg take plans, mating protocol - Current plans are to take 2.7 million eyed eggs for Dworshak, ~1.6 million green for Clearwater and ~1.4 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 600 steelhead females for its program, 150 fall-return adults and 450 from winter and spring returns. After eye-up and enumeration, approximately 2.7 million eyed eggs will go into the Dworshak program. Dworshak will also provide incubation space for up to 1.6 million green eggs for Clearwater Fish Hatchery. *Thomas Trock*

Nursery Rearing: Dworshak will early-rear 2.6 million steelhead in its nursery until the fish reach approximately 80 fpp during the spring and summer of 2004.

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, 2004. 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*

1.2.1.9. Juvenile Fish health - Upon ponding, fish 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 BY04 steelhead at Dworshak NFH are found in **Table 4**. *Ralph Roseberg*

1.2.1.11. Juvenile M&E FWS will be CWTing 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. *Craig Eaton*

1.2.2.2. Adult handling/outplanting/markings - All natural (unmarked) fish will be passed upstream of the weir. Adult hatchery steelhead 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 opercal v-notch. Any Tribal requests for steelhead will be coordinated through Nancy McAllaster, NPT (208-843-7320 ext.2445). Other species (bull trout, suckers, etc.) trapped will be passed upstream above the weir. *Craig Eaton / 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. CWTed steelhead will be sacrificed for tag recovery. No steelhead evaluation planned at Kooskia at this time, FWS is still awaiting final results from adult genetic samples collected in previous years. *Howard Burge*

1.2.3. Clearwater

1.2.3.1. Clearwater Hatchery - A range of 1,317,800 to 1,567,800 green eggs is needed for Clearwater Hatchery. All spawning will occur at DNFH. Our expected

first spawn date for Clearwater Hatchery egg collection is March 2. 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 IHN 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 - 1,354,000 green eggs are taken for the 700k target release for Magic Valley Hatchery. Our expected first spawn date for Magic Valley is March 16. Eggs for Magic Valley 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. Approximately 1.354 million eggs will be received on three different spawning days and held until the fish pathology lab determines virus results. At that time, positive IHN 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 (IHN) virus; 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 - For BY04 steelhead from Magic Valley and Clearwater hatcheries 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. In early Fall, 2004, FWS – IFRO will CWT and Elastomer tag 150,000 steelhead for release into lower and upper South Fork Clearwater River tributaries for an evaluation study. *Bill Horton / Howard Burge*

1.2.4. South Fork Un-clipped Program

1.2.4.1. Planned rearing – Since steelhead for this program will no longer be raised at Hagerman NFH because of the New Zealand mudsnail problem, the 200k of production slated for American River and Newsome Creek will be split

between Dworshak and Clearwater hatcheries, respectively. With the 100k at Dworshak replacing the 100k of un-clipped direct release steelhead and the 100k at Clearwater replacing part of their production still to be determined, possibly the Clear Creek release. *Howard Burge*

- 1.2.4.2. Planned juvenile marking & tagging - In early Fall, 2004, FWS – IFRO will CWT and elastomer tag 150,000 steelhead for release into lower and upper South Fork Clearwater River tributaries for an evaluation study. *Howard Burge / Jody Brostrom*

2. SPRING CHINOOK SALMON

2.1. Broodyear 2002 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, 2004, there were 1,080,534 BY02 spring Chinook averaging 37 fpp and 114 mm (4.5 inches) total length on station. In March 2004, projected release will be approximately 1,075,000 spring Chinook. 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 – 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 - BY 02 was diagnosed with IHNV early in the summer of '03, resulting in increased mortality. Low water in the river combined with larger numbers of spawning adult Chinook with high levels of IHNV contributed significantly to the problem. 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 CWTed for system contribution monitoring. 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 part in the CSS. *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 653,063 Kooskia stock BY02 spring Chinook fry of which 50,000 are for the ISS project. The Burrows ponds will be off the reuse bio-filter system and put on Clear Creek water in October. Chinook will be split from Burrow's ponds into raceways the middle of October. *Craig Eaton* (653,063 Chinook weighing 11,397 lbs, 3.88 inches or 99 mm long, at 57 ffp).

