Sayt-K'il'im-Goot – One Heart, One Path, One Nation

2014 NASS RIVER SALMON STOCK ASSESSMENT UPDATE – THURSDAY, 14 AUGUST

The following update is the eighth general public Nass River salmon and summer-run steelhead stock assessment update for 2014 from the Nisga'a Fisheries and Wildlife Department of Nisga'a Lisims Government.

All data presented in this update are preliminary and subject to change with further assessment information that becomes available and should be interpreted cautiously. For in-season assessment purposes only.

NASS RIVER ASSESSMENT OPERATIONS UPDATE

OPERATIONAL ASSESSMENT INFORMATION FOR 2014

Fishwheel Assessment data: 1 June – 13 August
Meziadin Fishway data: 1 July – 13 August
Kwinageese Weir data: 10 July – 13 August

GITWINKSIHLKW (GW) FISHWHEELS (NASS TEST FISHERY –STARTED IN 1994 [21st year]):

The Nass River test fishery fishwheels began operation on 1 June (FW1 and FW2) for tagging and historical catch index assessments for salmon and summer-run steelhead. All fish caught in the GW fishwheels are released alive after tagging and/or counting. Fishwheels 1 and 2 have been operating at below average water levels since 6 July but water levels rose on 10 August. The current water level at the GW fishwheels is the same as the 1994-2013 average (1.7 m). Both fishwheels have been fishing at their alternate (low water) fishing sites since 25 July. A chart of the water levels at the test fishery follows the text summary that compares current levels to historical levels. The Nass River water temperature is currently 0.5°C lower than the 1994-2013 average (9.7°C vs. 10.1°C).

GREASE HARBOUR (GH) FISHWHEELS:

Start-up dates of the GH fishwheels were 8 June (FW3, FW5, and FW6) and 1 July (FW4). Four fishwheels are currently operating at Grease Harbour (upstream of Ts'im Anwiihlist). Fishwheel 4 was re-started on 5 August after being shut down since 23 July and continues to operate. These fishwheels are used for in-season mark-recapture tag recoveries, abundance estimates, additional tagging (adult Chinook and Chum salmon, and Pacific Lamprey), and for harvesting (Sockeye Salmon for the Nisga'a Lisims Government's Nass River In-land Demonstration Fishery that is part of DFO's Inland Selective Demonstration Fishery Program and Coho Salmon as part of the Nisga'a Treaty). Of the 21,300 Sockeye caught at the GH fishwheels, 4,915 were harvested for the selective demonstration and treaty fisheries and 16,373 were released (see Nisga'a harvest summary in section below).

The Nass fishwheel catches are currently above average for Coho, steelhead, even-year Pink, and Pacific Lamprey, and below average for Sockeye, Chinook, and Chum salmon. Fishwheel catches of salmon, steelhead, and Lamprey to date are shown below including tagging results and jack salmon caught.

FISHWHEEL CATCH SUMMARIES	SOCK	CHIN	COHO	STEEL	PINK-EVE	CHUM	LAMP
FISHWHEEL TOTAL CATCH OF ADULTS	**31,084**	**1,662**	**5,395**	**388**	**10,330**	**29**	**487**
HISTORICAL AVG CUM CATCH (00-13) TO DATE	*37,500*	*5,400*	*4,620*	*256*	*6,650*	*43*	*369*
HISTORICAL AVG CUM TOTAL CATCH (00-13)	*42,000*	*5,400*	*13,300*	*1,000*	*13,000*	*130*	*500*
AVERAGE DAILY CATCH (5 D) OF ADULTS - GW	86	0	89	6	119	1	2
AVERAGE DAILY CATCH (5 D) OF ADULTS - GH	249	0	156	12	136	1	1
FISHWHEEL TOTAL TAGGED (OR ADIPOSE FIN MARKED)	6,597	1,456	1,855	356	NA	30	336
FISHWHEEL TOTAL JACKS - GW ONLY	1,859	227	28	NA	NA	NA	NA
HISTORICAL MEAN JACKS AT GW (94-13) TO DATE	*1,110*	*200*	*68*	*NA*	*NA*	*NA*	*NA*

Other adult species and juvenile salmon catches at the fishwheels to date include: 85 Dolly Varden, 69 Pike Minnow, 48 Whitefish sp., 46 Rainbow Trout, 27 Peamouth Chub, 6 Red-Side Shiner, 7 Sucker, 6 Sculpin, 4 River Lamprey, and 116 salmon smolts (79 Coho, 18 Chinook, 19 Sockeye), and 1 live beaver.

RUN SIZE AND ESCAPEMENT ESTIMATES FOR NASS SALMON & SUMMER-RUN STEELHEAD

In-season estimates of run size and projected forecasts to Gitwinksihlkw fishwheels for adult Nass salmon and summer-run steelhead are shown below. The current run size estimates are above average for Nass Coho and summer-run steelhead, and below average for Sockeye and Chinook salmon when compared to mean returns from 1994 to 2013.

	SOCK	CHIN	COHO	STEEL		13-Aug-14	
IN-SEASON RUN SIZE ESTIMATE TO DATE	**211,839**	**12,565**	**51,352**	**4,546**			
HISTORICAL MEAN RUN SIZE TO GW FOR DATE (94-13)	249,000	20,400	31,403	3,280			
RUN SIZE TARGET 2014 (MIN. FOR STEELHEAD)	***250,000***	***15,000***	***65,000***	***4,200***			

In-season **Nass Sockeye** estimates are generated using mark-recapture data from GH fishwheels that fluctuate over a 5 d period as GW tagged fish pass the GH site. In comparison, fishwheel catch index estimates based on catch and water level mark rates to date at GW are ranging from 95,000 to 376,000 with a mean estimate of 210,000. The MR estimate is considered more accurate at predicting the in-season abundance of the run passing the GW fishwheels. The MR estimate (~212,000) is based on tags applied at GW fishwheels (6,597), total catch at GH and Upper Stratum IS fisheries (30,954), and tag recoveries in the Upper Stratum (1,111).

The current in-season **Upper Nass Chinook** estimate (12,565) is generated using a new mark-recapture method based on tags applied at GH fishwheels (1,073), total catch (1,439) and tag recoveries (136) to estimate mark rates and compute daily abundance estimates. In comparison, fishwheel catch index estimates to date are ranging from 3,500 to 27,000 with a mean estimate of 6,000 passing GW fishwheels. The MR estimate is hoped to be a more accurate estimate at predicting the in-season abundance passing GW; but estimates fluctuate over a 10 d period while mark-rates fully stabilize.

In-season **Upper Nass Coho** estimates are generated using mark-recapture data from GH fishwheels that fluctuate over a 7 d period as GW tagged fish pass the GH site when cumulative tag recoveries at GH fishwheels reach > 12. In comparison, fishwheel catch index estimates to date at GW are ranging from 29,000 to 77,000 with a mean estimate of 46,000. The MR estimate is considered more accurate at predicting the in-season abundance of the run passing the GW fishwheels. The MR estimate (~51,000) is based on tags applied at GW fishwheels (1,855), total catch at GH and Upper Stratum IS fisheries (3,996), and tag recoveries in the Upper Stratum (161).

The mark-rates for Coho are also used to estimate the in-season summer-run steelhead abundance based on higher catches of Coho that can determine fishwheel catch efficiencies for expanding steelhead catches at GW. Based on this method, the **Upper Nass summer-run steelhead** in-season MR estimate is 4,600 compared to fishwheel catch index estimates ranging from 2,600 to 7,000 with a mean estimate of 4,200 passing GW fishwheels.

In-season projected forecasts to date for GW run sizes are currently tracking below target for Nass Sockeye and Chinook and above target for Nass Coho and summer-run steelhead (see table below). Estimates to GW are based on two methods, mean run timing and log-regression of the in-season to final estimate.

IN-SEASON FORECASTS TO GW - METHODS:	SOCK	CHIN	COHO	STEEL		13-Aug-14	
1. RUN TIMING METHOD (94-13) - Mean Run timing	234,000	13,000	132,800	15,000			
Lower (-2 S.D.)	205,000	13,000	85,400	8,900		In-season to Final	
Upper (+2 S.D.)	271,000	13,000	298,000	44,800		r^2 (CH) =	1.00
2. IN-SEASON TO FINAL (regression):	242,000	13,000	123,000	15,000		r^2 (SO) =	0.92
95% CI - lower	147,000	12,000	62,000	7,000		r^2 (CO)=	0.68
95% CI - upper	337,000	13,000	185,000	22,000		r^2 (ST)=	0.64
GW RUN SIZE TARGET (DEPENDING ON HARVESTS ABOVE GW)	*250,000*	*15,000*	*65,000*	*4,200*			

Net Escapement Estimates for adult Nass salmon and summer-run steelhead to date are as follows:

Based on the current projected forecasts to GW, net escapement targets for Nass Sockeye (200,000) and Chinook (13,000) may fall short of target depending on the final returns to GW and harvests above GW. The minimum net escapement target for summer-run steelhead has been reached to date based on in-season data.

IN-SEASON NET ESCAPEMENT ESTIMATES	SOCK	CHIN	COHO	STEEL		13-Aug-14	
HARVEST ESTIMATES ABOVE GW TO DATE	34,054	1,980	1,779	44			
NET ESCAPEMENT (ABOVE GW):	**177,785**	**10,585**	**49,573**	**4,502**			
NET ESCAPEMENT TARGET (UPPER RIVER ONLY)	*200,000*	*13,000*	*60,000*	*4,000*			

MEZIADIN FISHWAY UPDATE

The Meziadin Fishway operations started on 1 July. Counts of salmon at the fishway are currently below average for large Sockeye, well below for Chinook, and above for Coho based on mean counts from 1994 to 2013. The Meziadin River water temperature is currently 2.3°C lower than the 1998-2013 average (14.0°C vs. 16.3°C).

MEZIADIN FISHWAY DATA	SOCK	CHIN	COHO	STEEL	BULL TROUT	13-Aug-14	
TOTAL COUNTS OF ADULTS TO DATE	**76,577**	**30**	**62**	**-**	**2**		
HISTORICAL MEAN COUNT FOR DATE (94-13)	*99,360*	*268*	*29*	*0*	*NA*		
HISTORICAL MEAN TOTAL COUNT AT MEZ (94-13)	*167,000*	*440*	*3,800*	*30*	*NA*		
ESTIMATED % RETURN TO DATE BASED ON MEAN TIMING	*59%*	*59%*	*1%*	*0%*			
ESTIMATED FORECAST TO RETURN TO DATE BASED ON MEAN%	*130,000*	*100*	*Too early*	*Too early*			
AVG DAILY COUNT OF ADULTS (PAST 5 D)	**1,722**	**0**	**9**	**0**	NA		
TOTAL COUNTS OF TAGS (or adipose punches)	1,466	0	1	0	NA		
TOTAL COUNTS OF JACKS	4,788	32	1	NA	NA		

KWINAGEESE WEIR UPDATE

The Kwinageese weir operations started on 10 July when the weir was fish tight. The water level at the weir site is currently 0.04 m lower than the 2002, 2009-2013 average (0.16 m vs. 0.20 m). The water temperature is currently 2°C lower than the 2002, 2009-2013 average (15°C vs. 17°C). Counts of salmon to date are well below average for Sockeye and Chinook based on past monitored years not impacted by blockage (2002 and 2011-2013 monitored years).

KWINAGEESE WEIR DATA	SOCK	CHIN	COHO	STEEL	BULL TROUT	13-Aug-14	
TOTAL COUNTS OF ADULTS TO DATE	**80**	**241**	**0**	**0**	**5**		
HISTORICAL MEAN COUNT FOR DATE (02,05-06,12-13)	2,000	449	4	0	NA		
HISTORICAL MEAN TOTAL COUNT (02,05-06,12-13)	5,014	995	1,158	223	NA		
ESTIMATED % RETURN TO DATE BASED ON MEAN TIMING	*40%*	*45%*	*0%*	*0%*			
ESTIMATED FORECAST TO RETURN TO DATE BASED ON MEAN%	*200*	*500*	*Too early*	*Too early*			
TOTAL COUNTS OF TAGS (or adipose punches)	2	8	0	0	NA		
TOTAL COUNTS OF JACKS	0	2	0	NA	NA		

With funding support from the Pacific Salmon Commission's Northern Fund, two helicopter flights (15 July and 5 August) were conducted for assessing the water pooling capacity below the blockage falls area at low water levels. With the loss of several of the concrete blocks from the center of the channel, the backwatering effect of the concrete weir has diminished but not been eliminated entirely. The current height of the falls (~1.4 m) is within the acceptable range for passage of adult Chinook, Coho, Sockeye, and steelhead. Therefore, NFWD's assessment indicated that the water pooling capacity is sufficient for fish passage in 2014. Chinook and Sockeye continue to pass the Kwinageese weir each day so no immediate remedial actions at the blockage area are planned for 2014. Engineering designs are being considered for a more permanent solution to improve passage at the blockage site in 2015.

