

**8. GRAYS HARBOR SALMON MANAGEMENT
A 10 YEAR OVERVIEW**

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“GREEN SHEET”

Meeting dates:	February 5-6-7, 2009 Meeting (briefing)	#8
Agenda item #:	Grays Harbor Salmon Management a 10 year overview – briefing	
Staff Contact:	Kirt Hughes, Region 6 Fish Program Manager (Fish Program)	
Presenter(s):	Kirt Hughes, Region 6 Fish Program Manager (Fish Program)	

Background:

In November 2008, WDFW staff received a request from the Washington Fish and Wildlife Commission, to provide a briefing on Grays Harbor: salmon hatchery production, escapement goals, actual escapement, and harvest over the past 10 years. This briefing is to include information on Grays Harbor treaty harvest and the process for developing season allocations.

Overview

In the Grays Harbor Watershed WDFW co-manages salmon resources with the Quinault Indian Nation. Within the non-treaty harvest share there are three components that are managed for: sport, commercial, and the Chehalis Tribe.

Within Grays Harbor, there are primarily two separate units considered for the purpose of salmon management: the Chehalis River and its tributaries upstream of and including the Hoquiam River and the Humptulips River and its tributaries. A third unit, the south bay which includes the Elk and Johns rivers and their tributaries is a minor component and generally is associated with the Chehalis for management purposes.

Hatchery Production

Hatchery production within the Grays Harbor Watershed is primarily at WDFW hatchery facilities or through cooperative volunteer projects supported by WDFW hatchery facilities. The one exception of note is Grays Harbor Community College (GHCC) however WDFW does work closely with the college and supports much of the early rearing prior to transferring juvenile fish to GHCC for final rearing and release. Detailed accounting of hatchery production goals are available in the Future Brood Document (FBD). The FBD is the pre-season planning document which provides detail for egg-take, transfers and releases.

Chum

Hatchery production of chum in Grays Harbor is restricted to the Chehalis Basin and represents the smallest amount of production in both pounds and numbers. Hatcheries release chum as unfed and fed-fry depending on the facility and release group.

Hatchery chum production is not mass-marked and as a result is indistinguishable from natural production. Total annual release of hatchery chum into the Chehalis Basin is 545,000 fry.

Chinook

Hatchery production of Chinook in Grays Harbor occurs at Humptulips Hatchery and at three facilities in the Chehalis basin. Most Chinook are released as sub-yearlings. Until recently only small groups that were released received an externally visible mark (adipose fin clip). In the Humptulips, the annual release of hatchery reared chinook is 500,000 sub-yearlings. The annual goal for release of hatchery reared chinook in the Chehalis basin is 750,000. Currently, all hatchery Chinook in both the Humptulips and the Chehalis are adipose fin clipped.

Coho

Hatchery production of coho in Grays Harbor is by far the most substantial hatchery production in the watershed. Most of the production is released as yearlings. Coho production has been mass marked since 1999. Humptulips Hatchery annually releases 1,200,000 yearling coho into the Humptulips River. Through the various cooperative projects, netpen, and on-station releases at WDFW hatchery there are 2,255,000 coho released into the Chehalis Basin and independent tributaries to Grays Harbor.

Escapement Goals

The goal for hatchery escapement is to collect enough broodstock to achieve the eggtake goal in the FBD, by facility by species. More recently, that goal includes an element of broodstock management which incorporates natural origin fish into hatchery production for programs that are defined as integrated. All chum, chinook, and coho programs in Grays Harbor are considered integrated.

Hatchery and Natural Escapement Goals for Chum, Chinook and Coho stocks in Grays Harbor.

	<u>Humptulips</u>		<u>Chehalis</u>		<u>Grays Harbor Total</u>	
	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural
Chum	na	*	400	*	400	21,000
Chinook	369	2,236	47	12,364	416	14,600
Coho	2,120	6,894	2,850	28,506	4,970	35,400

* No goal established for specific river systems.

Pre-season planning

The process and procedures followed for the pre-season planning and season setting will be described and presented at the Commission Meeting. This will include: the number and types of meetings, the materials considered and used and the participants in the process.

Policy issue(s) you are bringing to the Commission for consideration:

This presentation is anticipated to serve as an informational briefing only.

Public involvement process used and what you learned:

Involvement by the public in salmon management associated with Grays Harbor and its tributaries fluctuates from year to year.

Action requested:

None. Briefing Only.