- 2.1.2.2.Projected release - KNFH will release the approximately 600,000 spring Chinook at 20-25 fpp on or after March 24, 2004. 50,000 ISS fish will be released ~9 miles above the Kooskia weir on the same day. (**Table 5**) *Craig Eaton*
- 2.1.2.3.Fish health – Treated for low levels of Ichtyobodo (Costia) in February 2003. Beginning in May, multiple treatments of formalin were administered for Ichthyophthirius while fish were on reuse. Treatments were terminated when the fish went on creek water at the end of October. 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 105k Kooskia stock was CWTEd for contribution monitoring and the ISS project, another 1,500 were tagged for the ISS project. 2004 will be the last year for ISS releases, the last fish returning from this release will be 2007, and there is a proposal to continue monitoring 2 generations after 2007. *Howard Burge*

2.1.3. Clearwater

- 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 7 and 15 or daily at Crooked River if intake ice-up problems are anticipated. Papoose Creek is the only direct release site in the spring of 2004. All production Chinook are Ad clipped. Planned releases of BY02 spring Chinook smolts are for 1,539,100 fish at an expected 16-18 fish per pound. A BY03 presmolt transport of 335,000 is planned for Powell Pond in April with release in September @ 20 fpp. (**Table 5**) *Jerry McGehee*
- 2.1.3.2.Fish health – Quarterly inspections performed and pre-liberation inspection given prior to release at Satellites (20 fish samples). There was an *Ichthyophthirius multifiliis* epizootic at Crooked River. Two prophylactic Erythromycin medicated feed treatments were given throughout the rearing cycle although some raceways received only one treatment as part of University of Idaho and IDFG Research. *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 2003 Spring Chinook

2.2.1. Dworshak

- 2.2.1.1.Production status - All of Kooskia stock and 607k of Dworshak stock BY03 spring Chinook eggs were shipped to Kooskia NFH during October and

November, 2003. Approximately 603k of Dworshak stock remained at Dworshak for incubation over the winter. On January 1, 2004, there were approximately 595,000 sac-fry incubating at Dworshak. In the spring of 2004, Dworshak stock Chinook fry from Kooskia along with those incubated at Dworshak will be ponded directly into raceways at Dworshak. *Thomas Trock*

2.2.1.2. Fish health status - BY03 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 CWTed 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 BY03 spring Chinook eggs were taken from a total of 257 females spawned with a total of 199 males. This produced a total of 913,210 green eggs. 856,700 Kooskia stock, and 607,373 Dworshak stock were transferred KNFH beginning of November. Eggs were incubated on well water, chilled to approximately 40°F, and then switched to Clear Creek water late November, at temperatures of approximately 40°F. Normally eggs for Dworshak and Kooskia all hatch out by mid January. Dworshak stock un-fed fry will be transferred back to Dworshak around the first of May for final rearing. Kooskia fry will be tanked and started on feed. Approximately 600k Kooskia stock will be reared to 20fpp. These fish will be released April 2005.

Craig Eaton

2.2.2.2. Fish health status - BY03 has experienced no problems to date. 60 fish will be sampled prior to release. *Marilyn Blair*

2.2.2.3. M&E – There will be no ISS releases with BY03 Chinook; however, ISS will continue monitoring adult returns. Approximately 100k fish will be CWTed 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 2003 is 1.42 million smolts, 335k pre-smolts, and 0 parr. NPTH requested green eggs for release of 400k parr and 75k pre-smolts. This request required 181 females for spawning, but only 139 were spawned. There were no clip/CWT adults identified for NPTH broodstock. 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. *Jerry McGehee*

2.2.3.2. Estimated numbers/planned marking & tagging - All production Chinook are Ad clipped. Planned releases of BY03 Chinook are for 1,420,000 smolts and 335,000 pre-smolts at an expected 20 fish per pound. (**Table 6**) *Tom Rogers*