HARVEST ESTIMATES FOR ADULT NASS SALMON & STEELHEAD

ALASKAN FISHERIES IN SE ALASKA (information courtesy from ADFG's website):

Alaskan gillnet fisheries in **District 101 (Tree Point)** and **District 106 (Sumner and Upper Clarence)** started on 15 June and 16 June, respectively. Alaskan seine fisheries start dates: **District 101 (Lower Clarence/Revilla)** on 6 July, **District 102 (Middle Clarence)** on 15 June, **District 103 (Cordova)** on 20 July, and **District 104 (Noyes/Dall)** on 6 July.

The table below shows the current catches of salmon in Alaskan net fisheries in Districts 101-104 (and mean catch comparisons between 2000 and 2013) to **14 August** based on data from ADFG's website. Current salmon catches are above average for Sockeye, Chinook, Pink and Coho, and below average for Chum. Current catches of even-year Pinks (18.7 million) are 2.2 times higher than average (8.6 million) with large salmon catches in the District 104 seine fishery (80-85 boats currently fishing).

IN-SEASON SE ALASKAN CUM. SALMON CATCH ESTIMATES (ADFG WEBSITE) - 2014											WEEK END:	16-Aug-14
DISTRICTS	AREA	SOCK CATCH	AVG (00-13)	CHIN CATCH	AVG (00-13)	PINK CATCH	AVG EVE (00-13)	CHUM CATCH	AVG (00-13)	COHO CATCH	AVG (00-13)
DIST 101 GN	TREE PT	42,000	76,000	1,300	1,400	450,180	276,400	168,000	199,000	10,200	16,600
DIST 106 GN	UPP. CLAR	48,000	88,000	1,200	1,400	275,000	110,600	90,000	134,000	87,500	59,300
DIST 101 SN	LOW CLAR	53,000	52,700	1,000	800	5,131,000	3,284,000	165,000	229,000	32,800	26,100
DIST 102 SN	MID CLAR.	28,100	30,300	1,500	720	2,381,000	2,188,400	336,000	359,000	30,500	36,100
DIST 103 SN	CORDOVA	17,100	20,000	260	400	2,180,000	825,000	33,300	57,000	23,200	16,000
DIST 104 SN	NOYES/DALL	463,000	208,000	10,000	5,400	8,275,000	1,898,000	160,000	148,000	110,000	54,300
CUMULATIVE TOTAL		**651,200**	**475,000**	**15,260**	**10,120**	**18,692,180**	**8,582,400**	**952,300**	**1,126,000**	**294,200**	**208,400**

Of the total in-season Sockeye catch reported in Alaskan fisheries to date (651,000), approximately 130,000 (~20%) are estimated as Nass origin based on mean stock composition estimates from 1982 to 2011. The estimated catch of Nass Sockeye to date is above average (122,000). The average total mean harvest of Nass Sockeye in Alaskan fisheries from 2000 to 2012 run reconstructed results is 138,000 (range: 47,000-300,000).

CANADIAN COMMERCIAL NET FISHERIES IN AREA 3 (information courtesy from DFO Prince Rupert):

DFO commercial net fishery openings in Area 3 for 2014 to **14 August** are: 17 gillnet and 14 seine. Commercial harvest and release data to date for salmon and steelhead in Area 3 net fisheries are shown below:

GEAR	DATE	Vessels	SO-harv	SO-Rel	CO-HARV	CO-Rel	PK-HARV	PK-Rel	Chum-harv	Chum-Rel	CH-harv	CH-Rel	STEEL-Rel
GN	6/10/2014	148	4,929	0	2	1	34	0	0	16	300	92	63
	6/11/2014	109	4,770	0	0	0	24	0	0	15	71	39	24
	6/16/2014	152	14,234	0	12	0	1	0	0	23	417	56	35
	6/17/2014	145	5,718	0	19	4	1	0	0	23	66	57	44
	6/23/2014	166	15,591	0	40	7	16	0	0	164	264	53	27
	6/24/2014	118	9,294	0	60	7	15	0	0	252	284	43	8
	6/26/2014	166	9,981	0	105	10	53	7	0	305	377	77	5
	6/27/2014	135	5,752	0	99	8	99	0	0	145	110	32	4
	6/30/2014	166	10,579	0	235	0	876	0	0	793	311	75	8
	7/1/2014	140	6,644	0	43	0	459	0	0	198	9	10	0
	7/3/2014	158	5,953	0	150	0	2,370	0	1,634	198	0	32	0
	7/4/2014	132	4,582	0	61	0	3,435	0	2,313	50	0	17	0
	7/7/2014	140	6,476	0	137	0	3,372	0	0	711	0	194	0
	7/8/2014	106	1,249	0	9	0	574	0	0	206	0	15	0
	7/27/2014	61	2,471	0	210	0	7,209	0	0	584	0	0	0
	7/30/2014	13	1,100	0	127	0	4,652	0	0	196	0	0	7
	7/31/2014	14	780	0	125	0	2,681	0	0	153	0	0	10
GN Total		**2,069**	**110,103**	**0**	**1,434**	**37**	**25,871**	**7**	**3,947**	**4,032**	**2,209**	**792**	**235**
SN	7/7/2014	8	600	0	142	0	2,483	0	3,266	0	0	7	0
	7/8/2014	8	1,112	0	173	0	3,568	0	3,839	0	0	25	0
	7/14/2014	22	0	1,417	628	0	39,855	0	5,314	0	0	81	4
	7/15/2014	22	0	3,168	726	0	82,192	0	4,048	0	0	116	0
	7/17/2014	27	0	3,496	1,089	0	146,232	0	6,642	0	0	182	0
	7/18/2014	27	0	2,592	486	0	96,255	0	2,889	0	0	105	0
	7/21/2014	18	0	2,124	661	0	92,804	0	0	4,554	0	103	0
	7/22/2014	18	0	2,484	763	0	84,485	0	0	3,816	0	109	0
	7/28/2014	13	6,713	0	304	0	111,500	0	0	735	0	32	11
	7/29/2014	13	6,946	0	752	0	42,307	0	0	573	0	34	30
	8/4/2014	13	3,167	0	933	0	56,227	0	0	1,320	0	29	28
	8/5/2014	20	2,347	0	1,541	0	85,728	0	0	2,089	0	10	13
	8/11/2014	5	0	1,100	337	0	9,097	0	0	262	0	1	0
	8/12/2014	5	0	560	176	0	4,679	0	0	203	0	3	0
SN Total		**219**	**20,885**	**16,941**	**8,711**	**0**	**857,412**	**0**	**25,998**	**13,552**	**0**	**837**	**86**
Grand Total		**2,288**	**130,988**	**16,941**	**10,145**	**37**	**883,283**	**7**	**29,945**	**17,584**	**2,209**	**1,629**	**321**

LABELS: SO=SOCKEYE, PK=PINK, CO=COHO, CH=CHINOOK; STEEL=STEELHEAD, HARV=HARVESTED, AND REL=RELEASED.

DFO implemented management actions in Area 3 in 2014 to reduce harvest impacts on the Kwinageese Sockeye stock during their migration through Area 3. The stock requires rebuilding from a past spawning barrier detected

in 2011 and from poor returns in 2010 and from 2012-2013. Sockeye retention was not permitted in commercial fisheries in Area 3 from 12-24 July, the anticipated peak of the Kwinageese Sockeye migration, as documented in DFO's 2014 Integrated Fisheries Management Plan (IFMP).

Future commercial net openings in Area 3 (16 hours): No net openings have been announced by DFO at the time of this update. Area 3 was opened to the commercial troll fishery (Area F) starting 18 August for retention of Coho and Pink salmon only.

Sub-area breakout of Area 3 commercial catch is as follows:

		Data											
GEAR	AREA 3	Vessels	SO-harv	SO-Rel	CO-HARV	CO-Rel	PK-HARV	PK-Rel	Chum-harv	Chum-Rel	CH-harv	CH-Rel	STEEL-Rel
GN	3-12	1032	58,501	0	400	18	9,397	4	0	1,151	1,754	447	137
	3-7B	522	26,991	0	409	13	9,829	1	2,729	1,395	132	139	35
	3-7A	449	20,942	0	510	6	4,789	2	0	1,357	261	196	63
	BOSTON ROCKS	66	3,669	0	115	0	1,856	0	1,218	129	62	10	0
GN Total		**2,069**	**110,103**	**0**	**1,434**	**37**	**25,871**	**7**	**3,947**	**4,032**	**2,209**	**792**	**235**
SN	3-7B	100	4,502	9,457	4,213	0	401,285	0	11,367	7,377	0	456	15
	BOSTON ROCKS	57	1,584	4,630	1,614	0	208,715	0	8,939	2,787	0	182	17
	MASK	28	14,207	60	1,752	0	138,932	0	0	1,382	0	61	53
	TRACEY BAY	31	457	2,754	1,064	0	98,780	0	5,692	1,833	0	128	0
SN Total		**219**	**20,885**	**16,941**	**8,711**	**0**	**857,412**	**0**	**25,998**	**13,552**	**0**	**837**	**86**
Grand Total		**2,288**	**130,988**	**16,941**	**10,145**	**37**	**883,283**	**7**	**29,945**	**17,584**	**2,209**	**1,629**	**321**

Note: SN total includes two sub areas not shown due to fewer than 5 boats fished.

Of the 130,988 Sockeye harvested in Area 3 commercial fisheries to date, we are estimating ~95,000 (72%) are of Nass origin. Of the 366,000 Sockeye harvested in Area 4 gillnet fisheries to date, we are estimating approximately 12,000 (10%) are of Nass origin in the Northern Area 4 areas. Some Nass Sockeye would also be intercepted in northern Area 4 seine fisheries but this information was not available for this update.

UPPER NASS HARVESTS – GITANYOW FISHERIES (information courtesy of the Gitanyow Fisheries Authority)

Reported salmon harvests in Gitanyow fisheries to date are: 11,280 Sockeye, 75 Chinook (62 large and 13 small), and 3 Coho based on FSC catches to 2 August (last week's catches were not available for this update) and DFO's Inland Selective Economic Demonstration Fishery Program for Sockeye (2,735). The Gitanyow have 63 Area C licenses and have been allocated 6,312 Sockeye based on Area 3 commercial gillnet catches to date. Of the total catch reported in Gitanyow fisheries, 42 Sockeye tags were returned to NFWD to date. The average salmon harvests in Gitanyow fisheries from 2000 to 2013 are: 7,200 Sockeye, 153 Chinook (large), and 193 Coho.

NISGA'A DOMESTIC (FSC) AND SALE FISHERIES:

Nisga'a domestic and sale fisheries are monitored by the Nisga'a Fisheries and Wildlife Department. Monitoring began on 4 May 2014. Cumulative harvests to **14 August** are shown in the table below. For the domestic harvest week ending period to 9 August, mean cumulative harvests from 2000 to 2013 are shown for comparison. The current domestic harvest estimates in 2014 are above average for Sockeye, Pink, and Coho, about average for steelhead (spring and summer runs combined), and below average for Chinook and Chum.

FSC Reported Week Ending Period		DOMESTIC (FSC) HARVESTS TO WK END - 2014		TOTAL HARVESTS TO DATE INCLUDING SALE FISHERIES - 2014	
NASS SPECIES	Wk end	**Harvest**	Mean*	**Harvest**	Mean*
CHINOOK	9-Aug-14	**4,552**	5,000	**4,552**	5,900
SOCKEYE	9-Aug-14	**26,420**	24,500	**76,286**	85,100
PINK	9-Aug-14	**5,859**	2,040	**6,821**	16,200
COHO	9-Aug-14	**787**	670	**3,587**	4,080
CHUM	9-Aug-14	**256**	300	**256**	430
STEELHEAD	9-Aug-14	**215**	160	**215**	220

* Mean harvests from 2000-2013 for week end periods. Harvests include all gear types estimates (net, angling, seine, fishwheels, etc.)

