

# 2010 REGIONAL MARK COMMITTEE MEETING

## (34<sup>th</sup> Annual Meeting)

Hosted by: Idaho Dept. Fish & Game  
Location: **Ameritel Inn, Boise, Idaho**  
Dates: April 13,14, 2010

### Meeting Notes- FINAL

**Highlight-** Action item

See further meeting information at: [2010 Meeting Page](#)

## **APR 13: TUESDAY: ~9:00 AM**

### **1. General business items (George Nandor, PSMFC)**

- Welcome and introductions;
  - Cathy Robinson is the new Mark Committee representative for Alaska replacing Ron Josephson
  - CDFG was not able to attend due to budgetary travel restrictions (Jason Azat is the committee representative)
- Next year's meeting (2011) is intended to be hosted in Canada (**note: passports now required!**);
  - Potential locations are Vancouver, Harrison Hot Springs (Fraser Valley- an hour drive from Vancouver), or Victoria
  - **Kathy Fraser will confirm meeting dates and location with George in the coming months**
- 2012 meeting is intended to be hosted in Washington state;
- Review agenda.

### **2. Regional Mark Processing Center operations and announcements**

#### **A. RMPC Project Updates (George Nandor)**

- Completion of Updated CWT Program Overview document for PNAMP
  - PNAMP (Pacific Northwest Aquatic Monitoring Partnership) focused on Columbia Basin
  - Provided updates to the 2004 version of the overview document
  - NMT also submitted a paper on advances in CWT technology (Chapter 8)
  - PNAMP publication process: peer reviewed, professionally edited.
  - Pre-Final document is found at: [http://www.rmpec.org/files/Nandor\\_CWT\\_Overview.pdf](http://www.rmpec.org/files/Nandor_CWT_Overview.pdf)
  - Final Publication: Tagging, Telemetry and Marking Measures for Monitoring Fish Populations. A Compendium of New and Recent Science for Use in Informing Technique and Decision Modalities. ~10 Chapters
- Developments in Idaho tagging program
  - Second year of PSMFC management of the program
  - 3.25 million CWTs, 15.7 million total (Ad and CWT)
    - PSMFC employees also doing the PIT tagging for IDFG
    - Using a mix of AutoFish and manual tagging trailers
    - Brochures for the Idaho and California tagging programs are available
- Additional Recovery data from joint sampling project of NOAA, Oregon State University
  - Research project off the coasts WA and OR from 1998
    - OSU research vessel conducting on-going 20m trawls to sample for juvenile salmon off the coasts of Oregon and Washington
    - The recovery data is not currently in RMIS

- They are recovering the tags before the agency has reported them as being released
- There has been an on-going questions of how juvenile recoveries should be brought into the system
  - Best solution is to have them all in the same database by looking at Brood Year (doing this will ensure that they are not lumped in with adult recoveries)
  - Should emphasize with recovering agencies the need to make sure that ALL recoveries are in the database (as there has been to make sure that all releases are in the database)
- How is “juvenile” being defined? The definition varies between agencies (no standard across the region). It is not a required field, since the date associated with the tag code is provided.
- Are juveniles included in the online reports available through RMIS? They are included if they are not specifically filtered out of the query. Would need to use a combination of Brood Year and Recovery Year to filter out the juveniles
  - Might want to indicate when juveniles are included in the reports and when they aren’t
- over 3000 recoveries collected, ongoing project
- data to be converted from Access db to PSC Format for CWT/RMIS
- Developments in other RMPC projects
  - Database updated to ver. 4.1 last year
  - New version 4.1 specification document available – being updated regularly (Nov, Jan, March)
- Added more Fish Culture Conference Proceedings on the Publications page of the RMPC web site

#### B. Status of CWT data (Dan Webb, PSMFC)

- PowerPoint presentation
  - All agencies have submitted data between January and April 2010
  - One record failed out of nearly 11,000 records received
  - Working with Nez Perce to have data submitted directly to RMIS
  - Generally takes 2-3 years for agencies to provide recovery data for analysis for a particular run year
  - Currently 31 tag codes are reported as missing
    - Recoveries of a missing tag code cannot validate as a tag status ‘1’ until the release is reported
    - Missing tag codes are most commonly associated with transfers between agencies and uncertainty over who is responsible to report the data to RMIS
  - No previous mechanism in the database for an Agency to delete a release
    - A Partial Release Submission does not remove any existing records
    - A Full Set Release Submission:
      - must contain “FULLSET” in the filename
      - replaces all releases for an agency if all records pass validation
      - does not update any records if one or more records fail
      - auto-removes any records not included in the submission
  - Dan Webb will only use categories 50, 52, and 54 for next year’s escapement summaries

#### C. CRITFC Agency & member tribes; questions about data reporting (George Nandor)

- Only recoveries are in Hood River, Deschutes, and Warm Springs for CRFC

#### D. Data Description Guidelines (Dan Webb)

- Data Description Guidelines review when to submit a Description File, what to submit, and examples of submissions
- On-Line Data Tools
  - Tools are only for use by the data providers so there is not a link on the RMPC website. Dan Webb will send out an email to all data providers that currently have an account to provide them with direct links to the two new entry screens
    - Data Transfer Screen (available to registered users)
    - Description Entry Screen (available to registered users)

#### E. Presentation of RMIS report usage history (Jim Longwill, PSMFC)

- PowerPoint presentation
  - Who has been using RMIS during the last four years?
  - How many rows do they select (preview) from the database?
  - How much data do they download (bytes)?
- Upcoming RMIS Projects
  - Revise user help documentation
    - Update content to have improved tutorials for Release, Recovery data selection
    - Better describe pattern searching capabilities
  - Improve Google maps look-up capabilities for releases and recoveries that have geographic data points
  - Add reports for Selective Fishery Evaluation Committee for improved analysis

#### 3. Status of 2010-11 funding for the Regional Mark Processing Center (George Nandor)

##### Three funding sources for the RMPC /current status:

- U.S. Fish and Wildlife Service: funding in place
- NOAA Fisheries: funding was deleted from President's budget; PSC added \$65,000 for RMPC which should be received in May 2010 (one-time allotment)
- Bonneville Power Administration: CWT Recovery Program Budget increased by 5%

#### 4. Update on mass marking, selective fisheries, & agency tagging levels for 2010 (George Nandor)

##### Agency Updates:

- Canada
  - Mass Marking- Tagging 400K Coho, ad-clipping 6 million, 100K unclipped
  - Chinook- tagging 4.8 million, releasing 21 million
  - Coho- 725,000 tagged, releasing 4.25 million
  - Selective Fisheries- same as 2009
  - Voluntary sampling for sport fishery (11,000 heads turned in; 2,000 tagged)
- Alaska
  - No anticipated significant changes over previous years
  - Only notable change for this year- no longer tagging at Chuck Creek/ Lake
  - Plan to increase their visual sampling (Alaska does not do electronic sampling)- will want ad-clipped fish during the winter fishery to try and reduce the number of heads taken from untagged fish
  - took 15,000 Chinook heads in the traditional troll fisheries in 2009 (half were untagged)- this causes problems with industry losing money

- Also see Handout “Alaska Mark, Tag, and Age Lab Update; April 13, 2010” in Appendix B
- Washington
  - Handout provided (includes tribal production)- see Appendix B
  - Using 18 million CWT, no significant changes from 2009
  - No significant changes to previous Mass Marking levels
    - Priest Rapids Hatchery- 600K double index tags, 500K CWT only
    - Majority of mass marking done manually (100 million)
  - Proposing Chinook Ocean Mark Selective Fishery to be June 12-30 in Washington areas 1, 2, 3, and 4.
  - Gil Lensegrav hired to replace Susan Markey
  - CWT Lab’s staffing issues have been resolved and are almost caught up on processing head; Anticipate reporting on-time in the future
  - Will sub-sample Coho by running them all through electronic detection and then take a percentage of those tagged fish
- Oregon
  - Ken Johnson will provide a handout summary
  - Status quo with CWT, expanding Mass Marking
  - 44 million mass marked (~36 million ad-clipped Chinook, ~6 million Coho)
  - 6.5 million CWT (level funded)- majority is Chinook, only tagging 250K Coho
  - Selective Fisheries- Columbia River Spring Chinook
- California
  - Status quo with Constant Fractional Marking Program
  - No Selective Fisheries planned
  - Will be a fishery in California this year
  - 2<sup>nd</sup> year of CFM in Klamath at Iron Gate Hatchery
- Idaho
  - Status quo
  - Almost entire production is Mass Marked
  - Hired Forrest Bohlen (through PSMFC) to manage CWT database
  - Brian Leth will provide a handout for the minutes
- USFWS
  - 2010 tagging levels status quo
- NWIFC
  - Status quo- tag 4 million, mass mark 12 million
  - No Selective Fisheries
- CRITFC
  - New Agency 61 releases for Warm Springs/ Hood River Spring Chinook Program
- YAKA
  - Provided Handout
- NEZP