2.2.3.3.Fish health status – 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 are performed by the Eagle Fish Health Lab quarterly and pre-liberation inspections are performed prior to release at Satellites (20 fish samples). Two prophylactic Erythromycin medicated feed treatments are given during the rearing cycle, but some raceways received only 1 treatment as part of University of Idaho and IDFG Research. *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 500 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 – As of January 31 a total of 424,605 spring Chinook fry were on hand at NPTH. Fish are progeny of adults trapped at Newsome Creek (14,522 fry), Lolo Creek (22,846 fry), Powell/South Fork (330,984 fry), and Dworshak (56,253 fry). Targeted 2004 release: (**Table 5**) *Butch Harty*

- 199,500 parr (direct stream) into Meadow Creek, Selway in July
- 150,000 presmolts (acclimated) into Yoosa/Camp/Lolo Creek in September
- 75,000 presmolts (acclimated) into Newsome Creek in September

2.2.4.2.Production at other facilities – Currently there are no fish being produced for NPTH at other facilities, however IDFG did collect BY03 adults for NPTH production. During August and September, NPTH staff assisted with the spawning of adult spring Chinook at IDFG's Powell facility and Clearwater FH. Females identified as returns from NPT releases (CWT/no ad-clip) were enumerated and spawned separately. A total of 82 females (Powell) and 46 females (South Fork) were spawned throughout the season. Green eggs were water hardened in iodophore for one hour and incubated at Clearwater FH. Eggs from 3 females (fish # 2007, 3002 and 4018) were destroyed due high ELISA values. Percent eye-up: 92.70 (Powell) and 91.34% (South Fork). Beginning on September 18th and continuing through October 26th, eyed eggs were shocked and transported to NPTH. The eggs were disinfected with iodophore, enumerated and placed into trays for hatching. *Becky Ashe*

2.2.4.3.Estimated numbers/planned marking & tagging – Fish will be marked at approximately 180 fish per pound (fpp), with a CWT the first week of March

and transferred to the NATURES S-channels or transferred to acclimation facilities at Newsome Creek and Yoosa/Camp/Lolo for final rearing. *Becky Ashe*

2.2.4.4. Acclimation facility operations/release_–

- Yoosa/Camp – Transfer of the fish will occur when conditions permit (end of May to the first week of June). Facility will be set-up and operational at least 2 days prior to transfer of fish. Target release is October 15 at 34 fpp
- Newsome Creek – Fish will be held at NPTH until September when water temperatures cool in Newsome Creek. Target release is November 12 at 29 fpp.
- Meadow Creek – Direct stream release is scheduled into Upper and Lower Meadow Creek at 65 fpp the first week of July, 2004. (**Table 6**) *Becky Ashe*

2.2.4.5. Fish health status – *A. salmonicida* was isolated from adult females from both Newsome Creek and Yoosa Camp. Virals still pending. Eggs from 3 females were culled because they had a high ELISA value. *Kathy Clemens*

2.2.4.6. 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- Pit tagged representative samples of 2,500 for upper Meadow Creek release, 2,500 for lower Meadow Creek release, 3,000 for Newsome Creek release, and 2,000 for Lolo Creek release. Estimate smolt survival rates and migration timing.
- Downstream migration – Operate rotary screw traps within Meadow Creek, Lolo Creek and Newsome Creek to monitor movement, timing, condition factors, and population estimates. *Sherman Sprauge*

2.2.4.7. Communication - NPTH produces monthly production and pathology reports, and Fish Research produces weekly weir reports.