Nisga'a Sale fishery information to date:

- Total Individual-sale (IS) fisher permits issued to date are 219 (including 45 elder permits). Of the total issued, 119 have actively participated in the sale fisheries from 13 June to 12 August.
- Permit distribution by community is: 50 Gitlakdamix, 41 Gitwinksihlkw, 36 Prince Rupert, 35 Gingolx, 26 Laxgalts'ap, 18 Terrace, and 13 Other (Port Edward, Richmond, Telkwa, Kitkatla, Kitimat, Kitwanga, Prince George and Port Alberni).

- The in-season catch target for the marine IS gillnet fishery was based on ~35% of the estimated sale target (~24,500 Sockeye based on pre-season return forecasts). A total of 8 fisheries have been conducted to date. The Nisga'a marine sale fishery was closed from 12-24 July for the Kwinageese Sockeye rebuilding management period. The current marine IS catch is 24,623 Sockeye, 962 Pink, and 284 Coho salmon. **The marine IS fishery is closed until further notice**. Individual catch data for the marine IS fishery is shown below.

NISGA'A MARINE SALE FISHERY:		
NUMBER OF NISGA'A MARINE FISHERIES (16 HR OPENINGS):	8	13-14 JUNE, 19-20 JUNE, 28-29 JUNE, 6 JULY & 12 AUGUST
DATA FROM 13 JUNE FISHERY (18 BOATS - 16 FISHERS) - REVIEWED		2770 SOCKEYE
DATA FROM 14 JUNE FISHERY (21 BOATS - 22 FISHERS) - REVIEWED		4731 SOCKEYE
DATA FROM 19 JUNE FISHERY (25 BOATS - 25 FISHERS) - REVIEWED		2356 SOCKEYE
DATA FROM 20 JUNE FISHERY (25 BOATS - 29 FISHERS) - REVIEWED		3669 SOCKEYE
DATA FROM 28 JUNE FISHERY (28 BOATS - 25 FISHERS) - REVIEWED		2595 SOCKEYE
DATA FROM 29 JUNE FISHERY (28 BOATS - 35 FISHERS) - REVIEWED		5078 SOCKEYE, 4 PINK
DATA FROM 6 JULY FISHERY (28 BOATS - 30 FISHERS) - REVIEWED		2842 SOCKEYE, 406 PINK, 5 COHO
DATA FROM 12 AUGUST FISHERY (8 BOATS - 9 FISHERS) - PRELIMINARY		582 SOCKEYE, 552 PINK, 279 COHO
NEXT NISGA'A MARINE FISHERY PLANNED:		**CLOSED UNTIL FURTHER NOTICE**

- A total of 7 in-river IS gillnet fisheries have been conducted to date. The Nisga'a in-river sale fishery closed from 16-28 July for the Kwinageese Sockeye rebuilding management period as the stock passes upriver. The current in-river IS catch is 20,328 Sockeye and 1,509 Coho salmon. **The in-river IS fishery is closed until further notice**. Individual catch data for the in-river IS fishery is shown below.

NISGA'A IN-RIVER SALE FISHERY:		
NUMBER OF NISGA'A IN-RIVER FISHERIES (10 HR OPENINGS):	7	5 JULY, 7 JULY, 9 JULY, 11 JULY, 13 JULY, 15 JULY & 11 AUGUST
DATA FROM 5 JULY FISHERY (31 FISHERS) - REVIEWED		1395 SOCKEYE, 2 COHO
DATA FROM 7 JULY FISHERY (32 FISHERS) - REVIEWED		2520 SOCKEYE
DATA FROM 9 JULY FISHERY (40 FISHERS) - REVIEWED		2878 SOCKEYE, 1 COHO
DATA FROM 11 JULY FISHERY (39 FISHERS) - REVIEWED		2477 SOCKEYE
DATA FROM 13 JULY FISHERY (33 FISHERS) - REVIEWED		3319 SOCKEYE, 3 COHO
DATA FROM 15 JULY FISHERY (36 FISHERS) - REVIEWED		4479 SOCKEYE, 1 COHO
DATA FROM 11 AUGUST FISHERY (25 FISHERS) - PRELIMINARY		3260 SOCKEYE, 1502 COHO
NEXT NISGA'A IN-RIVER FISHERY PLANNED:		**CLOSED UNTIL FURTHER NOTICE**

- A Nisga'a seiner (Ocean Virtue) has been contracted by NLG to fish the entitlement of Nass Area Pink and Coho salmon as part of NLG's communal sale fishery. The seiner catch limits have been set to a maximum of 40,000 Pink and 5,000 Coho salmon based on pre-season entitlement estimates. These limits may be adjusted as data become available for determining the in-season entitlements. No reports of the seiner's fishing efforts were available for this update.

NLG's inland selective demonstration fishery to date:

NLG were successful in negotiating the leasing of 30 Area C commercial gillnet licenses to participate in DFO's Inland Selective Demonstration Fishery Program in 2014. DFO allocate weekly catches of Sockeye to NLG's inland selective fishery program based on a license sharing formula from commercial gillnet catches in Area 3. These harvests are additional to Nisga'a Treaty Allocations (and IS targets) and have to be caught selectively (no gillnets). The GH fishwheels were used to harvest these additional catch shares as arranged by NLG and Nisga'a Fisheries Limited (NFL). As of 9 August, 4,793 Sockeye were allocated to this fishery by DFO. Of the 21,288 Sockeye caught at the GH fishwheels to date, 4,915 were harvested (4,793 Sockeye as part of the demonstration fishery from 27-29 June, 5-14 July, and 6-7 August, and 122 as part of the NLG treaty catch) and 16,373 were released. The NLG demonstration fishery closed from 22 July to 3 August for the Kwinageese Sockeye rebuilding management period as the stock passed upriver, and reopened on 6 August when DFO allocated additional catch allocations from Area 3 commercial gillnet fisheries that were conducted after 24 July.

The total harvest summary to date in all of the Nisga'a fisheries are as follows:

NISGA'A TOTAL HARVEST SUMMARY	SOCK	CHIN	COHO	PINK-EVE	CHUM	STEEL
MARINE SALE FISHERY TOTAL	24,623	CLOSED	284	962	CLOSED	CLOSED
IN-RIVER SALE FISHERY TOTAL	20,328	CLOSED	1,509	0	CLOSED	CLOSED
INDIVIDUAL SALE (IS) FISHERY TOTAL	**44,951**	**CLOSED**	**1,793**	**962**	**CLOSED**	**CLOSED**
NLG COMMUNAL SELECTIVE FISHWHEEL TREATY FISHERY	122	CLOSED	1,007	CLOSED	CLOSED	CLOSED
NLG COMMUNAL SEINE SELECTIVE TREATY FISHERY	0	0	0	0	CLOSED	CLOSED
DOMESTIC (FSC) GILLNET FISHERY - WK END 9 AUG	**26,420**	**4,552**	**787**	**5,859**	**256**	**215**
SUB TOTAL (NLG TREATY FISHERIES)	**71,493**	**4,552**	**3,587**	**6,821**	**256**	**215**
NLG SOCK DEMONSTRATION SELECTIVE FISHERY HARVEST	4,793	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
GRAND TOTAL	**76,286**	**4,552**	**3,587**	**6,821**	**256**	**215**

TOTAL RETURN TO CANADA (TRTC) AND NISGA'A ENTITLEMENT ESTIMATES FOR NASS SALMON

Pre-season forecasts for Nass salmon returns in 2014 projected below average returns for Sockeye, Chinook, even-year Pink, and Chum, and an above average return for Coho. Pre-season Nisga'a treaty catch potential by species are shown below:

PRE-SEASON TRTC & ENTITLEMENT FORECASTS	SOCK	CHIN	COHO	PINK-EVE	CHUM
HISTORICAL MEAN TRTC (1994-2013)	580,000	33,000	200,000	800,000	55,000
PRE-SEASON TRTC FORECAST	**542,000**	**24,000**	**259,000**	**496,000**	**15,000**
PRE-SEASON NISGA'A ENTITLEMENT	94,000	5,000	19,200	43,000	No surplus
CUM NISGA'A UNDERAGE (+)/OVERAGE (-): 2000-13	6,407	8,242	7,588	-96	30,193
TOTAL PRE-SEASON NISGA'A CATCH POTENTIAL	**100,000**	**13,200**	**27,000**	**43,000**	**No surplus**

The current tracking of in-season TRTC estimates for Nass salmon to **14 August** are based on mean run timing to date (Sockeye 92%, Chinook 97%, Coho 39%, Pink 32%, Chum 24%) with minimum and maximum run timing for range estimates from 1994 to 2013 returns. The in-season TRTC estimates are currently tracking below the pre-season forecasts for all species other than Nass Coho.

IN-SEASON TRTC & ENTITLEMENT ESTIMATES	SOCK	CHIN	COHO	PINK-EVE	CHUM
PROJECTED TRTC BASED ON MEAN RUN % & MR EST.	**407,000**	**20,000**	**275,000**	**430,000**	**7,000**
ESTIMATED %TRTC TO DATE: MEAN. RUN TIMING	92%	97%	39%	32%	24%
MINIMUM FORECAST	385,000	19,000	181,000	261,000	3,000
MAXIMUM FORECAST	470,000	20,000	571,000	1,811,000	18,000
IN-SEASON NISGA'A ENTITLEMENT TARGET	**64,000**	**4,200**	**19,200**	**33,000**	**No surplus**
IN-SEASON UNDERAGE (+)/OVERAGE (-)	6,407	350	7,588	- 96	small return
TOTAL IN-SEASON NISGA'A TREATY CATCH POTENTIAL	**70,000**	**4,600**	**27,000**	**33,000**	**No surplus**
MINIMUM ENTITLEMENT FORECAST	59,000	4,000	14,480	6,904	No surplus
MAXIMUM ENTITLEMENT FORECAST	78,000	4,200	19,200	244,096	No surplus
NLG SELECTIVE DEMONSTRATION FISHERY ALLOCATION	**4,793**	**NA**	**NA**	**NA**	**NA**
TOTAL IN-SEASON NISGA'A CATCH POTENTIAL - ALL FISHERIES	**75,000**	**4,600**	**27,000**	**33,000**	**No surplus**

The in-season Nisga'a entitlement estimate for **Nass Sockeye** is from 64,000 to 83,000 (min/max run timing) with a point estimate of **75,000** based on the in-season TRTC mean point estimate (407,000), the cumulative underage from 2000-2013 (6,407), and NLG demonstration fishery allocation (4,793). This estimate is 25,000 less than the pre-season forecast and is a result of a lower return of age 4 Sockeye to date (10% vs. 25% mean; see charts in attachment for more information) than predicted. The current catch of Nass Sockeye to date in Nisga'a fisheries is ~76,300. Based on reaching the in-season point estimate, any future harvests of Sockeye are anticipated to be taken in the domestic fishery only.

The in-season Nisga'a entitlement estimate for **Nass Chinook** is **4,200** based on the in-season TRTC mean point estimate (20,000). The current catch of Nass Chinook to date in Nisga'a fisheries is 4,560. The cumulative underage available from 2000-2013 (8,250) will only be applied if the total harvest of Chinook is greater than the final entitlement amount. Currently 350 would be used from the underage to balance the catch and entitlement estimates.

The in-season Nisga'a entitlement estimate for **Nass Coho** is from 22,000 to 27,000 (min/max run timing) with a point estimate of **27,000** based on the in-season TRTC mean point estimate (275,000) and the cumulative underage from 2000-2013 (7,588). Note that the maximum Nisga'a entitlement for Nass Coho is 19,200 (240,000 TRTC) in any year not including underages. The current catch of Nass Coho to date in Nisga'a fisheries is ~3,600.

The in-season Nisga'a entitlement estimate for **Nass Pink** is ranging from 7,000 to 244,000 (min/max estimates) with a point estimate of **33,000** based on an in-season mean TRTC estimate (430,000). The in-season TRTC estimate of even-year Nass Pink is based on Area 3 commercial catch of Pink to date (883,000) expanded by the mean harvest rate (29%; range 7-47%) and a mean Nass stock composition estimate (14%) from 2000 to 2013. The current catch of Nass Pink to date in Nisga'a fisheries is ~6,900.