- Rear 1.5 million fall Chinook at Nez Perce hatchery
  - 76% of total basin releases (5.8 million) are marked; 47% of total release is ad-clipped, 60% of total release is CWT, 12% of total releases are PIT tagged
  - 24% unmarked (1.5 million)- currently in discussions to determine a mark for them
  - Rear 225,000 spring Chinook- 100% CWT only
  - Rear 100,000 spring-summer Chinook- 100% CWT/ 50% VIE tags in 2010
  - Release 180,000 Coho- 60,000 CWT only, 120,000 CWT/ad-clip
  - May include DIT groups
  - **For any NEZP (& other agency) DIT groups- identify with Related Group Id.**
- Metlakatla
    - no mass marking, no selective fisheries, status quo on tagging

## **5. Update on PST funding for CWT Improvements (Ken Johnson, ODFW)**

- Received 13 proposals due to short time-frame
- Used Expert Panel Report criteria to evaluate the proposals
- \$1.5 million to award, which allowed for nearly all of proposals to be funded (1 cut, 1 adjusted):
  - An analytical tool which allows users to determine optimal tagging rates
  - Data Management program funded for ODFW to move old computer system to a new (relational) database system for CWT datasets
  - Mass Marking of Elk River stocks and may now be designated a PSC Indicator Stock
  - 2 Alaska proposals funded
- A number of states lost money due to the deletion of the Anadromous Fish Grants from the federal budget; went to Congress with a proposal to increase the base budget for the US-Canada treaty to make up the budget shortfalls

## **6. Alaska: CWTIT funding received for processing No Tags (Catherine Robinson, ADFG)**

- Received \$48,000 for lab support and \$8000 for freight charges
- Develop an application to provide more accurate contribution estimate from each quadrant in mixed-district fisheries (recommendation from Expert Panel Report)

## **7. Update on Selective Fisheries Evaluation Committee activities (Ron Olson)**

- PowerPoint presentation
  - 38 million proposed Coho mass marked in 2010 (similar to 2009)
  - 110 million proposed Chinook mass marked in 2010 (9 million increase from 2009)
  - Will have every fish mass marked that is intended for harvest
  - Identified issues they are dealing with on Mark Selective Fisheries
  - Sampling methodologies continue to differ by agency and are not coordinated with MM and DIT
  - Adequate sampling and reporting of CWT recoveries of unmarked DIT releases is only occurring in WA
  - New Columbia River Chinook DIT groups are recommended
  - MM, DIT, and CWT sampling programs are not sufficiently coordinated to support analysis by PSC technical committees

## **8. Preliminary results of a Wand study on Chinook (Ron Olson)**

- PowerPoint presentation
  - Current Chinook wandling recommendations are to use both external and mouth wandling on larger fish
  - NMT now has the ability to improve the detection capability of many wands
  - Purpose of the study was to determine if mouth wandling was still necessary when using the improved wands
  - Sampled 3000 fish and missed 15 tags on first pass (99.1% detection rate)
  - Majority of tags were missed in males, were 80-100 cm fork length, and were missed by the same wand
  - Combination wandling would have detected 13 of the 15 missed CWT's
  - Tuned up wands should be used on Chinook
  - Agencies may want to test the detection depth of their wands and use the most sensitive on Chinook
  - Continue to use the combination wandling technique on larger fish
  - Agency programs need to have good quality control measures in place to ensure proper wandling technique and functional equipment

## **9. Summary of CDFO Wandling Study Results – Gillnet, Troll Fisheries & Spawning Grounds (Doug Herriott, CDFO)**

- PowerPoint presentation
  - Use tube detectors at all hatcheries
  - Require combination wandling when it is used
  - Study was to examine the accuracy of the wand method for detecting CWTs in Chinook salmon at fishery landing sites and spawning grounds
  - As a result of the study, DFO is reducing dependency on wand method to detect CWT's

## **10. Questions regarding wandling of Steelhead in Columbia R Basin (Ken Johnson)**

- Are all steelhead being checked for CWT in the Columbia?
- No longer a ventral fin clip in steelhead to indicate the presence of a tag
- Idaho already using electronic detection for all Steelhead
- Should be using electronic detection in OR and WA
- Ken Johnson and Mark Kimbel will look into this issue and investigate the current procedure for OR and WA, and will also look into steelhead sampling procedures during Chinook season in zone 6

**Adjourn: ~5:00 PM**

**APR 14: WEDNESDAY: Reconvene at ~8:00 AM**

**11. Any special marking requests? (George Nandor)**

- **Requests received for 2010:**

Received by the RMPC Tue, Apr 6, 2010; from CDFO / K. Fraser (**see associated sheet**):

- Toon River; chum
  - 5000 ad-clipped transplants from Silver Creek to identify hatchery fish in escapement- no impact to coastwide CWT programs
- Cultus Lake; sockeye; #1
  - 55,000 ad-clipped fish to identify hatchery fish from natural spawn in rebuilding stock- no impact to coastwide CWT programs
- Snootli Creek; chum
  - 200,000 ad-clipped fish to identify hatchery fish- no impact to coastwide CWT programs since don't sample for Chum
- Atnarko River; sockeye
  - 55,000 ad-clipped fish to identify hatchery fish and escapement to determine effectiveness of stock enhancement programs- no impact to coastwide CWT programs
- Cultus Lake; sockeye; #2
  - 650,000 ad-clipped fish to determine benefits of stock enhancement programs- no impact to coastwide CWT programs
- ODFW Marking variance requests involving use of blank wire or for adipose-only marking studies
  - McKenzie River- want to eventually install a sorter that will allow only McKenzie River fish to proceed upriver and eliminate the risk of stray hatchery spawners.
    - They are ESA listed fish, so have a mandate to mark 100% of hatchery stock.
    - Want to mark 300,000 fish with CWT and 900,000 fish with Agency Only wire. Also released 200,000 blank wire fish at Young's Bay.
    - Impacts to Columbia River commercial and sport fisheries (3000+ recoveries in OR & WA); also impacts to recoveries in BC (850+ projected) and AK (830+ projected)
    - This is the third year for this request, so can expect to begin seeing returns (jacks only) this year
    - Why bother diverting the fish when you can CWT and mass mark them to obtain the same results? Want to force the Corps into meeting their obligations (and assist with building the sorter, etc).
    - Would cost an additional \$500,000 to put coded wire in the fish
- Other requests?
  - No more half tags in California from this point forward

**12. Update on High Seas CWT Sampling and Recovery Program for Years 2008, 2009 (Adrian Celewycz, NMFS-AK)**

- PowerPoint presentation
  - Recovered 48 tags out of 10,000 fish sampled in 2008 (all Chinook)
  - Hard cap of 60,000 Chinook in the by-catch starting in 2011
  - "Pseudo-tags" (agency only wire recoveries) would indicate a potential northward migration of Yukon River Chinook towards the Arctic Ocean
  - Privacy laws now prevent detailed information being provided regarding exact catch locations, dates, etc.

### **13. Northwest Marine Technology (Geraldine Vander Haegen, NMT)**

- Product update
  - Jan Sandburg moving to Marketing/ Accounts Receivable; Jan Chamberlin will be receiving orders at Shaw Island
  - New VI Alpha Tags and injectors are now available
  - Completed the bulk of the wand repairs
    - repair is free for functioning wand, \$1000 to repair/ upgrade a “dead” wand
    - if wand is pre- serial #11188, the wand could be re-tuned up to a max of 3.2 cm detection depth
    - silver battery cap means the wand has at least a 3.2 cm detection depth capability
  - Added a daughter board to existing driver boards on tube detectors to upgrade the R series detectors (cost is \$1200)
    - If there is a battery tube in the back, it hasn't been upgraded
  - Working on development of a cutter removal tool
  - New MK IV manual- more repair and maintenance detail is included, step-by-step instructions, available on the website
  - Wanding instructional videos are also available on the website
  - Call Dave with AutoFish questions
    - Continuing CFM in California, added another trailer to Iron Gate Hatchery and will add trailer at Trinity hatchery in 2011
    - Improved handling of Lake Trout through trailers in Great Lakes; starting with tagging 5 million fish in August 2010
    - 28 AutoFish trailers currently in use, 4 more to be added in 2011
  - Completed production of an adult fish counter (handout provided)
  - AFS Annual Meeting will be held in Seattle in 2011; could be good opportunity to plan a CWT Symposium
- Question and Answer session
  - Is there a plan to add more support staff with the addition of new trailers?
    - No- Brian, Joel, and Scott will still be the ones traveling.
    - Concern is that staff is spread fairly thin during tagging season, and agencies can't afford to be down a week waiting on NMT staff to be on-site.
  - Most agencies are on fixed or declining budgets, so when prices go up other items in the budget are sacrificed to meet the tagging mandates

**Adjourn: ~12:00 Noon**

**Visit to IDFG Sockeye Captive Brood facility, Eagle, ID; 1:00pm - 4:00pm (Brian Leth, IDFG)**

## **Appendices**

Appendix A	2010 Mark Meeting Attendees
Appendix B	Agency Marking and Tagging Updates
Appendix C	Variance Requests
Appendix D	History of Mark Meeting Locations
Appendix E	Photos of field trip to Eagle facility