Draft motion language:

N/A

Justification for Commission action:

N/A

Form revised 10/25/07

Table 1. Hatchery Facilities in Grays Harbor Watershed

Management Unit	Facility	River
Humtulpis	Humtulpis Hatchery	Humtulpis River
Chehalis	Skookumchuck Hatchery	Skookumchuck River
Chehalis	Bingham Creek Hatchery	Satsop River
Chehalis	Satsop Springs	Satsop River
Chehalis	Mayr Bros Hatchery	Wishkah River
Chehalis	Lake Aberdeen Hatchery	Van Winkle Creek
Chehalis	Grays Harbor Community College	Alder Creek

Table 2. Grays Harbor Chum - Future Brood Document – Production

Chehalis Basin Chum Hatchery Production			
Facility	Program		Release #
Mayr Bros Hatchery	MAYR BROTHERS REARIN		100,000
Lake Aberdeen Hatchery	GRAYS HARBOR COLLEGE		45,000
Bingham Creek Hatchery	BINGHAM CR HATCHERY		200,000
	SATSOP SPRINGS PONDS		200,000
Total Chehalis Basin Chum Hatchery Production			545,000
TOTAL GRAYS HARBOR HATCHERY CHUM PRODUCTION			545,000

Table 3. Grays Harbor Chinook - Future Brood Document – Production

Humtulpis Basin Chinook Hatchery Production			
Facility	Program		Release #
Humtulpis Hatchery	HUMPTULIPS HATCHERY		500,000
Total Humtulpis Basin Chinook Hatchery Production			500,000
Chehalis Basin Chinook Hatchery Production			
Facility	Program		Release #
Mayr Bros Hatchery	MAYR BROTHERS REARIN		200,000
Lake Aberdeen Hatchery	LK ABERDEEN HATCHERY		50,000
Bingham Creek Hatchery	SATSOP SPRINGS PONDS		500,000
Total Chehalis Basin Chinook Hatchery Production			750,000
TOTAL GRAYS HARBOR HATCHERY CHINOOK PRODUCTION			1,250,000

Table 4. Grays Harbor Coho - Future Brood Document - Production

Humptulips Basin Coho Hatchery Production		
Facility	Program	Release #
Humptulips Hatchery	HUMPTULIPS HATCHERY	1,200,000
Total Humptulips Basin Coho Hatchery Production		
Chehalis Basin Coho Hatchery Production		
Facility	Program	Release #
Mayr Bros Hatchery	ABERDEEN NET PENS	150,000
	BUZZARD CR COOP	25,000
	GRAYS HARBOR GILLNET (EF Hoquiam)	190,000
	OCOSTA HIGH PROJECT - RSI (Johns R./Eik R.)	50,000
	Lake Aberdeen Hatchery	GIRL SCOUTS/LIONS CL
Bingham Creek Hatchery	LK ABERDEEN HATCHERY	30,000
	BINGHAM CR HATCHERY	600,000
	DEEP CR 23.0957	90,000
	DILLENBAUGH CR PROJECT	50,000
	EIGHT CK/UPR CHEHALI	100,000
	ELMA FFA	1,000
	FRIENDS LANDING NP	50,000
	GRAYS HARB4-H/HARBEL	28,500
	HEIMBIGNER PROJECT	45,000
	PEDERSEN PROJECT	45,000
	REG 6 ED COOPS	25,000
	ROCHESTER FFA	25,000
	SATSOP SPRINGS PONDS	450,000
	SKOOKUMCHUCK HATCHERY	100,000
	WESTPORT NET PENS	200,000
Total Chehalis Basin Coho Hatchery Production		2,255,000
TOTAL GRAYS HARBOR HATCHERY COHO PRODUCTION		3,455,000

Table 5. Hatchery and Natural Escapement Goals for Chum, Chinook and Coho stocks in Grays Harbor.

	Humptulips		Chehalis		Grays Harbor Total	
	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural
Chum	na	na	400	na	400	21,000
Chinook	369	2,236	47	12,364	416	14,600
Coho	2,120	6,894	2,850	28,506	4,970	35,400

Table 6. Grays Harbor Chum Run-reconstruction

	Catch		Escapement		Forecast Runsize		Total Runsize
	Treaty	Non-treaty	Hatchery	Natural	Hatchery	Natural	
1998	3,218	11	na ¹	35,188	na ²	13,370	38,417
1999	2,875	59	na ¹	12,260	na ²	46,400	15,194
2000	1,081	763	na ¹	8,936	na ²	32,000	10,780
2001	688	243	na ¹	24,898	na ²	20,238	25,829
2002	3,902	4,889	na ¹	56,175	na ²	35,773	64,966
2003	5,790	5,181	na ¹	37,947	na ²	42,064	48,918
2004	9,620	5,405	379	17,115	na ²	45,352	32,519
2005	5,464	1,123	425	13,058	na ²	38,038	20,070
2006	4,038	91	442	10,826	na ²	29,370	15,397
2007	598	149	291	10,070	na ²	12,000	11,108

1/ Hatchery chum escapement is to hatchery rack.

2/ Hatchery chum are not a component of the pre-season forecast.