The in-season **Nass Chum** TRTC estimate is ranging from 3,000 to 18,000 with a mean point estimate of 7,000. The in-season TRTC estimate is based on Area 3 commercial catch of Chum to date (47,600) expanded by the mean harvest rate (6%; range 2-12%) and a mean Nass stock composition estimate (1%) from 2000 to 2013.

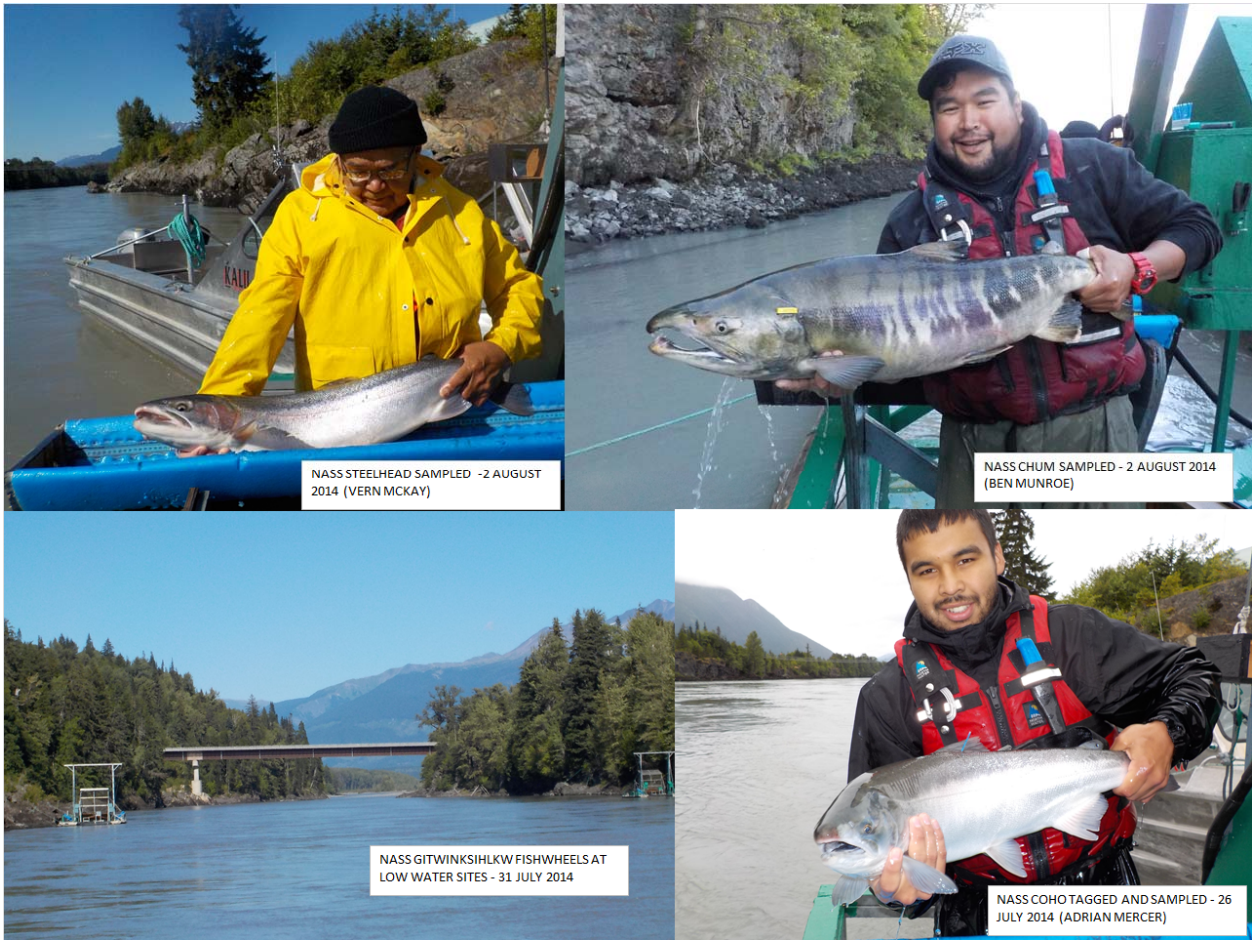
Based on the current in-season estimates for Nass Chum, the TRTC is below the minimum escapement goal (30,000) so all Nisga'a catch will be incidental for 2014 and anticipated to be **<500**. The current catch of Nass Chum to date in Nisga'a fisheries is 256. A cumulative underage from 2000-2013 (~30,000) is available to be caught if the return was strong and above the escapement goal. However, the Nass Area Chum has not returned above the escapement goal since 2006 and is not expected to reach the escapement goal in 2014.

The next Nass River public stock assessment update from Nisga'a Fisheries is planned for: **Thursday, 21 August 2014.**

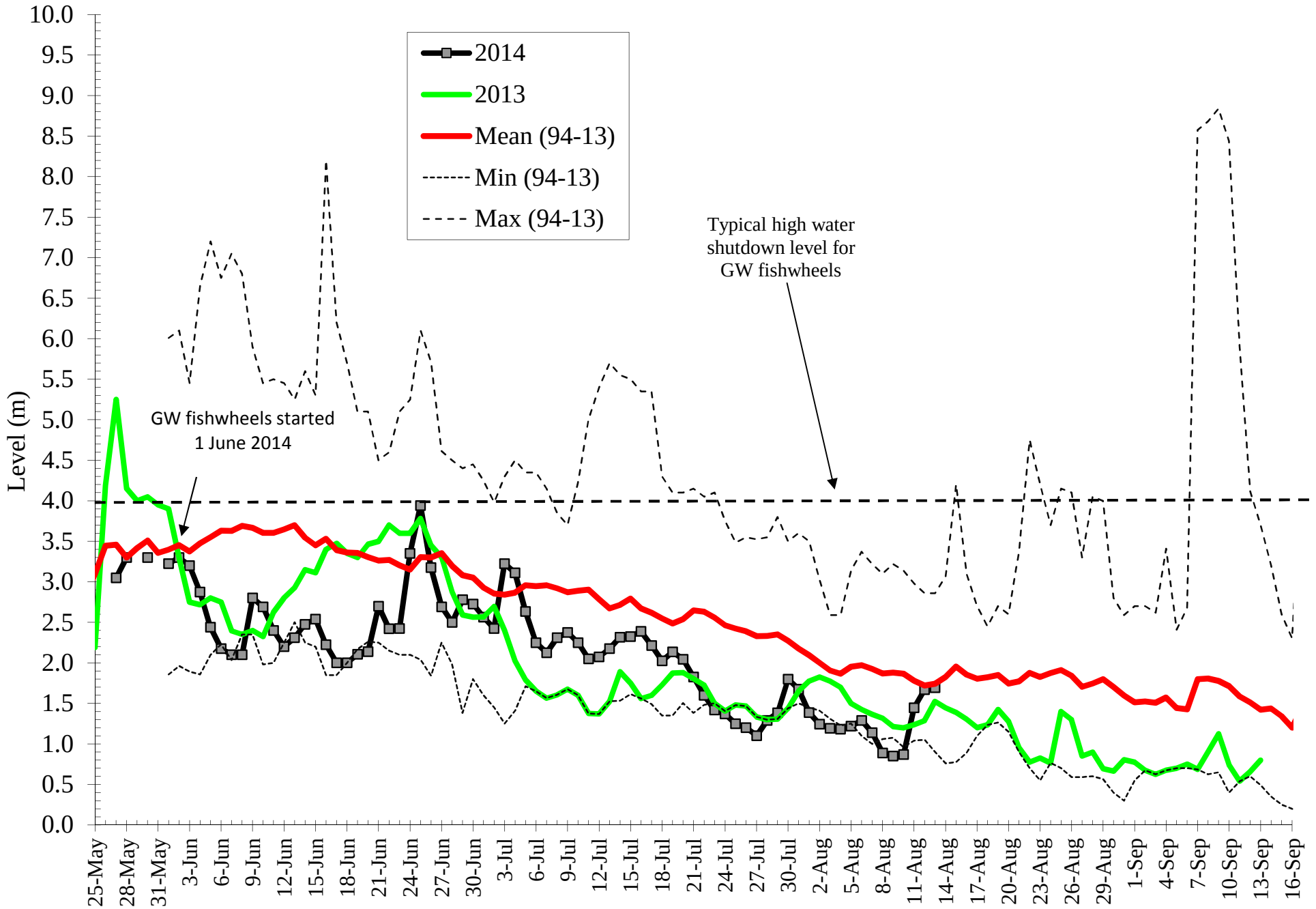
A Nass salmon run size update will also be available on Monday at the following link: ftp://ftp.lgl.com/Nass%20Stock%20Assessment%20Updates/.

Respectfully,

Richard Alexander, R.P.Bio
Nisga'a Fisheries Stock Assessment Management Biologist
Nisga'a Lisims Government - Fisheries & Wildlife Department