**Appendix A**  
**2010 Mark Meeting Attendees**  
**\*Committee Member**

<b>Name</b>	<b>Agency</b>	<b>Mailing Address/ Telephone/E-mail Address</b>
Allen, Stan	PSMFC	205 SE Spokane St., Suite 100, Portland, OR 97202-6413 Tel: (503) 595-3114 E-mail: Stan_Allen@psmfc.org
Bohlen, Forrest	PSMFC/ IDFG	Tel: E-mail: fbohlen@idfg.idaho.gov
Carter, Nichole	PSMFC/ USFWS	1387 S. Vinnell Way, Suite 343, Boise ID 83709 Tel: (208) 378-5298 E-mail: Nichole_Carter@fws.gov
Celewycz, Adrian*	NMFS	TSMRI, 17109 Pt. Lena Loop Rd, Juneau, AK 99801 Tel: (907) 789-6032 E-mail: Adrian.Celewycz@noaa.gov
Engelking, Henry	ODFW	3406 Cherry Ave NE, Salem, OR 97303 Tel: (503) 947-6257 E-mail: henry.m.engelking@state.or.us
Frawley, Tim	ADFG	10107 Bentwood Place, Juneau, AK 99801 Tel: (907) 465-4092 E-mail: tim.frawley@alaska.gov
Gearns, Howard	USFWS	510 Desmond Dr., Lacey, WA 98503 Tel: (360) 753-9591 E-mail: <a href="mailto:Howard_Gearns@fws.gov">Howard_Gearns@fws.gov</a>
Herriott, Doug	CDFO	Pacific Biol. Station, Hammond Bay Road, Nanaimo, B.C. V9R 5K6 Tel: (250) 756-7383 E-mail: doug.herriott@dfo-mpo.gc.ca
Hesse, Jay	NEZP	PO Box 365, Lapwai, ID 83540 Tel: (208) 843-7145 E-mail: jayh@nezperce.org
Johnson, Ken*	ODFW	17330 SE Evelyn St, Clackamas, OR 97015 Tel: (971) 673-6059 E-mail: <a href="mailto:Kenneth.Johnson@state.or.us">Kenneth.Johnson@state.or.us</a>
Kimbel, Mark*	WDFW	600 Capitol Way N, Olympia, WA 98501 Tel: (360) 902-2406 E-mail: <a href="mailto:Mark.Kimbel@dfw.wa.gov">Mark.Kimbel@dfw.wa.gov</a>
Kinzer, Ryan	NEZP	PO Box 1942, McCall, ID 83639 Tel: (208) 634-5290 E-mail: ryank@nezperce.org
Leask, Steve *	MIC	Box 8, Metlakatla, AK 99926 Tel: (907) 886-3150 E-mail: tchsteve@hughes.net
Leth, Brian *	IDFG	1414 E. Locust Lane, Nampa, ID 83686 Tel: (208) 465-8404 ext. 242 E-mail: brian.leth@idfg.idaho.gov
Longwill, Jim	PSMFC	205 SE Spokane St., Suite 100, Portland, OR 97202-6413 Tel: (503) 595-3146 E-mail: longwill@psmfc.org
Marshall, Scott	USFWS	1387 S. Vinnell Way, Suite 343, Boise ID 83709 Tel: (208) 378-5298 E-mail: Scott_Marshall@fws.gov

McClure, Marianne *	CRITFC	729 NE Oregon St., Suite 200, Portland, OR 97232 Tel: (503) 731-1254 E-mail: mccm@critfc.org
Molitor, Ken	NMT	PO Box 427, Shaw Island, WA 98286 Tel: (360) 468-3375 E-mail: Ken.Molitor@nmt.us
Nandor, George*	PSMFC	205 SE Spokane St., Suite 100, Portland, OR 97202-6413 Tel: (503) 595-3144 E-mail: George_Nandor@psmfc.org
Olson, Ron *	NWIFC	6730 Martin Way NE, Olympia, WA 98516-5540 Tel: (360) 528-4335 E-mail: rolson@nwifc.org
Roberts, Amy	PSMFC	205 SE Spokane St., Suite 100, Portland, OR 97202-6413 Tel: (503) 595-3451 E-mail: Amy_Roberts@psmfc.org
Robinson, Cathy *	ADFG	10107 Bentwood Pl, Juneau, AK 99801 Tel: (907) 465-4089 E-mail: Cathy.Robinson@alaska.gov
Steifel, Carl	IDFG	Tel: (208) 465-8404 E-mail: cstiefel@idfg.idaho.gov
Vander-Haegen, Geraldine	NMT	955 Malin Ln SW, Suite B, Tumwater, WA 98501 Tel: (360) 596-9400 E-mail: Geraldine.vanderhaegen@nmt.us
Webb, Dan	PSMFC	205 SE Spokane St., Suite 100, Portland, OR 97202-6413 Tel: (503) 595-3147 E-mail: dan@psmfc.org
Yundt, Steve	USFWS	1387 S. Vinnell Way, Ste. 387, Boise, ID 83703 Tel: E-mail: steve.yundt@fws.gov



# Brood Year 2009 Chinook and Sockeye salmon marking and tagging in 2010

Marks & Tags								
Species	Fish Hatchery	Release Site	AD	AD/CWT	CWT	OTC	VIE/CWT	Grand Total
Fall Chinook	Oxbow	IPC Hells Canyon Dam	10,000	190,000				200,000
	Oxbow Sum		10,000	190,000				200,000
	Fall Chinook Sum		10,000	190,000				200,000
Sockeye	Eagle/Sawtooth	Upper Salmon R. Lakes (Presmolts)	60,000					60,000
	Eagle/Sawtooth Sum		60,000					60,000
	Eagle/Sawtooth	Upper Salmon R.and Redfish Lake Cr.			100,000			100,000
	Eagle/Sawtooth Sum				100,000			100,000
Sockeye Sum			60,000		100,000			160,000
Summer Chinook	McCall	Johnson Creek Knox Bridge S.F. Salmon R.					100,000	100,000
	McCall Sum		900,000	200,000				1,100,000
	Pahsimeroi	Pahsimeroi R.	880,000	120,000			100,000	1,200,000
	Pahsimeroi Sum		880,000	120,000				1,000,000
Summer Chinook Sum			1,780,000	320,000			100,000	2,200,000
Spring Chinook	Clearwater	Clear Creek	115,000	120,000				235,000
		Lower Selway R.	145,000	120,000	135,000			400,000
		Powell Pond	280,000	120,000				400,000
		Red River Pond	980,000	120,000				1,100,000
		Upper Selway R. (parr)				300,000		300,000
		NPTH		66,000	134,000			200,000
		Crooked River Trap Site (Summers)			200,000			200,000
	Clearwater Sum		1,520,000	546,000	469,000	300,000		2,835,000
	Rapid River	Hells Canyon	400,000					400,000
		Little Salmon	200,000					200,000
		Rapid River	2,400,000	100,000				2,500,000
	Rapid River Sum		3,000,000	100,000				3,100,000
	Sawtooth	Sawtooth weir Yankee Fork	1,380,000	120,000				1,500,000
Sawtooth Sum		1,380,000	120,000	200,000			200,000	
Spring Chinook Sum			5,900,000	766,000	669,000	300,000		7,635,000
Grand Total			7,750,000	1,276,000	769,000	300,000	100,000	10,195,000

## Brood Year 2010 Steelhead Marking and Tagging in 2010

Marks & Tags							
Fish Hatchery	Release Site	Stock	AD	AD/CWT	No Clip	No Clip/CWT	Grand Total
Clearwater	S.F. Clearwater (Red House Hole)	Dwor B	200,000	60,000			260,000
	Peasley Cr	Dwor B	190,000	60,000			250,000
	Crooked River	Dwor B			83,000		83,000
	Red River	Dwor B			75,000		75,000
		SF Clwtr			75,000		75,000
	Newsome Cr.	Dwor B			100,000		100,000
<b>Clearwater Total</b>			<b>390,000</b>	<b>120,000</b>	<b>333,000</b>		<b>843,000</b>
Hagerman National	East Fk. Salmon R. Weir	E.F. Natural				170,000	170,000
	Sawtooth Weir	Saw A	670,000	80,000			750,000
	Yankee Fk.	Saw A	140,000	80,000	220,000		440,000
<b>Hagerman National Total</b>			<b>810,000</b>	<b>160,000</b>	<b>220,000</b>	<b>170,000</b>	<b>1,360,000</b>
Magic Valley	Little Salmon R. Stinky Springs	Dwor B	97,000	120,000			217,000
		Pah A	180,000	20,000			200,000
	Lower East Fk. Salmon R.	Dwor B	218,000	60,000			278,000
	Pahsimeroi Trap	Upper Salmon B				120,000	120,000
	Salmon R. Sec. 16 Red Rock	Pah A	40,000	80,000			120,000
	Salmon R. Sec. 17 Colston Corner	Saw A	90,000	60,000			150,000
	Salmon R. Sec. 18 McNabb Point	Saw A	60,000	60,000			120,000
	Salmon R. Sec. Shoup Bridge	Pah A	40,000	20,000			60,000
	Squaw Creek	Dwor B	219,000	60,000			279,000
<b>Magic Valley Total</b>			<b>944,000</b>	<b>480,000</b>		<b>120,000</b>	<b>1,544,000</b>
Niagara Springs	Hells Canyon Dam	Oxbow A	435,000	90,000			525,000
	Little Salmon R. Stinky Springs	Oxbow A	245,000	30,000			275,000
		Pah A	140,000	30,000			170,000
	Pahsimeroi Trap	Pah A	740,000	90,000			830,000
<b>Niagara Springs Total</b>			<b>1,560,000</b>	<b>240,000</b>			<b>1,800,000</b>
<b>Grand Total</b>			<b>3,704,000</b>	<b>1,000,000</b>	<b>553,000</b>	<b>290,000</b>	<b>5,547,000</b>