2.3. Broodyear 2004 Spring Chinook

2.3.1. Dworshak

2.3.1.1. Projected adult returns - Based on draft tribal and sport harvest data, the expected return for BY04 adult spring Chinook to Dworshak rack is approximately 12,064 fish. Our forecast for the 2004 spring Chinook salmon returns to Dworshak NFH is given in **Table 7a**. FWS is confident that they will meet broodstock requirements, and IDFG and the NPT may open sport and tribal fisheries in the Clearwater River in the spring of 2004 after dam counts confirm the validity of the estimates. *Ralph Roseberg*

2.3.1.2. Ladder operation - Like past years, the ladder will be opened around the first of June to collect ~200 Chinook, after which we will close it until July, when regular spring Chinook trapping will begin. The ladder will then be operated intermittently to collect only what is needed for broodstock, adult outplanting, or brood needs for other facilities. NPT will provide a broodstock request if fish are needed for NPTH. *Bill Miller / Howard Burge*

- 2.3.1.3.Adult outplanting 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 350-400 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, 600k of Dworshak eggs and all of Kooskia eggs (750k) will be shipped to Kooskia for final incubation. The remaining 600k 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*. 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 draft tribal and sport harvest data, Kooskia's BY04 adult Chinook return is expected to be about 1,295. Our forecast for the 2004 spring Chinook salmon returns to Kooskia NFH is given in **Table 7a**. FWS is confident that they will meet their brood stock requirements of 800 Chinook. Idaho Department of Fish and Game and the Nez Perce Tribe may open sport and tribal fisheries in the Clearwater River in the spring of 2004 after dam counts confirm the validity of our estimates. *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 needs will be transported to Dworshak for holding until spawning. *Howard Burge / Craig Eaton*
- 2.3.2.3.Adult outplanting 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 / Craig Eaton

- 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 - Spring Chinook adults 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. *Craig Eaton*
- 2.3.2.6.Egg incubation - BY04 Kooskia stock (705k) and (tentatively) ~600k of Dworshak stock eggs will be transferred to KNFH beginning of November after eye-up. Eggs will be incubated on well water, chilled to approximately 40°F, and then switched to Clear Creek water late November, at temperatures of approximately 40°F. Normally eggs for Dworshak and Kooskia all hatch out by mid January. *Craig Eaton*
- 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*. 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 – Expect surplus fish to be available to anglers this year. Chinook sport harvest seasons are being proposed. 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. *Ed Schriever, Bill Horton*
- 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 721 females and 721 males for Clearwater Hatchery allocations. Approximately 239 females and 239 males will be needed for NPTH allocations. NPTH egg request is in negotiation because NPTH will be trapping adults at their own traps this summer 2004 (Table 6). Brood year 2001 Chinook was the last group of Chinook to be reared on Clearwater Fish Hatchery (CFH) station for NPTH outplants as per Tribal Fisheries request. 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 8. *Jerry McGehee*

- 2.3.3.3. Adult outplanting plans - Please see **Tables 8a** and **8b** for outplanting marks and priority streams. *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**) Female contribution estimated at 50%
- Newsome Creek – 504 adults
 - Lolo Creek – 1,962 adults
 - Meadow Creek - There is no estimate of adult returns for Meadow Creek.
- 2.3.4.2. Trapping operations at satellite facilities – Trapping operations on Lolo Creek and Newsome Creek usually begin at the end of May, after peak flows are reached. Trapping will continue through September 18th, until zero fish are trapped for 10 consecutive days. Proposed adult needs are approximately 60

females and 60 males for Lolo Creek and 30 females and 30 males for Newsome Creek allocations. Two weirs will be operated on Lolo Creek, an upper weir (RKM 50) and a lower weir (RKM 19). Pass/keep ratios for the upper and lower weirs are initially set at 17:1 until 30 adults are collected at each weir. Pass/keep ratios for the Newsome Creek weirs are initially set at 7:1. Pass/keep ratios may be adjusted dependent on the actual catches. Adult weirs will also be used for escapement, composition, age structure, timing, and genetic tissue samples. *Sherman Sprauge*

2.3.4.3. Trapping operations at NPTH

The adult ladder and trap will also be operated at Nez Perce Tribal Hatchery to collect spring chinook adults. Trapping operations will begin April 19th and continue through July 31st. The ladder will be operated intermittently to collect 542 adults needed for broodstock, 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% (182 adults) of the collection goal has been retained for broodstock. At that time, the trap will be closed until June 1. Beginning June 1, the trap will reopen until 33% (180 adults) of the collection goal has been retained for broodstock. Again, the trap will be closed until July 1. Finally, beginning July 1, the trap will reopen until the remaining 33% (180 adults) of the collection goal has been retained for broodstock. Trapping operations targeting spring chinook will cease for the remainder of the season at this time.