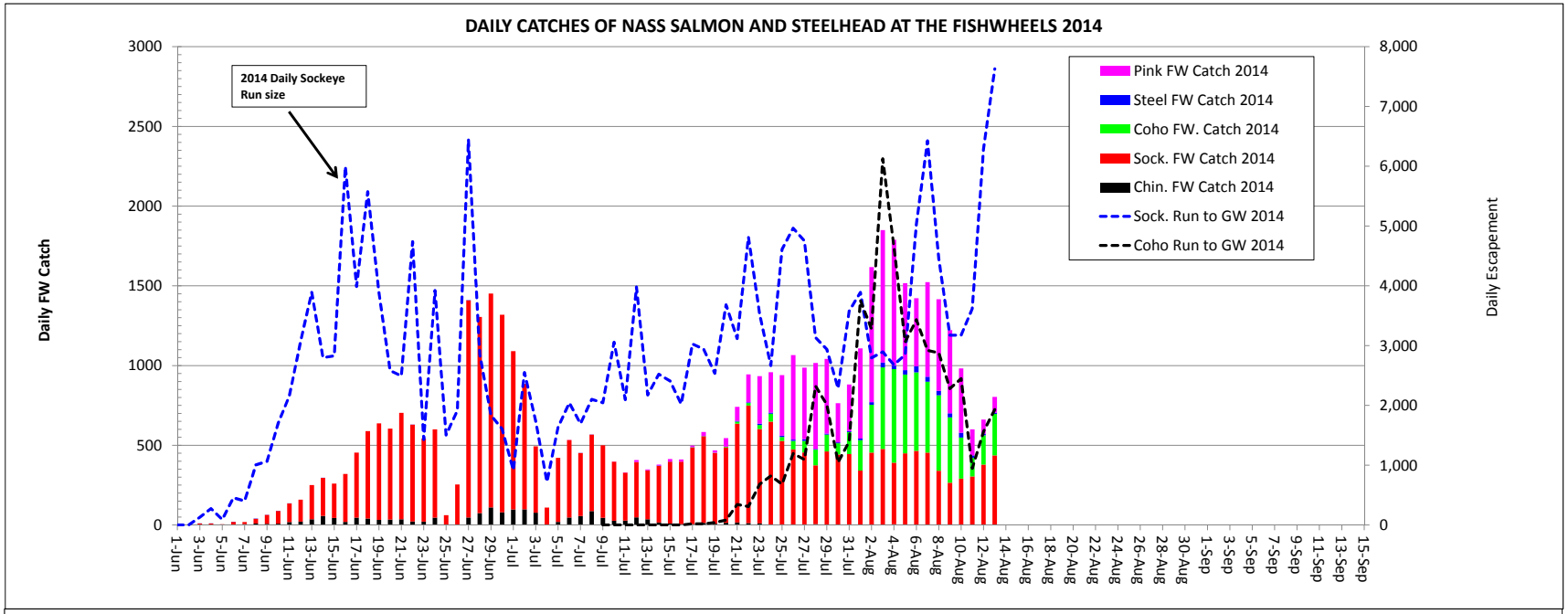


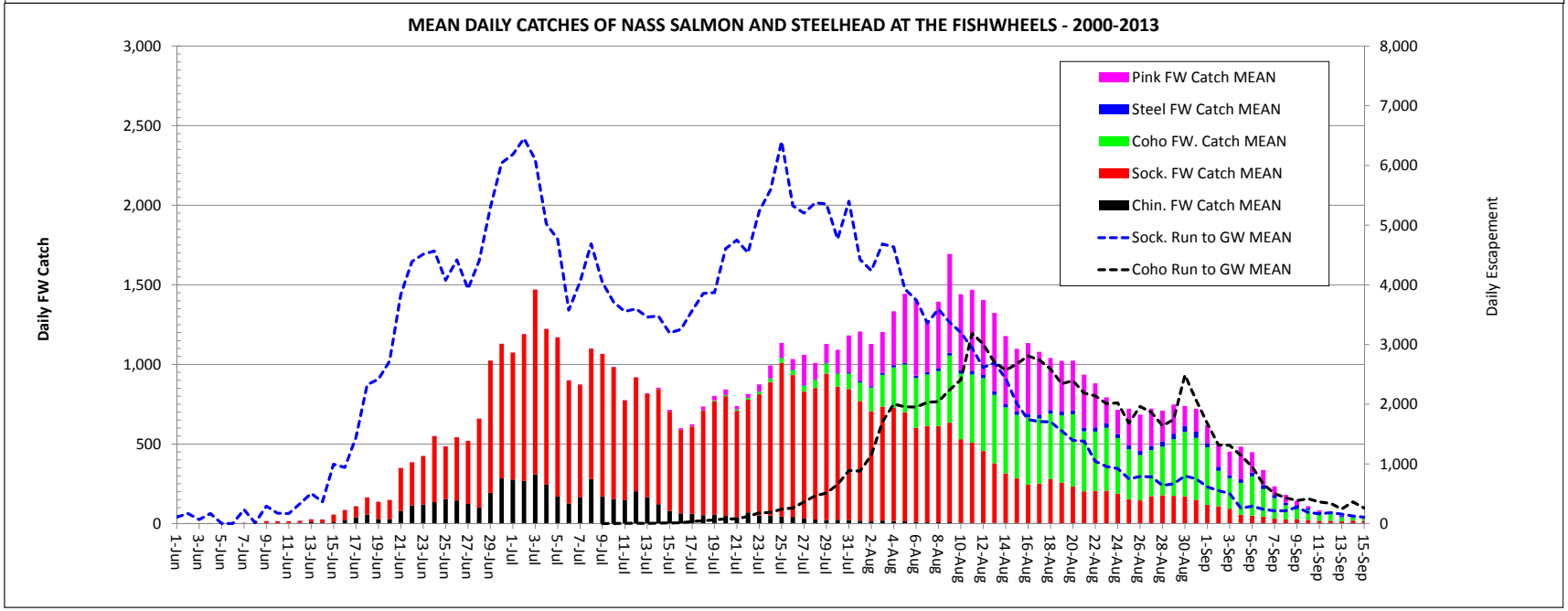
Daily Water Level at Gitwinksihlkw Fishwheels 2014

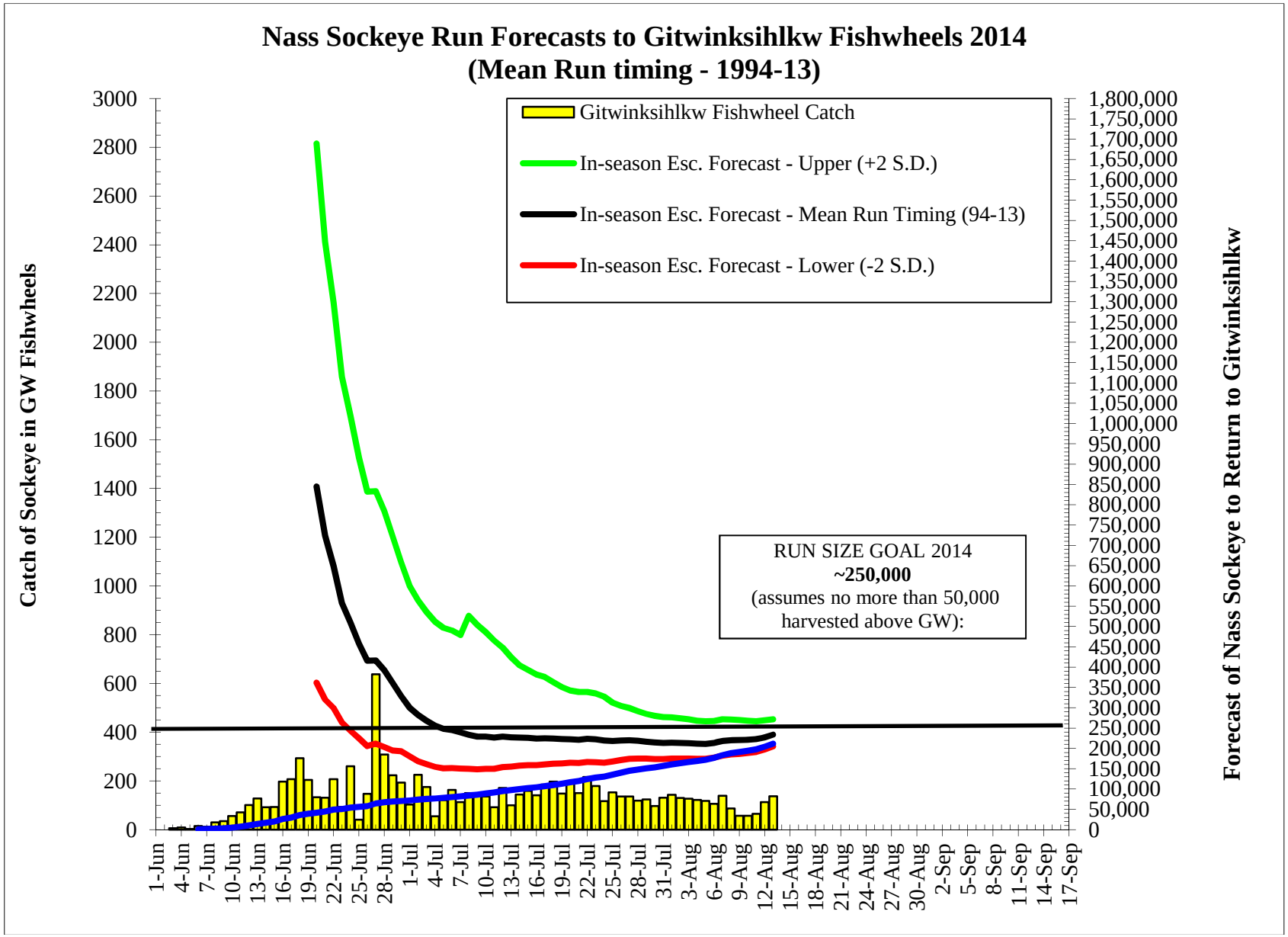


Prepared by Nisga'a Fisheries

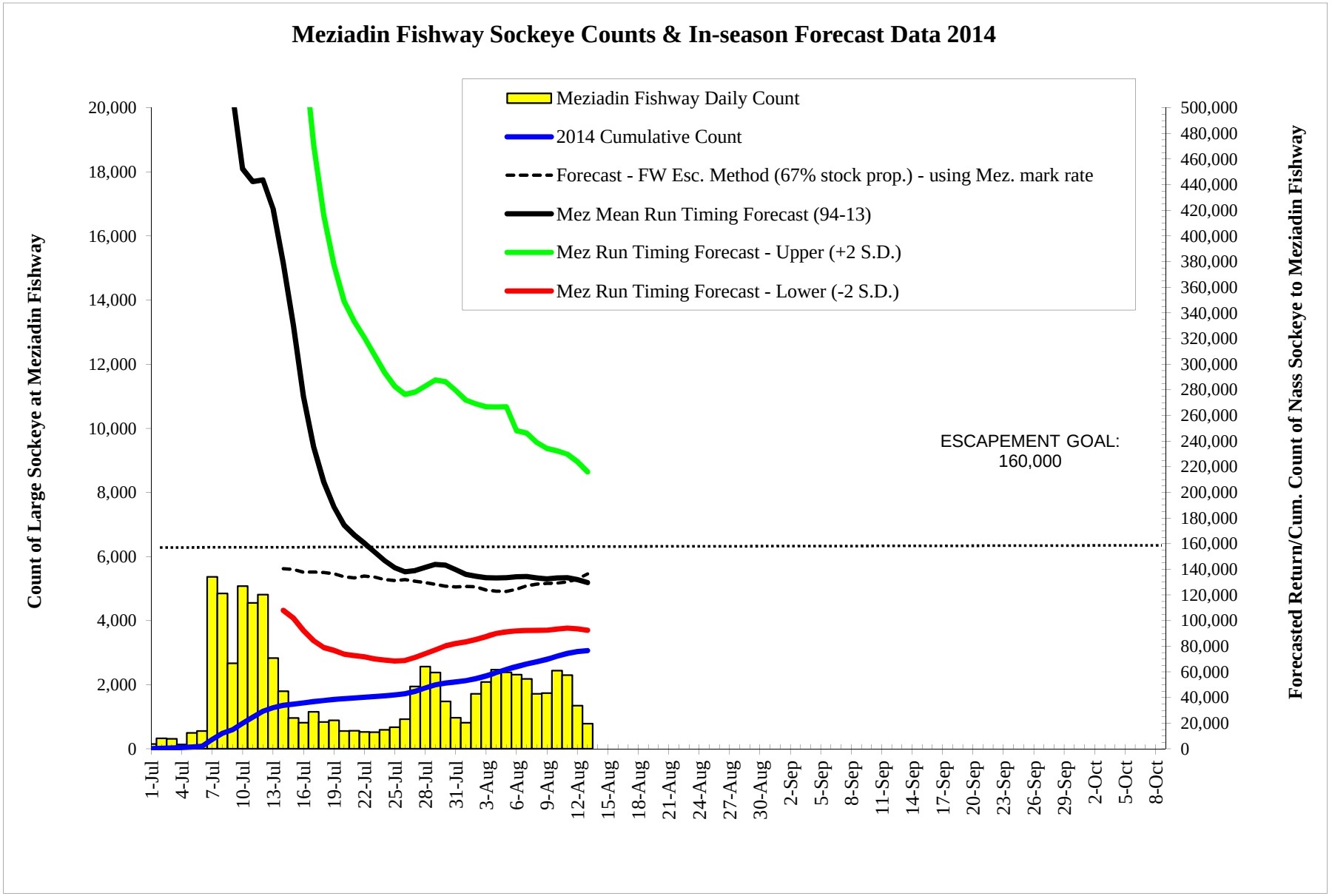
8/14/2014


DAILY CATCHES OF NASS SALMON AND STEELHEAD AT THE FISHWHEELS 2014
2014 Daily Sockeye Run size
Pink FW Catch 2014
Steel FW Catch 2014
Coho FW. Catch 2014
Sock. FW Catch 2014
Chin. FW Catch 2014
Sock. Run to GW 2014
Coho Run to GW 2014
Daily FW Catch
Daily Escapement