# WDFW and TRIBAL PUGET SOUND CHINOOK MASS MARKING and CODED-WIRE TAGGING 2010

Species: Chinook

Area: Puget Sound

Brood: 2009

Releases 2010 and 2011

11/25/2009

Agency	Hatchery	Stock	Number of fish to be released with a CWT		Number of fish to be released without a CWT		Total Production	Proposed to be marked this year (Y/N)	Marked in previous year (Y/N)
			Ad Clipped	Unclipped	Ad Clipped	Unclipped			
WDFW	Kendall Creek*	NF Nooksack springs	200,000	200,000	350,000	0	750,000	Y	Y
WDFW	Marblemount	Skagit River springs	250,000	0	0	0	250,000	Y	Y
WDFW	Marblemount*	Skagit River springs 1+	75,000	75,000	0	0	150,000	Y	Y
WDFW	Hupp Springs	White River springs	0	250,000	0	0	250,000	NA	NA
WDFW	Hupp Springs	White River springs	0	85,000	0	0	85,000	NA	NA
Tribal	White River	White River springs	0	340,000	0	0	340,000	NA	NA
Tribal	White River	White River springs 1+	0	55,000	0	0	55,000	NA	NA
Tribal	White River Acclimation	White River springs	0	0	0	1,000,000	1,000,000	NA	NA
WDFW	Dungeness	Dungeness River springs	0	50,000	0	0	50,000	NA	NA
WDFW	Hurd Creek	Dungeness River springs	0	50,000	0	0	50,000	NA	NA
WDFW	Greywolf Acclimation	Dungeness River springs	0	100,000	0	0	100,000	NA	NA
Total spring chinook			525,000	1,205,000	350,000	1,000,000	3,080,000		
WDFW	Marblemount	Skagit River summers	200,000	0	0	0	200,000	Y	Y
Tribal	Stillaguamish	NF Stillaguamish River summers	220,000	0	0	0	220,000	Y	Y
Tribal	Bernie Gobin	Skykomish River summers	100,000	0	1,600,000	0	1,700,000	Y	80%
WDFW	Wallace River*	Skykomish River summers	200,000	200,000	600,000	0	1,000,000	Y	Y
WDFW	Wallace River	Skykomish River summers 1+	0	0	250,000	0	250,000	Y	Y
Total summer chinook			720,000	200,000	2,450,000	0	3,370,000		
WDFW	Glenwood Springs	Glenwood Springs falls	90,000	0	460,000	0	550,000	Y	Y
Tribal	Lummi Bay Sea Ponds	Samish River (Friday Creek) falls	0	0	1,000,000	0	1,000,000	Y	Y
WDFW	Samish*	Samish River falls	200,000	200,000	3,600,000	0	4,000,000	Y	Y
WDFW	Marblemount	Skagit River falls	0	0	0	0	0	NA	Y
WDFW	Soos Creek*	Big Soos Creek falls	200,000	200,000	2,600,000	0	3,000,000	Y	Y
WDFW	Icy Creek	Big Soos Creek falls 1+	0	0	300,000	0	300,000	Y	Y
WDFW	Issaquah	Issaquah Creek falls	200,000	0	1,800,000	0	2,000,000	Y	Y
WDFW	Portage Bay (UW)	Portage Bay falls	0	0	180,000	0	180,000	Y	Y
WDFW	Minter Creek	Minter Creek falls 1+	75,000	0	45,000	0	120,000	Y	Y

Tribal	Gorst Creek	Grovers Creek falls	0	0	1,900,000	0	1,900,000	Y	Y
Tribal	Gorst Creek	Grovers Creek falls 1+	0	0	0	0	0	NA	Y
Tribal	Grovers Creek *	Grovers Creek falls	200,000	200,000	100,000	0	500,000	Y	Y
Tribal	Clarks Creek	Puyallup River falls	215,000	0	1,000,000	0	1,215,000	Y	Y
Tribal	Electron Ponds	Puyallup (Voights Creek) falls	300,000	0	0	0	300,000	Y	Y
WDFW	Voights Creek	Voights Creek falls	200,000	0	200,000	0	400,000	Y	Y
WDFW	Garrison Springs	Garrison Springs falls	200,000	0	1,150,000	0	1,350,000	Y	Y
WDFW	Chambers Creek	Garrison Springs falls	0	0	70,000	0	70,000	Y	Y
WDFW	Lakewood	Garrison Springs falls	200,000	0	0	0	200,000	Y	Y
WDFW	Lakewood	Garrison Springs falls 1+	90,000	0	40,000	0	130,000	Y	Y
Tribal	Clear Creek *	Clear Creek falls	200,000	200,000	3,100,000	0	3,500,000	Y	Y
Tribal	Kalama Creek	Kalama Creek falls	100,000	0	500,000	0	600,000	Y	Y
WDFW	Tumwater Falls	Deschutes River falls	200,000	0	3,600,000	0	3,800,000	Y	Y
WDFW	Percival Cove Net Pens	Deschutes River falls	0	0	0	0	0	NA	Y
WDFW	George Adams *	George Adams falls	225,000	225,000	3,350,000	0	3,800,000	Y	Y
WDFW	Hamma Hamma	George Adams falls	86,000	0	0	0	86,000	Y	Y
WDFW	Hoodsport	Hoodsport falls	200,000	0	2,600,000	0	2,800,000	Y	Y
WDFW	Hoodsport	Hoodsport falls 1+	0	0	120,000	0	120,000	Y	Y
WDFW	Rick's Pond (LLTK)	George Adams falls 0+	90,000	0	285,000	0	375,000	Y	Y
WDFW	Elwha	Elwha River falls 1+	0	200,000	0	0	200,000	NA	NA
WDFW	Elwha	Elwha River falls	0	200,000	0	2,500,000	2,700,000	NA	NA
WDFW	Bear Springs	Elwha River falls 1+	0	200,000	0	0	200,000	NA	NA
Tribal	Hoko Falls *	Hoko River falls	200,000	0	200,000	0	400,000	Y	Y

Total fall chinook 3,471,000 1,625,000 28,200,000 2,500,000 35,796,000

Total 4,716,000 3,030,000 31,000,000 3,500,000 42,246,000

Total Chinook Production 42,246,000  
Percent Marked 85%

\* DIT group

# WDFW and TRIBAL PUGET SOUND COHO MASS MARKING and CODED-WIRE TAGGING 2010

11/13/2009

Species: Coho  
Area: Puget Sound  
Brood: 2009  
Release Year: 2011

Agency	Hatchery	Stock	Number of fish to be released with a CWT		Number of fish to be released without a CWT		Total Production	Proposed to be marked this year (Y/N)	Marked in previous year (Y/N)
			Ad Clipped	Unclipped	Ad Clipped	Unclipped			
WDFW	Kendall Creek*	Nooksack (Kendall Creek)	0	0	0	0	0	NA	Y
WDFW	Squalicum Net Pens	Nooksack (Kendall Creek)	0	0	0	0	0	NA	Y
Coop	Baker Lake	Baker River	0	0	60,000	0	60,000	Y	Y
WDFW	Glenwood Springs	Glenwood Springs	0	0	100,000	0	100,000	Y	Y
Tribal	Lummi Bay Sea Pens	Lummi Bay	50,000	0	950,000	0	1,000,000	Y	Y
Tribal	Skookum Creek	Skookum Creek	50,000	50,000	900,000	0	1,000,000	Y	Y
WDFW	Marblemount*	Skagit ( Clark Creek)	45,000	45,000	160,000	0	250,000	Y	Y
WDFW	Lake Shannon Net Pens	Baker River	0	0	25,000	0	25,000	Y	Y
WDFW	Roche Harbor Net Pen	Skagit ( Clark Creek)	0	0	15,000	0	15,000	Y	Y
WDFW	Indian Slough (For SSC)	Skagit ( Clark Creek)	0	0	100,000	0	100,000	Y	Y
WDFW	Oak Harbor Net Pens	Skagit ( Clark Creek)	0	0	30,000	0	30,000	Y	Y
Tribal	Stillaguamish	Stillaguamish River	0	0	50,000	0	50,000	Y	Y
WDFW	Wallace River*	Skykomish (May Creek )	45,000	45,000	60,000	0	150,000	Y	Y
Tribal	Bernie Gobin	Skykomish (May Creek )	50,000	0	1,700,000	0	1,750,000	Y	80%
WDFW	NWSSC Everett Net Pens	Skykomish (May Creek )	0	0	20,000	0	20,000	Y	Y
WDFW	Possession Point Net Pens	Skykomish (May Creek )	0	0	50,000	0	50,000	Y	Y
WDFW	Seattle Poggie Club	Skykomish (May Creek )	0	0	54,000	0	54,000	Y	Y
WDFW	Laebugten Net Pens	Issaquah Creek	0	0	25,000	0	25,000	Y	Y
WDFW	Issaquah	Issaquah Creek	0	0	450,000	0	450,000	Y	Y
WDFW	Ballard Salmon Net Pens	Issaquah Creek	0	0	30,000	0	30,000	Y	Y
WDFW	Soos Creek*	Green River ( Soos Creek)	45,000	45,000	510,000	0	600,000	Y	Y
Tribal	Crisp Creek	Green River ( Soos Creek)	0	0	200,000	0	200,000	Y	Y
Tribal	Elliott Bay Net Pens	Green River ( Soos Creek)	0	0	395,000	0	395,000	Y	Y
WDFW	NWSSC Des Moines	Green River ( Soos Creek)	0	0	30,000	0	30,000	Y	Y
WDFW	Seattle Aquarium	Green River ( Soos Creek)	0	0	2,000	0	2,000	Y	Y
WDFW	Portage Bay ( UW)	Portage Bay ( UW)	0	0	90,000	0	90,000	Y	Y
WDFW	Marine Tech Center	MTC / Soos Creek	0	0	10,000	0	10,000	Y	Y
WDFW	Voights Creek*	Puyallup ( Voights Creek)	45,000	45,000	690,000	0	780,000	Y	Y
Tribal	Puyallup Tribal (Rushing)	Puyallup ( Voights Creek)	100,000	0	0	0	100,000	Y	Y