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. *Becky Ashe*

2.3.4.4. Adult outplanting plans - Please see **Table 8a** and **8b**. *Becky Ashe*

2.3.4.5. Spawning plans – The first sort and spawn will occur August 9th. Spawning will occur once per week at the satellite facilities and twice per week at NPTH (moribund ripe females will not be spawned). Schedule: Tuesday, Wednesday, and Thursday. A spawning ratio of 1:1 will be used. Jacks will be limited to ten percent of the male contribution. Spawning will continue until all females are spawned. *Becky Ashe*

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 - Plan to do regular monitoring visits to facilities and diagnostic visits as requested. 60 fish sample from each stock will be assayed prior to

release for viruses, bacteria and parasites. 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*. Eggs from high and medium ELISA level females will be culled; exact level will depend upon number of fish returning. *Kathy Clemens*

2.3.4.8. Communication - NPTH produces monthly production and pathology reports, and Fish Research produces weekly weir reports.

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, Meadow Creek (Selway River), O’Hara Creek (Selway River) and Meadow Creek (South Fork Clearwater River)(total 390,000 parr). Beginning in 2004, parr releases will be discontinued and production space will be utilized to produce 270,000 presmolts which will be released in Lolo Creek. Fish production for this program comes from Eagle Creek NFH, Dworshak, and Clearwater hatcheries.

3.1. Broodyear 2002 Coho

3.1.1. Dworshak

3.1.1.1. Production status – There were 357,792 fish on hand (5.09”, 16,260 pounds, 22 fpp) at Dworshak as of January 25, 2004. *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 2004 for a 3 week acclimation. *Scott Everett*

3.1.1.3. Numbers/dates/marks & tags (Table 9) 90,146 coho were CWT’ed with no AD clip on August 4, 2003. 1,500 fish will be PIT tagged at Kooskia as soon as fish are there for acclimation in April 2004. *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. 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. *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 1-12, 2004. Approximately 550,000 (275,000 each stream) will be direct stream released. Approximately 30,000 will be CWT/AD, and 30,000 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. 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. *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 2003 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 of 130,704 eyed eggs resulted from coho adults returning to the Clearwater River (Clearwater stock). An additional 117,843 eyed eggs were transferred from Eagle Creek NFH for incubation at Dworshak. Total coho on station – 248,547 as of January 25, 2004. *Scott Everett*

3.2.1.2.Projected production - The projected production will be 280,000 smolts reared through spring 2005. 90,000 fish will receive CWT and 1,000 will receive PIT. **(Table 10)** *Scott Everett*

3.2.1.3.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 were taken by NPT staff and delivered to Idaho Fish Health Center personnel for analysis. There were no fish with a high ELISA value; no fish were culled. Two adult pools of tissue were positive for *A. salmonicida* and IHNV prevalence was less than 10% in adults. Juvenile fish will be sampled quarterly and prior to liberation. *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 - Eyed eggs were received from Eagle Creek NFH December 17, 2003. As of January 25, 2004 there were 478,514 eyed eggs at Clearwater. *Scott Everett*

3.2.2.2.Projected production - The projected production will be 270,000 pre-smolts reared through fall 2004. A yet to be determined amount will be CWT and 3,000 will receive PIT. Fish will be transferred in September 2004 to Lolo Creek 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*

3.3. Broodyear 2004 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, 2004 to begin trapping coho salmon at Dworshak. *Bill Miller, 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 25th, 2004 and operated until late November, 2004. *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. Spawning operation First sort will take place around the first week of October and spawning operations will take place once a week till all fish have been spawned. *Scott Everett*

3.3.2.3. 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*

3.3.2.4. 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*

3.3.2.5. Communication - NPTH produces monthly production and pathology reports, and Fish Research produces weekly weir reports.