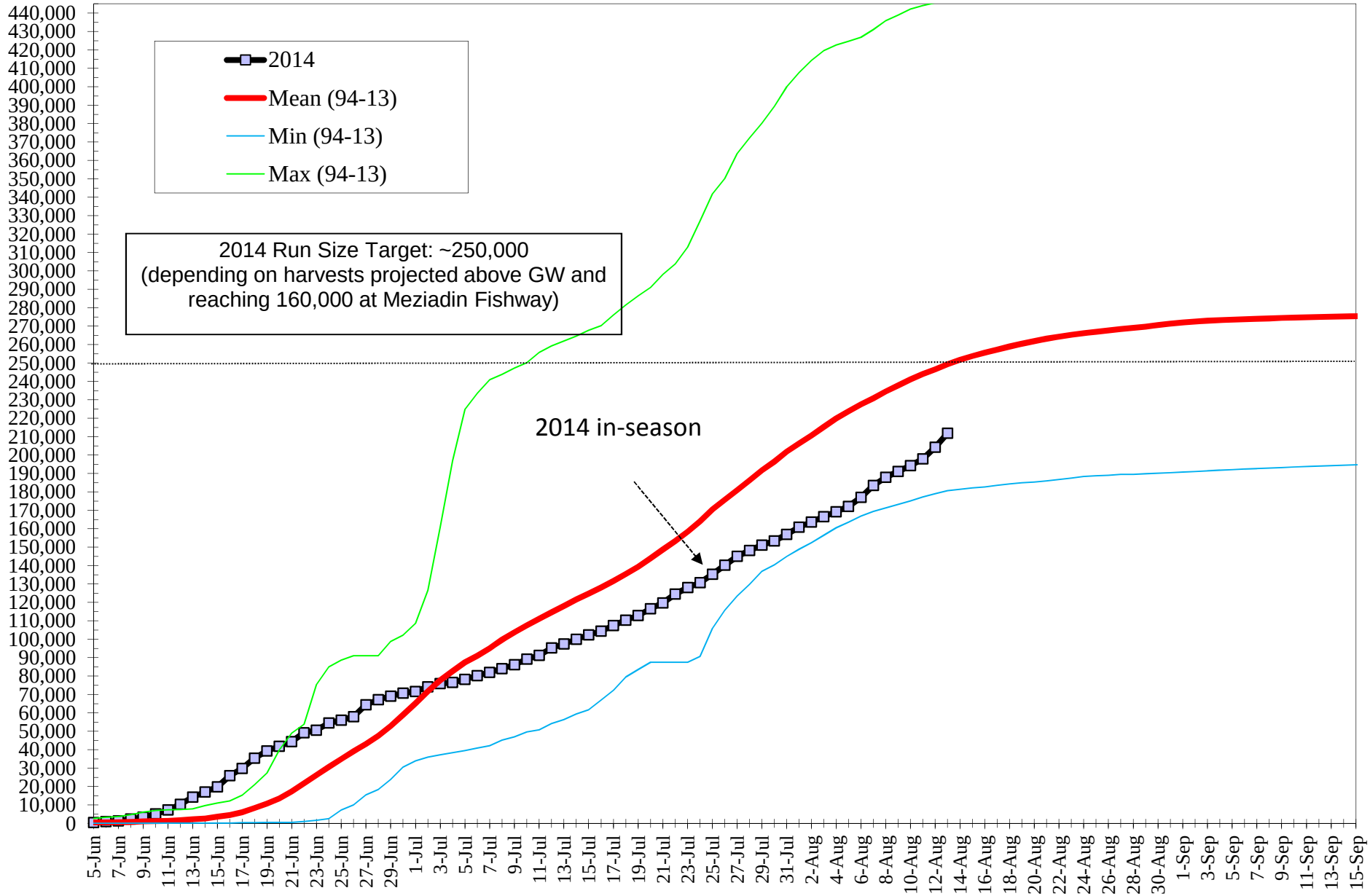

MEAN DAILY CATCHES OF NASS SALMON AND STEELHEAD AT THE FISHWHEELS - 2000-2013
Pink FW Catch MEAN
Steel FW Catch MEAN
Coho FW. Catch MEAN
Sock. FW Catch MEAN
Chin. FW Catch MEAN
Sock. Run to GW MEAN
Coho Run to GW MEAN
Daily FW Catch
Daily Escapement


Nass Sockeye Run Forecasts to Gitwinksihlkw Fishwheels 2014
(Mean Run timing - 1994-13)
Gitwinksihlkw Fishwheel Catch
In-season Esc. Forecast - Upper (+2 S.D.)
In-season Esc. Forecast - Mean Run Timing (94-13)
In-season Esc. Forecast - Lower (-2 S.D.)
RUN SIZE GOAL 2014
~250,000
(assumes no more than 50,000
harvested above GW):
Catch of Sockeye in GW Fishwheels
Forecast of Nass Sockeye to Return to Gitwinksihlkw
3000
2800
2600
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
1,800,000
1,750,000
1,700,000
1,650,000
1,600,000
1,550,000
1,500,000
1,450,000
1,400,000
1,350,000
1,300,000
1,250,000
1,200,000
1,150,000
1,100,000
1,050,000
1,000,000
950,000
900,000
850,000
800,000
750,000
700,000
650,000
600,000
550,000
500,000
450,000
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
1-Jun
4-Jun
7-Jun
10-Jun
13-Jun
16-Jun
19-Jun
22-Jun
25-Jun
28-Jun
1-Jul
4-Jul
7-Jul
10-Jul
13-Jul
16-Jul
19-Jul
22-Jul
25-Jul
28-Jul
31-Jul
3-Aug
6-Aug
9-Aug
12-Aug
15-Aug
18-Aug
21-Aug
24-Aug
27-Aug
30-Aug
2-Sep
5-Sep
8-Sep
11-Sep
14-Sep
17-Sep

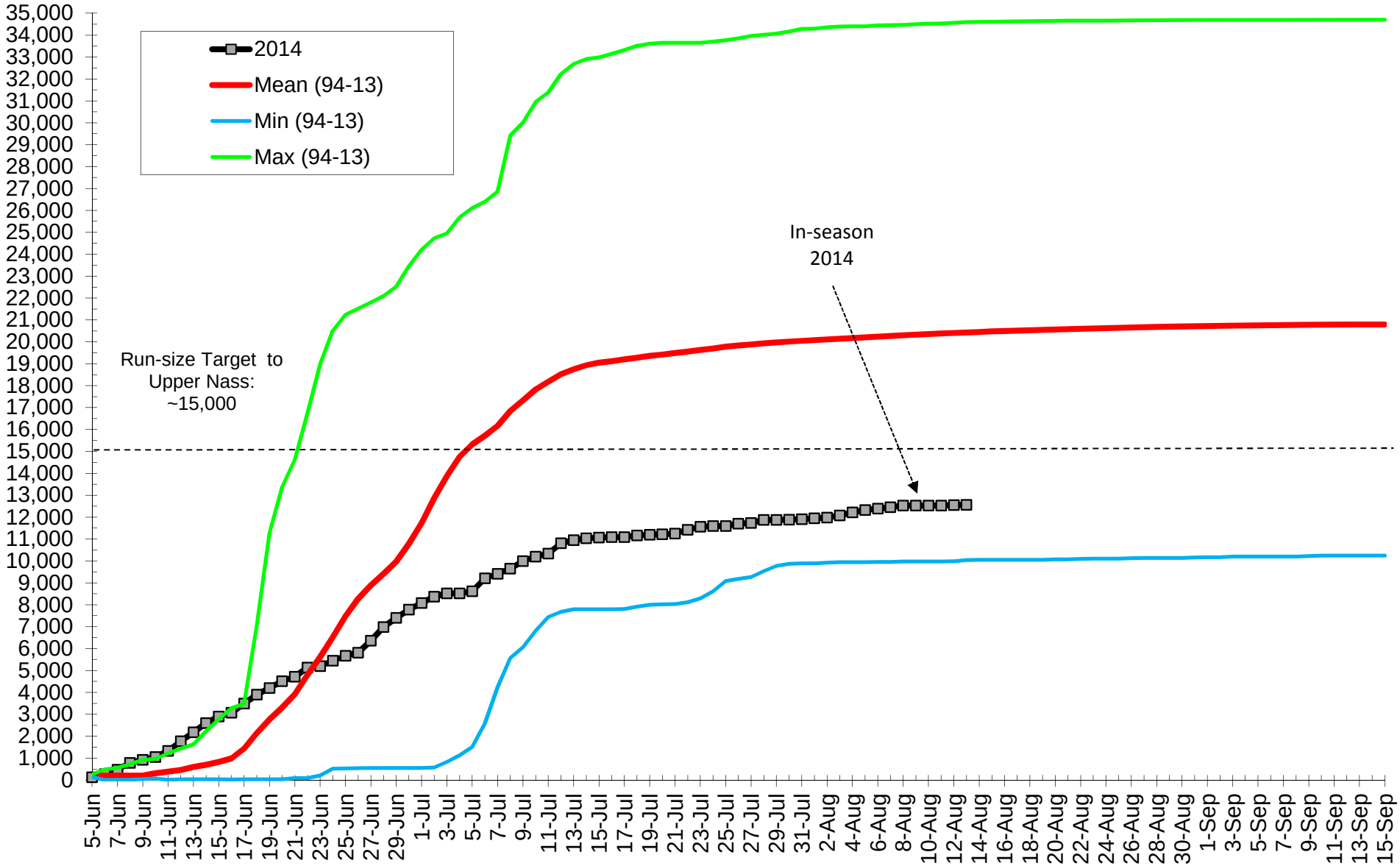
Meziadin Fishway Sockeye Counts & In-season Forecast Data 2014



Nass Sockeye Cum. Run Size to Gitwinksilhkw Fishwheels 2014 versus 94-13 Mean, Min, Max returns (before upriver harvests)



Cumulative Nass Adult Chinook Run Size to Gitwinksihlkw 2014 vs 94-13 Mean, Minimum and Maximum returns (before up river harvests)



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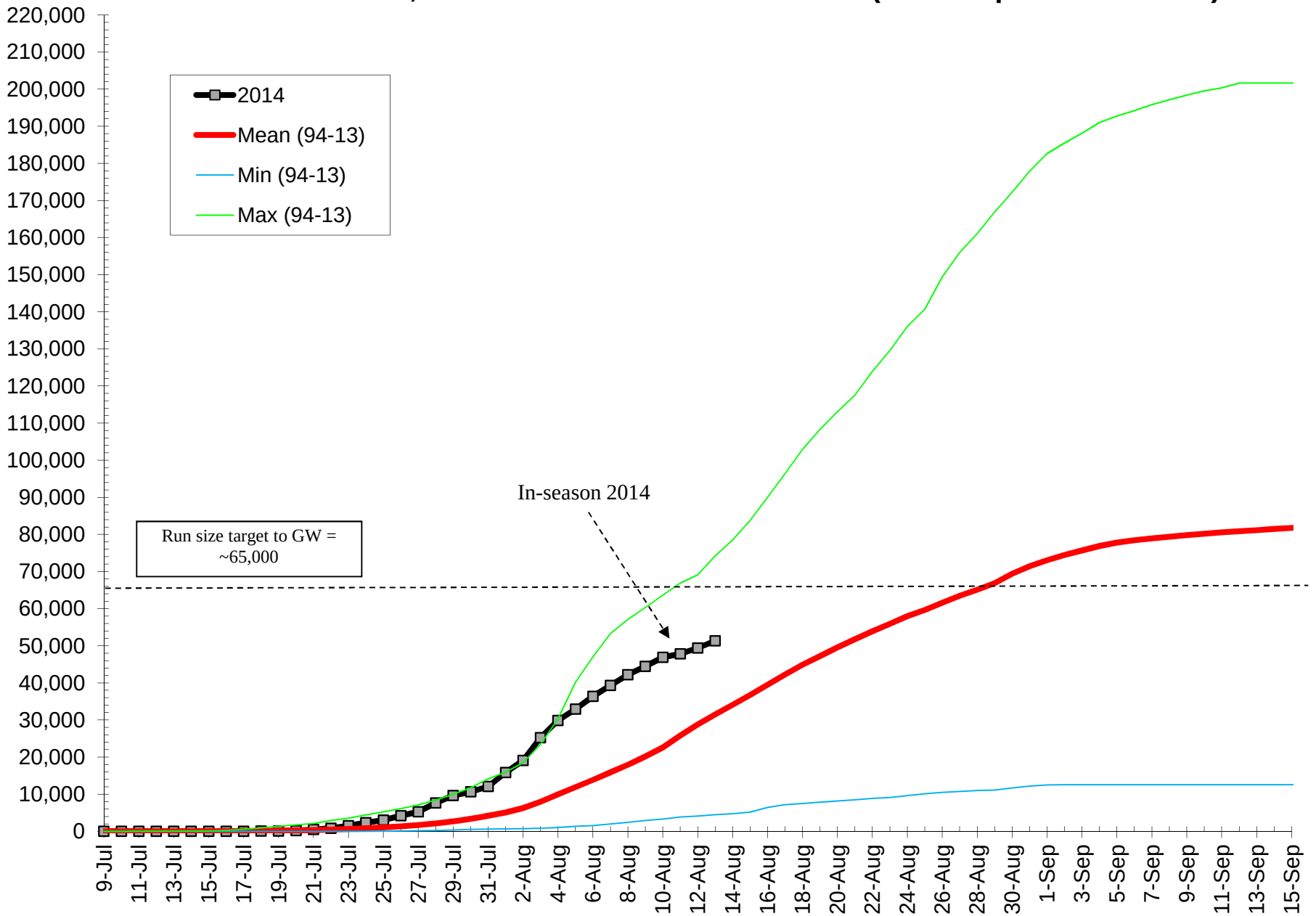
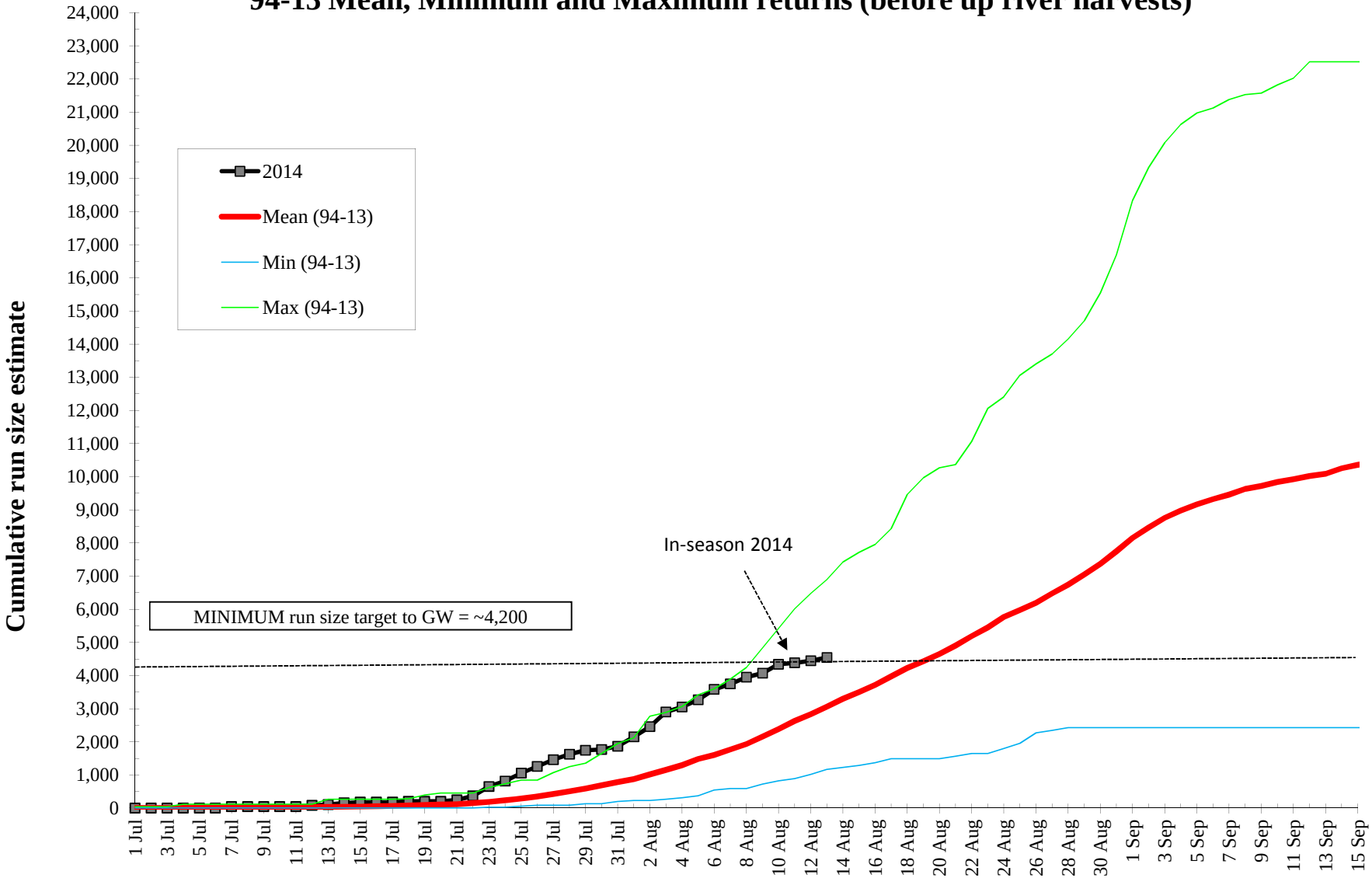
Cumulative Nass Adult Coho Run Size to Gitwinksihlkw 2014 vs. 94-13 Mean, Minimum and Maximum returns (before up river harvests)