Table 7. Humptulips River Chinook Run Reconstruction

	Catch		Escapement		Forecast		Total Runsize
	Treaty	Non-treaty	Hatchery	Natural	Hatchery	Natural	
1998	1,528	1,779	968	1,756	na ¹	4,400	6,031
1999	883	26	804	1,458	na ¹	2,675	3,171
2000	246	66	571	1,033	1,478	2,174	1,916
2001	399	290	615	1,112	874	1,618	2,416
2002	426	-	886	1,602	816	1,481	2,914
2003	330	1,093	1,561	2,823	1,114	2,463	5,807
2004	806	4,155	1,221	2,209	1,171	2,990	8,391
2005	762	377	2,511	4,541	1,243	2,054	8,191
2006	2,052	1,452	2,431	4,397	3,139	3,351	10,332
2007	1,681	2,229	485	1,567	4,040	4,614	5,271

1/ Hatchery forecast for 1998 and 1999 were not available in dataset.

Table 8. Chehalis River Chinook Run Reconstruction

	Catch		Escapement		Forecast		Total Runsize
	Treaty	Non-treaty	Hatchery	Natural	Hatchery	Natural	
1998	2,607	1,400	654	9,720	na ¹	14,100	14,381
1999	1,043	133	1,187	7,738	na ¹	9,302	10,101
2000	3,043	2,254	879	7,055	1,173	21,788	13,231
2001	3,486	5,253	506	7,228	1,046	21,864	16,473
2002	537	2,981	1,120	8,523	1,564	15,124	13,161
2003	521	218	1,297	14,984	1,107	9,023	17,020
2004	2,692	1,975	1,474	25,644	828	15,377	31,785
2005	1,498	437	1,025	12,498	1,074	9,609	15,458
2006	1,686	488	414	11,557	642	13,288	14,145
2007	789	1,190	206	9,697	194	15,501	13,413

1/ Hatchery forecast for 1998 and 1999 are not available in dataset.

Table 9. Humptulips Coho Run Reconstruction

	Catch		Escapement		Forecast ^{1/}		Total Runsize
	Treaty	Non-treaty	Hatchery	Natural	Hatchery	Natural	
1998	5,609	1,280	7,971	5,093	na	na	19,953
1999	5,813	1,555	18,060	3,666	na	na	29,094
2000	2,497	1,754	11,622	4,406	na	na	20,279
2001	5,023	5,473	31,820	16,208	na	na	58,524
2002	1,914	2,906	10,361	19,548	na	na	34,729
2003	2,658	3,589	31,229	7,487	23,225	5,793	44,963
2004	3,066	3,929	35,870	14,200	34,349	19,124	57,065
2005	6,417	4,948	34,225	7,481	25,041	13,957	53,071
2006	2,260	616	7,310	1,772	23,788	10,999	11,958
2007	3,800	2,345	6,673	1,334	34,302	9,705	14,152

1/ Forecast for Grays Harbor coho prior to 2003 were a single basin-wide forecast; see Chehalis coho below for Grays Harbor coho forecast prior to 2003.

Table 10. Chehalis Coho Run Reconstruction

	Catch		Escapement		Forecast ^{1/}		Total Runsize
	Treaty	Non-treaty	Hatchery	Natural	Hatchery	Natural	
1998	7,821	2,002	6,317	29,799	26,291	28,309	45,939
1999	6,248	5,537	9,257	29,682	25,513	51,556	50,724
2000	8,300	8,839	9,344	33,648	75,802	47,755	60,131
2001	10,480	19,695	36,750	63,892	57,053	46,440	130,817
2002	12,211	18,165	27,644	90,518	50,850	50,640	148,538
2003	9,383	16,640	25,550	77,465	19,286	46,968	129,038
2004	14,610	12,397	8,248	47,498	23,383	100,625	82,753
2005	16,815	14,229	11,672	37,605	23,590	77,105	80,321
2006	6,422	3,893	6,488	12,767	25,697	56,290	29,571
2007	5,122	11,118	6,221	22,935	35,546	46,665	45,397

1/ Forecast for Grays Harbor coho prior to 2003 were a single basin-wide forecast; see Chehalis coho below for Grays Harbor coho forecast prior to 2003.

COMMISSION REQUEST TO DEPARTMENT

Title of Request: Grays Harbor Salmonid Management

Commissioner: Miranda Wecker

Priority Level (put one check in each row):

Importance: [] High [X] Medium [] Low

Urgency: [] High [X] Medium [] Low

Date Requested: November 7-8, 2008 **Date Assigned:** November 12, 2008

Assigned To (staff person): Fish Program (Kirt Hughes)

Requested Due Date: February or March 2009

Knowledge or Action Being Requested (narrative). Describe what you want to know. Be specific.

Department to provide a briefing on Grays Harbor salmon hatchery production, escapement goals, actual escapement, and harvest over the past 10 years. Include information on treaty harvest and process for developing season allocations.

Output Requested (e.g., telephone call, memo, material from files, new report, presentation, other):

Briefing at upcoming Commission meeting.