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 2002 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.

- 4.1.1.1.Production status – Approximately 110,000 yearlings are being reared at Lyons Ferry Hatchery for transfer to the Big Canyon acclimation facility on March 1, 2004. *Becky Ashe, Bruce McLeod*
- 4.1.1.2.Projected release – Target release will be 110,000 yearlings at 10 fpp on April 15. Fish are all CWT ad-clip and VIE Left Green (**Table 11**) *Bruce McLeod*
- 4.1.1.3.Fish health - Yearling fish at Lyons Ferry SFH were sampled 1/13/04 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 -
 - PIT tagging for juvenile outmigrant survival and migration timing
 - SARS to Lower Granite Dam
 - All mortalities will be scanned for PIT tags.
 - Aerial spawning ground surveys
 - Sample adult carcasses (Marks/tags, biological data, genetics, etc.) *Steve Rocklage*
- 4.1.1.5.Communication - O&M and M&E quarterly and annual reports to BPA

4.2. Broodyear 2003 Fall Chinook

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

- 4.2.1.1.Production status – Approximately 500,000 subyearlings are being reared at Lyons Ferry Hatchery for transfer to the Big Canyon acclimation facility on May 15, 2004. *Becky Ashe, Bruce McLeod*
- 4.2.1.2.Projected release – Target release is 500,000 subyearlings at 75-50 fpp on June 1, 2004. A group of 200,000 fish are CWT ad-clipped 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 -
 - PIT tagging for juvenile outmigrant survival and migration timing
 - SARS to Lower Granite Dam
 - All mortalities will be scanned for PIT tags.
 - Aerial spawning ground surveys
 - Sample adult carcasses (Marks/tags, biological data, genetics, etc.) *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 NPTH, 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 27, August 2003, and continued through 2, December 2003. A total of 121 adults and 64 jacks were collected at NPTH. Another 3 females and 2 jacks were collected at the Potlatch weir and transported to NPTH for spawning. An additional 6 females, 2 jacks and 1 male were collected at DNFH and transported to NPTH. *Becky Ashe*
- 4.2.2.2.Spawning – Over the course of seven takes, a total of 98 females were spawned yielding 307,735 green eggs. Average eye up was 72.77% (Take #1: 95.46%; Take #2: 81.77%; Take #3: 59.76%; Take #4: 68.51%; Take 5: 91.88%; Take 6: 86.25%; Take 7: 51.68%). An additional 47,825 green eggs were transferred to NPTH in October. These eggs came from 15 females spawned at Lyons Ferry Hatchery. Eye up, for this group, was 97.05%. Eggs are incubated at a water temperature of 54° F. Mechanical failures, with the well and surface water pumps, created water quality problems during the incubation period. As a result, we experienced elevated pre and post hatching mortalities. Fry were transferred to production room tanks on January 28 and 29, February 3 and 9, 2004. *Butch Harty*
- 4.2.2.3.Production status - As of February 10, 2004, an estimated 194,820 fish are on hand at NPTH. Average size is 819 fish per pound weighing 238 pounds with a length of 41 mm. *Butch Harty*
- 4.2.2.4.Projected release - All fish will receive a CWT in April and be transferred to the fall chinook ponds at NPTH for final rearing, acclimation and release. A June 15, 2004, release of an estimated 185,000 sub-yearlings (BY03) at a size of 39 fish per pound is planned. (**Table 11**) *Butch Harty*
- 4.2.2.5.Fish health - A 60 fish sample will be collected and assayed prior to release. *Kathy Clemens*
- 4.2.2.6.M&E
- CWT all fish. Initial tag retention and tagging mortality estimated. Estimate final CWT retention rates 14 days or more after tagging.
 - PIT survival studies- Pit tag 2,500-3,000 of each release group for survival estimates 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 all 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.