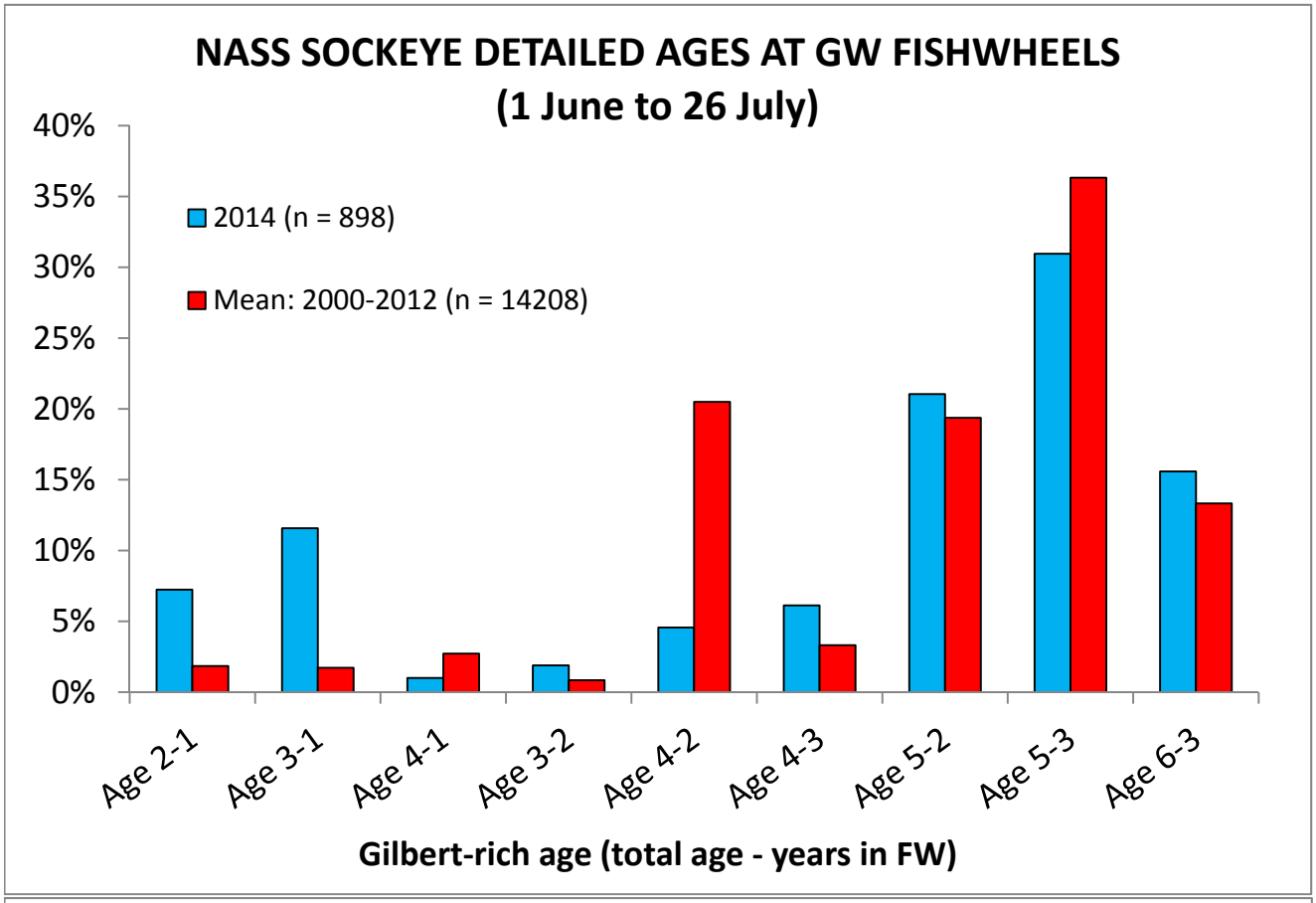


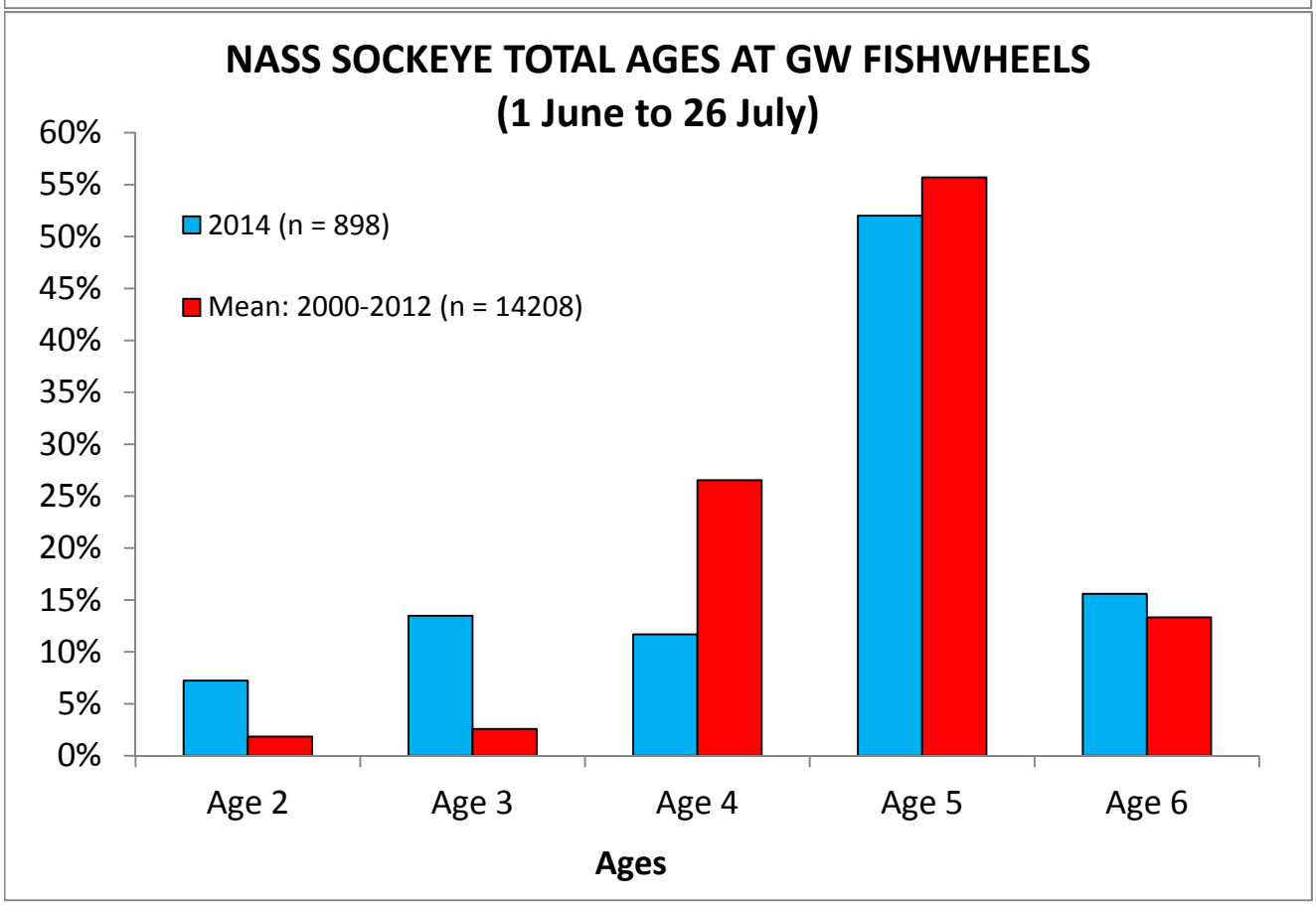
Cumulative Nass Adult Summer-run Steelhead Return to Gitwinksihlkw 2014 vs. 94-13 Mean, Minimum and Maximum returns (before up river harvests)