WDFW	Minter Creek	Minter Creek	0	0	500,000	0	500,000	Y	Y
Tribal	Gorst / Agate Pass	Minter Creek	50,000	0	250,000	0	300,000	Y	NA
WDFW/Tribal	SSNP/Squaxin Net Pens	Skykomish ( May Creek)	50,000	0	1,750,000	0	1,800,000	Y	Y
Tribal	Kalama Creek	Kalama Creek	45,000	0	255,000	0	300,000	Y	Y
WDFW	George Adams*	George Adams (Purdy Creek)	45,000	45,000	210,000	0	300,000	Y	Y
WDFW-Tribal	Port Gamble Net Pens	Big Quilcene River	45,000	0	355,000	0	400,000	Y	Y
Tribal	Quilcene Bay Net Pens	George Adams (Purdy Creek)	45,000	45,000	110,000	0	200,000	Y	Y
WDFW	Dungeness	Dungeness	40,000	0	460,000	0	500,000	Y	Y
Tribal	Lower Elwha*	Elwha River	75,000	75,000	600,000	0	750,000	NA	NA

\* = DIT Group

<b>Total</b>	<b>825,000</b>	<b>395,000</b>	<b>11,196,000</b>	<b>0</b>	<b>12,416,000</b>
<b>Total Coho Production</b>	<b>12,416,000</b>				
<b>Percent marked</b>	<b>97%</b>				

# WDFW and TRIBAL COASTAL CHINOOK MASS MARKING and CODED-WIRE TAGGING 2010

Species: Chinook  
 Area: Coastal Washington  
 Brood: 2009  
 Releases: 2010 and 2011

11/25/2009

Agency	Hatchery	Stock	Number of fish to be released with a CWT		Number of fish to be released without a CWT		Total Production	Proposed to be marked this year (Y/N)	Marked in previous year (Y/N)
			Ad Clipped	Unclipped	Ad Clipped	Unclipped			
Tribal	Educket Creek	Sooes River falls	0	0	100,000	0	100,000	Y	Y
WDFW	Solduc	Solduc spring/summers	0	0	<b>320,000</b>	0	<b>320,000</b>	Y	Y
Tribal	Bear Springs	Solduc spring/summers	0	0	50,000	0	50,000	Y	Y
Tribal	Salmon River	Queets River falls	200,000	0	0	0	200,000	Y	Y
Tribal	Quinault River*	Quinault River falls	200,000	200,000	0	0	400,000	Y	Y
WDFW	Humptulips	Humptulips River falls	0	0	500,000	0	500,000	Y	Y
WDFW	Lake Aberdeen	Van Winkle Creek falls	0	0	50,000	0	50,000	Y	Y
WDFW	Wishkah	Wishkah River falls	0	0	200,000	0	200,000	Y	Y
WDFW	Satsop Springs	Satsop River falls	0	0	500,000	0	500,000	Y	Y
WDFW	Forks Creek *	Willapa River falls	200,000	200,000	1,600,000	0	2,000,000	Y	Y
WDFW	Nemah	Nemah River falls	0	0	2,000,000	0	2,000,000	Y	Y
WDFW	Naselle	Naselle River falls	0	0	3,000,000	0	3,000,000	Y	Y
<b>Total</b>			<b>600,000</b>	<b>400,000</b>	<b>8,320,000</b>	<b>0</b>	<b>9,320,000</b>		

**Total Chinook Production**  
**Percent Marked**

**9,320,000**  
**96%**

\* DIT



# WDFW and TRIBAL COASTAL COHO MASS MARKING and CODED-WIRE TAGGING 2010

11/13/2009

Species: Coho  
Area: Coastal Washington  
Brood: 2009  
Release Year: 2011

Agency	Hatchery	Stock	Number of fish to be released with a CWT		Number of fish to be released without a CWT		Total Production	Proposed to be marked this year (Y/N)	Marked in previous year (Y/N)
			Ad Clipped	Unclipped	Ad Clipped	Unclipped			
Tribal	Educket Creek	Sooes River	0	0	40,000	0	40,000	Y	Y
WDFW	Solduc	Solduc summers	0	0	100,000	0	100,000	Y	Y
WDFW	Solduc *	Solduc falls	75,000	75,000	<b>100,000</b>	0	<b>250,000</b>	Y	Y
Tribal	Salmon River *	Salmon River	75,000	75,000	500,000	0	650,000	Y	Y
WDFW	Humptulips	Humptulips	0	0	<b>600,000</b>	0	<b>600,000</b>	Y	Y
WDFW	Humptulips	Humptulips lates	0	0	<b>370,000</b>	0	<b>370,000</b>	Y	Y
WDFW	Friends Landing	Satsop River	0	0	<b>25,000</b>	0	<b>25,000</b>	Y	Y
WDFW	Mayr Brothers	Wishkah River	0	0	150,000	0	150,000	Y	Y
WDFW	Buzzard Creek	Wishkah River	0	0	25,000	0	25,000	Y	Y
WDFW	Lake Aberdeen	Van Winkle	0	0	30,000	0	30,000	Y	Y
WDFW	Bingham Creek *	Satsop River	75,000	75,000	0	0	<b>150,000</b>	Y	Y
WDFW	Bingham Creek	Satsop Lates	0	0	<b>150,000</b>	0	<b>150,000</b>	Y	Y
WDFW	Heimbigner Project	Satsop River	0	0	15,000	0	15,000	Y	Y
WDFW	Satsop Springs	Satsop River	40,000	0	<b>290,000</b>	0	<b>330,000</b>	Y	Y
WDFW	Skookumchuck	Satsop River	0	0	50,000	0	50,000	Y	Y
WDFW	Skookumchuck	Satsop lates	50,000	0	0	0	50,000	Y	Y
WDFW	Carlisle Lake	Satsop River	0	0	50,000	0	50,000	Y	Y
WDFW	Carlisle Lake	Satsop lates	0	0	50,000	0	50,000	Y	Y
WDFW	Eight Creek	Satsop lates	0	0	100,000	0	100,000	Y	Y
WDFW	Forks Creek *	Willapa River	75,000	75,000	350,000	0	500,000	Y	Y
WDFW	Forks Creek	Willapa lates	45,000	0	55,000	0	100,000	Y	Y
WDFW	Nemah	Nemah River	0	0	500,000	0	500,000	Y	Y
WDFW	Naselle	Naselle River	50,000	0	450,000	0	500,000	Y	Y
WDFW	Naselle	Naselle River lates	0	0	100,000	0	100,000	Y	Y
WDFW	Aberdeen Net Pens	Wishkah River	0	0	150,000	0	150,000	Y	Y
WDFW	Westport Net Pens	Humptulips River	0	0	<b>100,000</b>	0	<b>100,000</b>	Y	Y
<b>Total</b>			<b>485,000</b>	<b>300,000</b>	<b>4,350,000</b>	<b>0</b>	<b>5,135,000</b>		