4.3. Broodyear 2004 Fall Chinook

4.3.1. Adult collection

- 4.3.1.1.Lower Granite - Coordinate this activity with Lyons Ferry Hatchery, Jerry Harmon and U.S. Army Corps of Engineers to obtain the necessary permits for adult collection. *Bruce McLeod*
- 4.3.1.2.Trapping sites/Ladder operation - Commencing on August 23, 2004, and continuing through December 3, 2004, the adult ladder and trap will be operated at Nez Perce Tribal Hatchery to collect fall chinook adults for brood year 2004. Adults will also be transported from Lower Granite Dam to NPTH for holding and spawning. *Butch Harty, Becky Ashe*
- 4.3.1.3.Spawning plans – To meet the egg take goal of 1.98 million, 520-565 females will be spawned at NPTH. Spawning will begin the third week of October and continue through the first week of December. *Butch Harty*
- 4.3.1.4.Egg Incubation – Eggs will be incubated on processed (well and treated surface) water chilled to approximately 50° F. All eggs should be hatched out by mid-January. *Butch Harty*
- 4.3.1.5.Egg transfers from Lyons Ferry - No egg transfers from Lyons Ferry Hatchery are anticipated for brood year 2004. *Becky Ashe*
- 4.3.1.6.Adult M&E
- CWT all fish. Initial tag retention and tagging mortality estimated. Estimate final CWT retention rates 14 days or more after tagging.
 - PIT survival studies- Pit tag 2,500-3,000 of each release group for survival estimates 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 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

5.1.1. Dworshak Free fishing day

- 5.1.1.1.Production status - BY03: Dworshak is rearing Shasta strain rainbow trout from Ennis NFH for the June 11, 2004 Kids' Fishing Day. On January 1, 2004, there were 15,800 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 14.5 inches in length (0.85 per lb.) by Open House. *Thomas Trock*

5.1.1.2.Fish health - IHNV and Coldwater disease was prevalent in this group of fish.
Kathy Clemens

5.1.1.3.Excess outplanting - The plan is to continue what has been done in previous years, with fish going to the Nez Perce Tribe, Coeur D' Alene Tribe, and Idaho Dept. of Fish and Game. The use of these rainbows into Tunnel Pond is still problematic due to lack of free public access. *Howard Burge*

5.1.2. Dworshak Reservoir

5.1.2.1.Proposed release numbers/dates - Clearwater Fish Hatchery should receive 65,000 T-9 rainbow eggs by approximately May 1, 2004. They would be reared as large as possible for release prior to annual pipeline exercise first week of May 2005. Estimated release number is 50k. The CFH regional rainbow program will be redistribution of 90,300 Nampa reared trout only. A total of 29 plant sites will be stocked with rainbow trout, requiring 110 trips. Fish reared at Clearwater Fish Hatchery will be planted into Dworshak Reservoir. *Jerry McGehee*

5.1.2.2.Hagerman/IDFG exchange program – Since 1997 Hagerman NFH has raised rainbows for stocking into Southern Idaho reservoirs and IDFG reciprocates by stocking sterile triploid rainbows into Dworshak Reservoir. There are no planned changes for the program this year. However the New Zealand mudsnail issue with regards to rearing hatchery, Clearwater Hatchery, and Dworshak Reservoir needs to be reviewed. *Howard Burge*

5.1.3. Clearwater River

5.1.3.1.Stocking program - Plan on two separate stocking of 25,000 kamloop fingerlings each into the Clearwater River. Planned date of release is October 2004. All these fish are sterile and unmarked. Half are from Lyons Ferry Fish Hatchery and the other half are from Nampa Fish Hatchery. These fish are part of an annual IDFG general stocking program to provide additional fishing opportunities. These fish are funded by the Lower Snake River Compensation Project and Dingle-Johnson. Kamloop strain rainbows are utilized due to their potential larger size as adults. Even though overall small numbers of these stocked fish end up being caught, they account for a large percent of the bigger fish that are caught. As mentioned above, the New Zealand mudsnail issue with regards to rearing hatchery and Clearwater River stocking needs to be reviewed. *Robert Hand*

6. CONTACTS

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