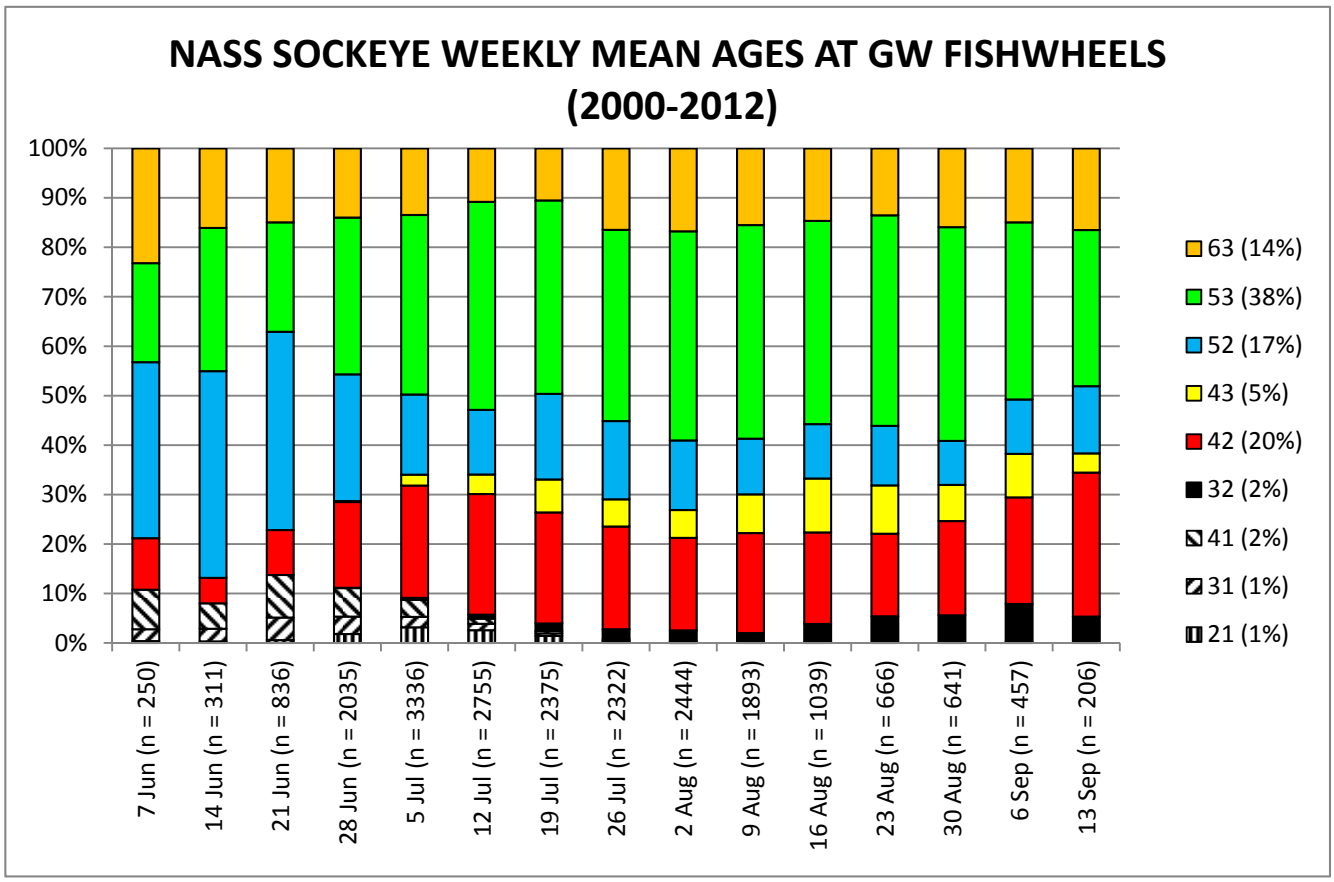


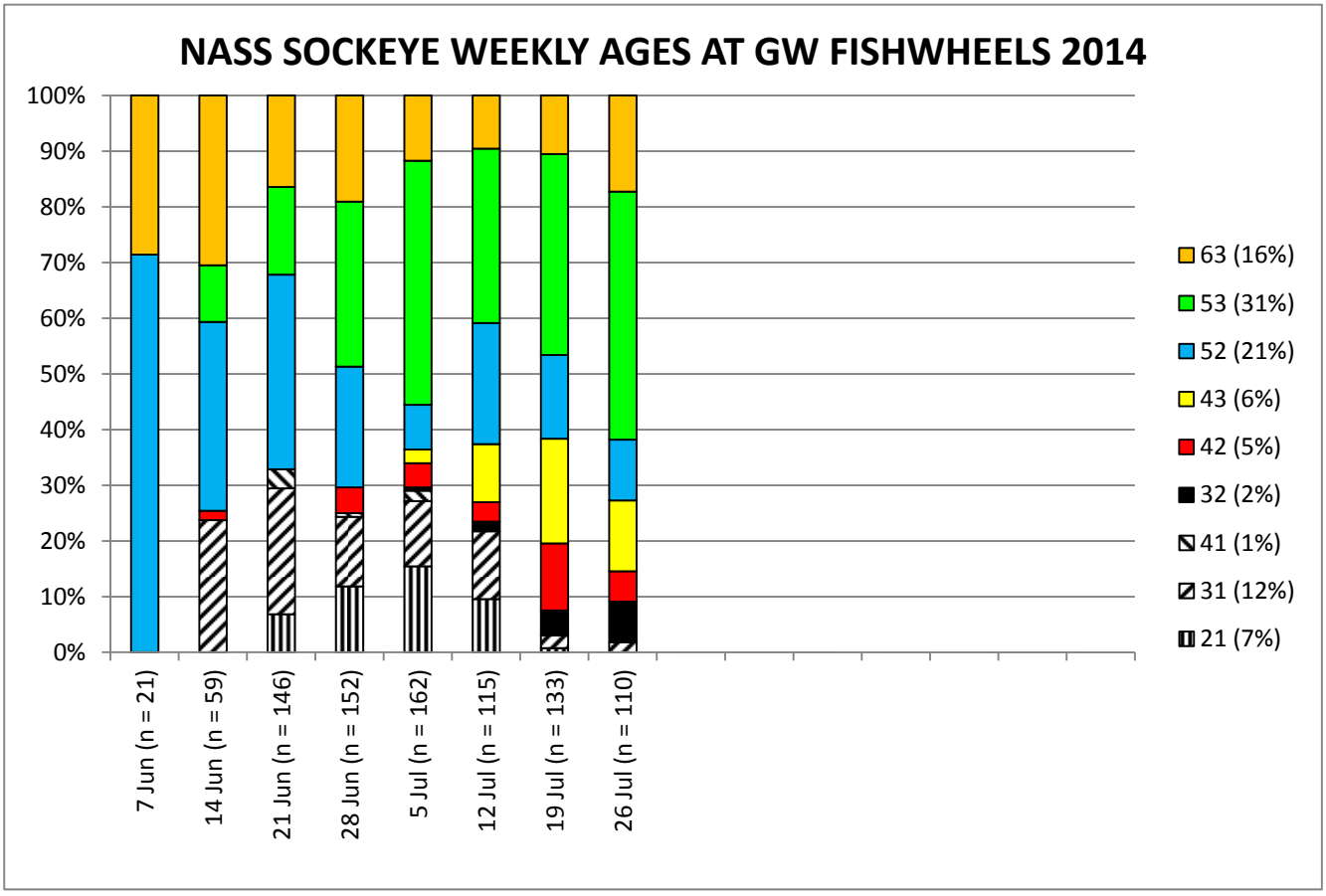
2014 Nass Fishwheel Catches

	GW		GW Total	GH				GH Total	Grand Total
Data	FW1	FW2		FW3	FW4	FW5	FW6		
Chin-adult catch	**97**	**325**	**422**	**322**	**111**	**494**	**313**	**1,240**	**1,662**
Chin-tagged	85	298	383	291	89	424	269	1,073	1,456
Chin-recaps	8	9	17	25	27	91	56	199	216
Chin-Jacks	76	151	227	119	114	245	229	707	934
Sum of CH Harv	0	0	0	0	0	0	0	0	0
Sockeye-adult catch	**3,198**	**6,598**	**9,796**	**5,750**	**1,430**	**8,939**	**5,169**	**21,288**	**31,084**
Sockeye-tagged	2,438	4,159	6,597	0	0	0	0	0	6,597
Sockeye-recaps	178	141	319	189	71	377	190	827	1146
Sockeye_ jacks	464	1395	1859	449	572	1218	778	3017	4876
Sum of Sk Harv	0	0	0	1241	383	2103	1188	4915	4915
Coho-adult catch	**1,284**	**961**	**2,245**	**519**	**379**	**1,401**	**851**	**3,150**	**5,395**
Coho-tagged	1,021	834	1,855	0	0	0	0	0	1,855
Coho-recaps	85	77	162	11	23	73	44	151	313
Coho-jack	12	16	28	31	16	65	44	156	184
Sum of CO Harv	0	0	0	130	213	350	314	1007	1007
Steel-adult catch	**71**	**112**	**183**	**60**	**21**	**77**	**47**	**205**	**388**
Steel-Adipose marked	67	98	165	55	20	71	45	191	356
Steel-unmarked	4	14	18	5	1	6	2	14	32
Steel-recap-total	9	5	14	5	2	16	3	26	40
Pacific Lamprey-catch	**32**	**74**	**106**	**39**	**27**	**142**	**173**	**381**	**487**
Lamprey-tagged	23	56	79	19	18	83	137	257	336
Lamprey-released	9	18	27	20	9	59	36	124	151
Lamprey-recaps	0	0	0	0	1	5	9	15	15
River Lamprey	0	1	1	0	0	3	0	3	4
Pink-adult-catch	**2761**	**3623**	**6384**	**1257**	**262**	**1871**	**556**	**3946**	**10330**
Chum-adult-catch	**12**	**8**	**20**	**7**	**0**	**0**	**2**	**9**	**29**
Chum-tagged	12	9	21	7	0	0	2	9	30
Chum-punched	0	0	0	0	0	0	0	0	0
Chum-recaps	1	1	2	0	0	0	0	0	2
Dolly Varden	**21**	**55**	**76**	**2**	**1**	**4**	**2**	**9**	**85**
Pike Minnow	**1**	**0**	**1**	**23**	**1**	**27**	**17**	**68**	**69**
Whitefish sp.	**2**	**12**	**14**	**5**	**2**	**15**	**12**	**34**	**48**
Rainbow Trout	**15**	**13**	**28**	**7**	**0**	**5**	**6**	**18**	**46**
Peamouth Chub	**0**	**0**	**0**	**7**	**1**	**10**	**9**	**27**	**27**
Red-Side Shiner	**0**	**2**	**2**	**2**	**0**	**2**	**0**	**4**	**6**
Sucker	**0**	**0**	**0**	**4**	**0**	**3**	**0**	**7**	**7**
Sculpin	**4**	**0**	**4**	**0**	**1**	**1**	**0**	**2**	**6**
Cutthroat sp.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Sum of chin_smolt	10	2	12	0	1	1	4	6	18
Sum of co_smolt	44	18	62	4	1	10	2	17	79
Sum of sk_smolt	16	0	16	0	2	1	0	3	19


NASS SOCKEYE DETAILED AGES AT GW FISHWHEELS
(1 June to 26 July)
40%
35%
30%
25%
20%
15%
10%
5%
0%
2014 (n = 898)
Mean: 2000-2012 (n = 14208)
Age 2-1
Age 3-1
Age 4-1
Age 3-2
Age 4-2
Age 4-3
Age 5-2
Age 5-3
Age 6-3
Gilbert-rich age (total age - years in FW)


NASS SOCKEYE TOTAL AGES AT GW FISHWHEELS
(1 June to 26 July)
60%
55%
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
2014 (n = 898)
Mean: 2000-2012 (n = 14208)
Age 2
Age 3
Age 4
Age 5
Age 6
Ages


NASS SOCKEYE WEEKLY MEAN AGES AT GW FISHWHEELS (2000-2012)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
7 Jun (n = 250)
14 Jun (n = 311)
21 Jun (n = 836)
28 Jun (n = 2035)
5 Jul (n = 3336)
12 Jul (n = 2755)
19 Jul (n = 2375)
26 Jul (n = 2322)
2 Aug (n = 2444)
9 Aug (n = 1893)
16 Aug (n = 1039)
23 Aug (n = 666)
30 Aug (n = 641)
6 Sep (n = 457)
13 Sep (n = 206)
63 (14%)
53 (38%)
52 (17%)
43 (5%)
42 (20%)
32 (2%)
41 (2%)
31 (1%)
21 (1%)


NASS SOCKEYE WEEKLY AGES AT GW FISHWHEELS 2014
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
7 Jun (n = 21)
14 Jun (n = 59)
21 Jun (n = 146)
28 Jun (n = 152)
5 Jul (n = 162)
12 Jul (n = 115)
19 Jul (n = 133)
26 Jul (n = 110)
63 (16%)
53 (31%)
52 (21%)
43 (6%)
42 (5%)
32 (2%)
41 (1%)
31 (12%)
21 (7%)