Total Coho Production  
Percent Marked

5,135,000  
94%

\* DIT groups

# WDFW and CRITFC COLUMBIA RIVER COHO MASS MARKING and CODED-WIRE TAGGING 2010

Species: Coho  
 Area: Columbia River  
 Brood: 2009  
 Release Year: 2011

11/13/2009

Agency	Hatchery	Stock	Number of fish to be released with a CWT		Number of fish to be released without a CWT		Total Production	Proposed to be marked this year (Y/N)	Marked in previous year (Y/N)
			Ad Clipped	Unclipped	Ad Clipped	Unclipped			
WDFW	Sea Resources	Sea Resources	0	0	52,500	0	52,500	Y	Y
WDFW	Deep River Net Pens	Grays River - Type S	30,000	0	<b>785,000</b>	0	<b>815,000</b>	Y	Y
WDFW	Grays River	Grays River - Type N	30,000	0	120,000	0	150,000	Y	Y
<b>WDFW</b>	<b>Grays River</b>	<b>Grays River - Type S</b>	<b>30,000</b>	<b>0</b>	<b>120,000</b>	<b>0</b>	<b>150,000</b>	<b>Y</b>	<b>NA</b>
WDFW	Cathlamet FFA	Elochoman - Type N	0	0	15,000	0	15,000	Y	Y
WDFW	Cowlitz	Cowlitz - Type N	90,000	0	<b>1,745,434</b>	0	<b>1,835,434</b>	Y	Y
WDFW	Cowlitz	Cowlitz - Type N (wild)	<b>1,000,000</b>	0	0	0	<b>1,000,000</b>	NA	NA
WDFW	N Toutle	Toutle - Type S	30,000	0	120,000	0	150,000	Y	Y
WDFW	Kalama Falls	Kalama Falls - Type N	30,000	0	570,000	0	600,000	Y	Y
WDFW	Fallert Creek	Kalama Falls - Type S	30,000	0	70,000	0	100,000	Y	Y
WDFW	Lewis River*	Lewis River - Type S	75,000	75,000	730,000	0	880,000	Y	Y
WDFW	Lewis River*	Lewis River - Type N	75,000	75,000	665,000	0	815,000	Y	Y
WDFW	Washougal (Klickitat release)	Washougal - Type N	60,000	0	2,440,000	0	2,500,000	Y	N
WDFW	Washougal	Washougal - Type N	30,000	0	120,000	0	150,000	Y	Y
CRITFC	Klickitat	Klickitat - Type N	45,000	0	955,000	0	1,000,000	Y	Y
<b>WDFW</b>	<b>Wells</b>	<b>Willard - Type S</b>	<b>0</b>	<b>195,000</b>	<b>0</b>	<b>0</b>	<b>195,000</b>	<b>NA</b>	<b>NA</b>
<b>Total</b>			<b>1,555,000</b>	<b>345,000</b>	<b>8,507,934</b>	<b>0</b>	<b>10,407,934</b>		
<b>Total Coho Production</b>			<b>10,407,934</b>						
<b>Percent Marked</b>			<b>97%</b>						

\* DIT group

# WDFW and CRITFC COLUMBIA RIVER CHINOOK MASS MARKING and CODED-WIRE TAGGING 2010

Species: Chinook  
Area: Columbia River  
Brood: 2009  
Release Year: 2010 and 2011

04/9//2010

Agency	Hatchery	Stock	Number of fish to be released with a CWT		Number of fish to be released without a CWT		Total Production	Proposed to be marked this year (Y/N)	Marked in previous year (Y/N)
			Ad Clipped	Unclipped	Ad Clipped	Unclipped			
WDFW	Sea Resources	Sea Resources - Falls	0	0	107,500	0	107,500	Y	Y
WDFW	Deep River Net Pens	Elochoman - Falls	90,000	0	910,000	0	1,000,000	Y	Y
WDFW	Cowlitz	Cowlitz - Falls	100,000	0	4,900,000	0	5,000,000	Y	Y
WDFW	N Toutle	Toutle - Falls	90,000	0	1,400,000	0	1,490,000	Y	Y
WDFW	Kalama Falls	Kalama - Falls	90,000	0	3,500,000	0	3,590,000	Y	Y
WDFW	Fallert Creek	Kalama - Falls	90,000	0	3,410,000	0	3,500,000	Y	Y
WDFW	Lewis River	Lewis River - Falls (wild)	100,000	0	0	0	100,000	NA	NA
WDFW	Washougal	Washougal - Falls	200,000	200,000	2,600,000	0	3,000,000	Y	Y
CRITFC	Klickitat	Klickitat - falls	622,900	0	3,427,100	0	4,050,000	Y	Partial
CRITFC	Hanford Reach	Hanford - Wild	200,000	0	0	0	200,000	NA	NA
WDFW	Lyons Ferry	Lyons Ferry - Falls	400,000	0	0	0	400,000	NA	NA
WDFW	Lyons Ferry	Lyons Ferry - Falls 1+	225,000	225,000	0	0	450,000	NA	NA
WDFW	Ringold **	URBs	200,000	0	3,250,000	0	3,450,000	Y	N
WDFW	Priest Rapids	Priest Rapids - URBs	600,000	600,000	1,700,000	3,800,000	6,700,000	Y	Partial
<b>Total Fall Chinook</b>			<b>3,007,900</b>	<b>1,025,000</b>	<b>25,204,600</b>	<b>3,800,000</b>	<b>33,037,500</b>		
<b>Total Percent Marked</b>			<b>85%</b>						
WDFW	Turtle Rock	Wells - summers	400,000	0	600,000	0	1,000,000	Y	N
WDFW	Turtle Rock	Wells - summers 1+	100,000	0	0	0	100,000	NA	NA
WDFW	Chelan River Net Pen	Wells - summers 1+	0	0	100,000	0	100,000	Y	NA
WDFW	Dryden Pond	Wenatchee - summers 1+	864,000	0	0	0	864,000	NA	NA
WDFW	Wells	Wells - summers	484,000	0	0	0	484,000	NA	NA
WDFW	Wells	Wells - summers 1+	320,000	0	0	0	320,000	NA	NA
WDFW	Carlton Pond	Methow / Okanogan - summers 1+	400,000	0	0	0	400,000	NA	NA
WDFW	Similkameen Pond	Methow / Okanogan - summers 1+	576,000	0	0	0	576,000	NA	NA
<b>Total Summer Chinook</b>			<b>3,144,000</b>	<b>0</b>	<b>700,000</b>	<b>0</b>	<b>3,844,000</b>		
<b>Total Percent Marked</b>			<b>100%</b>						
WDFW	Deep River Net Pens	Cowlitz - springs 1+	50,000	0	300,000	0	350,000	Y	Y
WDFW	Cowlitz	Cowlitz - springs	100,000	0	807,539	0	907,539	Y	Y

WDFW	Cowlitz - upper river	Cowlitz - springs	0	0	0	300,000	300,000	NA	NA
WDFW	Friends of the Cowlitz	Cowlitz - springs 1+	0	0	55,000	0	55,000	Y	Y
WDFW	Fallert Creek	Kalama - springs 1+	0	0	125,000	0	<b>125,000</b>	Y	Y
WDFW	Gobar Pond	Kalama - springs 1+	125,000	0	250,000	0	375,000	Y	Y
WDFW	Lewis River*	Lewis River - springs 1+	150,000	150,000	600,000	0	900,000	Y	Y
WDFW	Fish First	Lewis River - springs 1+	0	0	150,000	0	150,000	Y	Y
WDFW	Lk Wenatchee Net Pens	White River - springs	0	150,000	0	0	150,000	NA	NA
CRITFC	Klickitat	Klickitat - springs 1+	<b>172,900</b>	0	<b>427,100</b>	0	600,000	Y	Y
WDFW	Tucannon	Tucannon - springs 1+	0	225,000	0	0	225,000	NA	NA
WDFW	Chiwawa Pond	Chiwawa - springs 1+	672,000	0	0	0	672,000	Y	Y
WDFW	Methow	Methow - springs 1+	0	183,000	0	0	183,000	NA	NA
WDFW	Twisp	Twisp - springs 1+	0	183,000	0	0	183,000	NA	NA
WDFW	Chewuch	Chewuch - springs 1+	0	184,000	0	0	184,000	NA	NA
<b>Total Spring Chinook</b>			<b>1,269,900</b>	<b>1,075,000</b>	<b>2,714,639</b>	<b>300,000</b>	<b>5,359,539</b>		
<b>Total Percent Marked</b>			<b>74%</b>						
<b>Total Chinook</b>			<b>7,421,800</b>	<b>2,100,000</b>	<b>28,619,239</b>	<b>4,100,000</b>	<b>42,241,039</b>		
<b>Total Percent Marked</b>			<b>85%</b>						

\* DIT group

## 2010 YIN Releases - Yakima River - Planned

2/5/2010

Facility	BY	Species	Stock	Release Goal	Release/Acclimation Location	Release Date	Release Waterbody	Marks
Prosser Hatchery	2008	Fall Chinook	YN URB	17,000	Prosser	04/09/10	Yakima River	17,000 PIT
	2009	Fall Chinook	LWFH URB	1,200,000	Prosser	04/23/10	Yakima River	10% AD Clip+CWT and remainder AD clip only
	2009	Fall Chinook	LWFH URB	480,000	Prosser	04/16/10	Yakima River	4,000 PIT, 476,000 AD Clip only
	2009	Fall Chinook	YN URB	17,000	Prosser	04/09/10	Yakima River	17,000 PIT
	2009	Fall Chinook	YN URB	280,000	Prosser	04/16/10	Yakima River	unmarked
	2009	Fall Chinook	Wells Su. Run	202,000	Stiles Acclimation Pond	04/29/10	Naches River	30,000 PIT 172,000 CWT only
Marion Drain	2009	Fall Chinook	Marion Drain	30,000	Marion Drain	04/09/10	Marion Drain	unmarked
	Total	Fall Chinook		2,226,000				

Eagle Creek NFH	2008	Coho	Eagle Creek	135,086	Stiles Acclimation Pond	4/12/2010	Naches River	100% AD
	2008	Coho	Eagle Creek	15,846	Holmes Acclimation Pond	4/12/2010	Upper Yakima	100% AD
	2008	Coho	Eagle Creek	134,850	Lost Creek Acclimation Pond	4/12/2010	Naches River	100% AD
	2008	Coho	Eagle Creek	205,926	Easton	4/12/2010	Upper Yakima	100% AD
	2008	Coho	Eagle Creek	37,806	Boone	4/12/2010	Upper Yakima	100% AD
	2008	Coho	Eagle Creek	45,060	Prosser	4/12/2010	Upper Yakima	100% AD
Prosser Hatchery	2008	Coho	YNProsser	74,438	Stiles Acclimation Pond	4/12/2010	Naches River	100% CWT
	2008	Coho	YNProsser	74,342	Holmes Acclimation Pond	4/12/2010	Upper Yakima	100% CWT
	2008	Coho	YNProsser	38,159	Lost Creek Acclimation Pond	4/12/2010	Naches River	100% CWT
	2008	Coho	YNProsser	137,659	Prosser	4/12/2010	Yakima River	No Mark

COHO Summary:	Totals per Pond	Additional Marks
Stiles Acclimation Pond	209,524	5000 PIT per pond
Holmes Acclimation Pond	90,188	5000 PIT per pond
Lost Creek Acclimation Pond	173,009	5000 PIT per pond
Boone Pond	37806	1264
Easton Ponds	205,926	2500
Prosser Release	182,719	2500
Total All Sites	899,172	

Cle Elum Hatchery				as of 1/31/10:				
Clark Flat Accl.	2008	Spring Chinool	Upper Yakima	280,960	Clark Flat Accl.	03/15/10	Upper Yakima	100% AD + Elastomer Eye + CWT; ~16,000 PIT
Easton Accl.	2008	Spring Chinool	Upper Yakima	288,342	Easton Accl.	03/15/10	Upper Yakima	100% AD + Elastomer Eye + CWT; ~12,000 PIT
Jack Crk Accl.	2008	Spring Chinool	Upper Yakima	281,928	Jack Crk Accl.	03/15/10	Upper Yakima	100% AD + Elastomer Eye + CWT; ~12,000 PIT

### ODFW's 2010 FISH MARKING PROGRAM

	Ad+CWT	Ad Only	CWT Only	AdLV+CWT	AdRV+CWT	AdRV	AdLMax	AdRMax	LV Only	RV Only	Totals
<b>Spr Chin</b>	2,418	10,640	339	0	0	0	250	240	0	0	<b>13,887</b>
<b>Fall Chin</b>	2,300	17,130	680	50	0	0	0	0	925	10	<b>21,095</b>
<b>Coho</b>	300	6,455	150	0	0	0	0	150	0	0	<b>7,055</b>
<b>Sum Sthd</b>	0	797	0	230	100	60	0	0	0	0	<b>1,187</b>
<b>Win Sthd</b>	0	980	0	0	0	50	0	100	0	0	<b>1,130</b>
<b>Sockeye</b>	0	0	100	0	0	0	0	0	0	0	<b>100</b>
<b>Total</b>	<b>5,018</b>	<b>36,002</b>	<b>1,269</b>	<b>280</b>	<b>100</b>	<b>110</b>	<b>250</b>	<b>490</b>	<b>925</b>	<b>10</b>	<b>44,454</b>

**Total Fish Marked: 44,454**

**Total CWTs: 6,667**

**Total Ad Clips: 42,250**  
**(single + combination marks)**

**Fish with Adipose Fin Present: 2,204**

***\*\* All numbers x 1,000***

# Requests for Marking Variance - List - 2010

Regional Mark Committee; Apr 2010

====

## 1: Request for Marking Variances

Agency: DFO Date: March 22, 2010

Marking Coordinator: a) Name: Roberta Cook b) Email: roberta.cook@dfo-mpo.gc.ca

1. Mark Requested: Adipose Clip

2. Details of Marking

- a) Number of fish: 5000
- b) Species and Run: Chum- fall
- c) Brood year: 2009
- d) Stock(s): Silver Creek (transplant to Toon River)
- e) Hatchery(ies): Silver Creek
- f) Geographic area(s): North Coast BC
- g) Release date: May, 2010
- h) Duration of this marking program: 1 day

3. Specific Management and/or Research Objectives:

Marking transplant to Toon River as identification of hatchery fish in escapement. No chum have been counted in Toon River for several years.

4. Impact on Coastwide CWT Programs

- a) Predicted number observed recoveries by state/province and by year:  
4 in 2012, 78 in 2013, 13 in 2014; mainly in North Coast BC- not likely to affect Alaskan fisheries significantly.

- b) Changes to current CWT sampling program: None needed- chum are not sampled for CWTs in North Coast
- c) Other

5. Specify Expected Benefits: Identification of hatchery fish in escapement to see if transplant is working.

6. Alternatives Considered (specify reason(s) for rejection): other finclips result in higher mortality and regeneration of clipped fins.

Please forward request to: George Nandor, Regional Mark Coordinator

====

## 2: Request for Marking Variances

Agency: DFO Date: March 22, 2010

Marking Coordinator: a) Name: Roberta Cook b) Email: roberta.cook@dfo-mpo.gc.ca

1. Mark Requested: Agency-only wire tagging

2. Details of Marking

- a) Number of fish: 55,000
- b) Species and Run: sockeye, fall run
- c) Brood year: 2009
- d) Stock(s): Cultus Lake
- e) Hatchery(ies): Inch Creek Hatchery Sockeye Satellite
- f) Geographic area(s): British Columbia- Lower Fraser
- g) Release date: April, 2011
- h) Duration of this marking program: 6 days

3. Specific Management and/or Research Objectives

(give examples): marking sockeye so hatchery-reared smolts can be distinguished from hatchery-reared fry releases and from progeny of natural spawners on the spawning grounds

4. Impact on Coastwide CWT Programs: none (no sockeye sampled for CWTs)

- a) Predicted number observed recoveries by state/province and by year:  
none, unless 1 or 2 are mistaken for coho.
- b) Changes to current CWT sampling program: none
- c) Other

5. Specify Expected Benefits: ability to distinguish hatchery-releases from progeny of natural spawners in a system of conservation concern and the ability to compare rates of return to the river for 2 hatchery release strategies.

6. Alternatives Considered (specify reason(s) for rejection): not marking or CWTs with complete codes. The first doesn't allow any analysis and the second is too expensive and isn't really necessary.

Please forward request to: George Nandor, Regional Mark Coordinator

====

## 3: Request for Marking Variances

Agency: DFO Date: March 22, 2010

Marking Coordinator: a) Name: Roberta Cook b) Email: roberta.cook@dfo-mpo.gc.ca

1. Mark Requested: Adipose Clip

2. Details of Marking

- a) Number of fish: 200,000
- b) Species and Run: Chum- summer run
- c) Brood year: 2009
- d) Stock(s): Snootli Creek
- e) Hatchery(ies): Snootli Creek Hatchery



- f) Geographic area(s): British Columbia- Central Coast  
g) Release date: end of March 25 to early April, 2010  
h) Duration of this marking program: 1 week
3. Specific Management and/or Research Objectives  
(give examples): Marking contributes to management of the Area 8 chum fishery and is used as the hatchery fed fry indicator stock for the Central Coast.
4. Impact on Coastwide CWT Programs: None (chum are not sampled for CWTs)  
a) Predicted number observed recoveries by state/province and by year: 70 in 2012, 250 in 2013 & 20 in 2014, all in BC.  
b) Changes to current CWT sampling program: None necessary  
c) Other
5. Specify Expected Benefits: easier to clip adipose fin than ventral fins (used on this stock to date), lower clip regeneration rate and lower clipping-related mortality for adipose clips.
6. Alternatives Considered (specify reason(s) for rejection): used left or right ventral clips in the past, but they're more difficult to apply, regenerate more easily and have higher post-clipping mortality
- Please forward request to: George Nandor, Regional Mark Coordinator

====

#### 4: Request for Marking Variances

- Agency: \_\_\_\_\_ DFO \_\_\_\_\_ Date: \_\_\_\_\_ March 22, 2010 \_\_\_\_\_  
Marking Coordinator: a) Name: \_\_\_\_\_ Roberta Cook \_\_\_\_\_ b) Email: \_\_\_\_\_ roberta.cook@dfo-mpo.gc.ca
1. Mark Requested: Adipose Clip
2. Details of Marking  
a) Number of fish: 55,000  
b) Species and Run: Sockeye- summer  
c) Brood year: 2009  
d) Stock(s): Atnarko River  
e) Hatchery(ies): Snootli Creek  
f) Geographic area(s): Central Coast BC  
g) Release date: May 2010  
h) Duration of this marking program: 4 days
3. Specific Management and/or Research Objectives:  
Identification of hatchery fish in escapement to see if depressed stock is responding to enhancement.
4. Impact on Coastwide CWT Programs: None, unless a couple of them are mistaken for coho, but coho are not mass marked in north and central BC or in Alaska.  
a) Predicted number observed recoveries by state/province and by year: should be recovered only in escapement.  
b) Changes to current CWT sampling program: none needed  
c) Other
5. Specify Expected Benefits: to determine whether enhancement of this stock appears to be working.
6. Alternatives Considered (specify reason(s) for rejection): other finclips result in higher mortality and regeneration of clipped fins.
- Please forward request to: George Nandor, Regional Mark Coordinator

====

#### 5: Request for Marking Variances

- Agency: \_\_\_\_\_ DFO \_\_\_\_\_ Date: \_\_\_\_\_ March 22, 2010 \_\_\_\_\_  
Marking Coordinator: a) Name: \_\_\_\_\_ Roberta Cook \_\_\_\_\_ b) Email: \_\_\_\_\_ roberta.cook@dfo-mpo.gc.ca
1. Mark Requested: Adipose clips
2. Details of Marking  
a) Number of fish: 650,000  
b) Species and Run: sockeye, fall run  
c) Brood year: 2009  
d) Stock(s): Cultus Lake  
e) Hatchery(ies): Inch Creek Hatchery Sockeye Satellite  
f) Geographic area(s): British Columbia- Lower Fraser  
g) Release date: July-October, 2010  
h) Duration of this marking program: 18 days
3. Specific Management and/or Research Objectives  
(give examples): marking sockeye so hatchery-reared fry releases can be distinguished from hatchery-reared smolts and from progeny of natural spawners on the spawning grounds
4. Impact on Coastwide CWT Programs: none (no sockeye sampled for CWTs)  
a) Predicted number observed recoveries by state/province and by year: none, unless 1 or 2 are mistaken for coho.  
b) Changes to current CWT sampling program: none  
c) Other
5. Specify Expected Benefits: ability to distinguish hatchery-releases from progeny of natural spawners in a system of conservation concern and the ability to compare rates of return to the river for 2 hatchery release strategies.
6. Alternatives Considered (specify reason(s) for rejection): not marking or CWTs with complete codes. The first doesn't allow any analysis and the second is too expensive and isn't really necessary.
- Please forward request to: George Nandor, Regional Mark Coordinator

## Marking Variance Announcement

### 2010 Mark Committee Meeting

Boise, Idaho  
April 13-14, 2010

Oregon Department Fish and Wildlife: Ken Johnson (971) 673-6059 (coordinator)

<b>Mark Used:</b>	Adipose clip with Agency-only wire: (Code 09blank)
<b>Number of Fish:</b>	900,000
<b>Additional Marking:</b>	300,000 with Ad+CWT
<b>Species/Run:</b>	Spring Chinook
<b>Brood Year:</b>	2009
<b>Stock:</b>	McKenzie River
<b>Hatchery:</b>	McKenzie
<b>Geographic Area:</b>	Upper Willamette River – Oregon
<b>Tagging Date:</b>	June -July, 2010
<b>Release Date:</b>	Three releases: 11/07/10; 02/01/11; 03/01/11)
<b>Duration:</b>	3rd year (Extended duration likely but unknown)

### Management Objectives:

#### Overview of Mass Marking Objectives:

Mass marking spring Chinook production at McKenzie Hatchery in the upper Willamette River is part of an ongoing mass marking program to provide fishing opportunity for Willamette Valley hatchery origin spring Chinook while minimizing impacts to wild/natural origin fish. In addition to fishery enhancement, the mass mark program is facilitating hatchery and wild fish escapement accounting in natural spawning areas.

The 2008 Willamette Biological Opinion identifies the McKenzie spring Chinook stock as "*a stronghold population and remains the most productive run of natural-origin spring Chinook in the basin*" (Executive Summary - page 10). Concerns are noted in the BiOP that strays from other Willamette Basin hatcheries would continue to impact this population by decreasing fitness and productivity. Therefore, a sorter/separator site is to be installed at Leaburg Dam on the McKenzie River to create a natural fish sanctuary.

#### 100% Wire Tagging at McKenzie Hatchery (3<sup>rd</sup> Year):

The entire production of McKenzie Hatchery's 1.21 million spring Chinook (McKenzie brood 2009) is **tentatively** scheduled to be marked with wire tags in mid July, 2010 per request of the U.S. Army Corps of Engineers (COE).

At this point in time, the decision is final that 300,000 fish will be Ad+CWT marked this year and the remaining balance of 900,000 fish will be Adipose clipped. However, discussions continue on whether or not to also insert Agency Only tags in the mass marked 900,000 fish. Part of the discussion focuses on the cost of inserting 900,000 more tags when the sorter is not yet on the drawing board and potentially might not be built. In addition, there is concern about the impact

on the number of snouts that will need to be taken by the hatchery and processed by ODFW's Tag Recovery Lab in Clackamas.

**Impacts to Coastwide CWT Programs:** Based on CWT recoveries for prior brood years 2000-2002, an estimated total of 757 adipose clipped McKenzie Hatchery spring Chinook (brood 2008) would be encountered over 3-4 years in the various recovery regions from Alaska down through Oregon. Alaska, British Columbia, and Washington would see a total of 84, 112, and 112, respectively, in their fisheries. Not surprisingly, the largest number would be encountered in the Columbia River (366).

The number of encounters, however, could be substantially higher. A comparable analysis on Agency only tag encounters for McKenzie spring Chinook (Brood 2009) was done *using CWT recoveries for broods 1999-2001*. Based on a release group of 900,000 fish, a total of 1,400 Agency only tags in McKenzie spring Chinook would be encountered coastwide. The total encounters estimated for Alaska, British Columbia, and Washington regions would be 216, 369, and 107, respectively. And like the 2008 brood estimates, the largest number of encounters (625) were predicted for the Columbia River. See Table 1.

**Expected Benefits:** See Management Objectives above.

**Alternatives Considered:** 100% CWT (full codes) tagging. The increased cost for an additional 900,000 fish was not a viable option.

**Date of this Update:** April 12, 2010

**Table 1. Oregon McKenzie Hatchery Spring Chinook (Brood 2010)**  
**Potential Encounter Rates based on 100% Tagging with Agency Only Wire**

Recovery Region	Fishery	Encounter Rate of CWT Groups BY 1999-2001	Estimated No. of MM Fish Encountered <i>(Encounters spread over 3-4 years)</i> <i>(Col. 3 x 900,000 Agency Only fish)</i>	Electronic Sampling Currently in Place
Alaska	Commercial	0.00019743	178	No
	Sport	0.00004200	38	No
BC Marine North	Commercial	0.00011441	103	Yes**
	Sport	0.00003993	36	No (Voluntary)
BC Marine South	Commercial	0.00022252	200	Yes**
	Sport	0.00003344	30	No (Voluntary)
Washington	Commercial	0.00007477	67	Yes
	Sport	0.00004423	40	Yes
Columbia River	Commercial	0.00037382	336	Yes*
	Sport	0.00032133	289	Yes*
Oregon Coast	Commercial	0.00004779	43	No*
	Sport	0.00004419	40	No*
California	Commercial			No
	Sport			No
			TOTAL:	1,400

\* Spring and summer run Chinook fisheries are sampled electronically by ODFW and WDFW, fall run Chinook fisheries are sampled visually by ODFW and electronically by WDFW.

\*\* Commercial Northern BC fisheries for Chinook are electronically sampled. However, CWTs from unclipped fish are not extracted.

## History of Mark Meeting Locations

Year	Month	City	State/Prov.
1976	December	Portland	OR
1978	February	Portland	OR
1979	January	Portland	OR
1980	January	Portland	OR
1981	March	Portland	OR
1982	January	Portland	OR
1983	January	Portland	OR
1984	February	Portland	OR
1985	February	Portland	OR
1986	February	Portland	OR
1987	February	Portland	OR
1988	February	Portland	OR
1989	February	Portland	OR
1990	February	Portland	OR
1991	February	Seattle	WA
1992	February	Vancouver	BC
1993	February	Portland	OR

Year	Month	City	State/Prov.
1994	February	Olympia	WA
1995	February	Portland	OR
1996	February	San Francisco	CA
1997	April	Juneau	AK
1998	April	Lewiston	ID
1999	April	Vancouver	BC
2000	April	Silverdale	WA
2001	April	Newport	OR
2002	April	Pacific Grove	CA
2003	April	Sitka	AK
2004	May	Lewiston	ID
2005	April	Tofino	BC
2006	April	Port Angeles	WA
2007	April	Warm Springs	OR
2008	April	Pacific Grove	CA
2009	May	Metlakatla	AK
2010	April	Boise	ID

## 2010 Mark Meeting Attendees at Work





**Field Trip to the IDFG Eagle Facility  
(Red Fish Lake Sockeye Captive Brood, Genetics Lab and Fish Health Lab)**













