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WCVI Salmon Escapement Bulletin
Observations to November 12, 2010

SUMMARY:

For 2010 large amounts of rainfall and, in some cases flooding, have made escapement surveys challenging. For some systems fewer than optimal surveys have been conducted and this will contribute to greater uncertainty in final escapement estimates - i.e. in some cases estimates will be biased low. Also, please note the observations for 2010 reported below are the 'peak counts' observed to date; they do not represent an estimate of total escapement.

Similar to the pattern observed in 2008 and 2009, Chinook escapement levels are about the recent 12-year average in the NWVI region (DFO Statistical Areas 25 to 27), but below average in the SWVI region (DFO Statistical Areas 20 to 24). Chinook escapements remain particularly low in Clayoquot Sound (Area 24). With the exception of the San Juan area, coho escapements are about the recent 12-year average. Chum escapements throughout the WCVI are well below recent 5 and 12-year averages.

2010 EXPECTATIONS:

Chinook: Approximately 43,000 Somass Chinook are forecast to return to Barkley Sound and Alberni Inlet in 2010. For other WCVI Chinook populations, expectations are for below-average returns: Conuma Hatchery Terminal Return: 5000 – 14,000; Nitinat Terminal: 10,000; Nahmint River: <100; San Juan River: 1000 – 3000; WCVI Wild about 6000 total (~40% of average observations since 1995).

Coho: Most coho returning to WCVI systems in 2010 are 3-years from the 2007 brood year. Return expectations are based on forecast marine survival rates of the brood, which are below average at 1% for the Roberstson Creek hatchery indicator stock. However, forecast model predict a much higher survival rate of 10% for the wild indicator stock (Carnation Creek).

Chum: WCVI chum forecasts for 2010 are well below average returns at about 83K, 24K, 35K, 69K and 35K for Nitinat, Barkley, Clayoquot, Nootka and Kyoquot terminal areas, respectively.

Sockeye: The 2010 Somass (Great Central and Sproat Lake) sockeye return is in the range of 1.2 to 1.4M adults, far exceeding pre-season expectations. Observations suggest returns of other WCVI sockeye populations are also relatively abundant compared to recent year averages.

METHODOLOGY:

Since 1995, escapements to about 18 systems throughout the WCVI have been surveyed annually by DFO-contracted crews with a consistent methodology. These crews count spawners several times over the duration of the run. Spawners are usually counted during swims, but other methods may be used, such as aerial surveys or bank walks. The counts are compiled and analyzed (using the area-under-the-curve method) to estimate total escapement. Although other species are observed and recorded, the timing and methodology of these surveys is most conducive to generating estimates of Chinook, coho and chum escapement.

More precise escapement data are also gathered through indicator stock programs (e.g. Somass sockeye and Chinook, Carnation Creek coho). Less precise data are gathered through surveys sponsored by local First Nations, stewardship groups and Charter Patrol operators.

PORT RENFREW (AREA 20):

Escapement to the San Juan River is monitored at the counting fence operated by the San Juan enhancement society until high water necessitates the removal of the fence. After that, the Pacheedaht First Nation will conduct swim surveys once per week for a total of 4 swims (depending on river conditions). Escapement to Harris and Lens creeks will also be surveyed by the Pacheedaht First Nation.

Since 1995, average escapement to San Juan River is about 2000 and 17,000 for chinook and coho, respectively.

2010 observations indicate well below average escapement of both chinook and coho to the San Juan River with peak observations of < 500 chinook and < 4000 coho.

NITINAT (AREA 21, 22):

Nitinat River will be surveyed by DFO StAD and Nitinat Hatchery. Four surveys are scheduled. Hobiton Creek sockeye run is currently monitored by Ditidaht First Nation and the Nuu-chah-nulth Tribal Council (NTC). Two surveys are scheduled for the Klanawa River during peak Chinook and Chum timing, to be conducted by Huu-ay-aht First Nation and DFO.

Since 1995, average escapement to the Nitinat River is about 21,000 and 200,000 for chinook and chum, respectively. Surveys of the Nitinat River are not conducive to estimating coho abundance.

2010 observations indicate a peak escapement of about 4500 of Chinook to Nitinat River, which although below average is about expected levels. Escapement of chum to the Nitinat Lake and River is well below average, estimated at about 90,000 near forecast.

Charter Patrol operator will also survey a number of systems in Area 25 with assistance by Ehatisaht First Nation. For 2010, there are also mark-recapture studies for chinook operating on the Tahsis and Burman River.

2010 observations indicate Chinook escapements to Area 25 systems are similar to the recent 5-year average (i.e. lower than the longer-term 12 year average, but stable). Coho escapements are about the 12-year average for most systems. Chum escapements are well below average.

KYUQUOT (AREA 26):

In Area 26, the Kaouk, Artlish and Tahsish Rivers are surveyed by DFO in partnership the North Vancouver Island Salmon Enhancement Society and Kyuquot First Nations. 5 surveys are planned this year at a frequency of about once per week, depending on river conditions. For 2010, there is a mark-recapture study for chinook operating on the Kaouk River.

2010 observations of Chinook escapements to Area 26 systems are variable and likely influenced by poor survey conditions. Chinook escapement to the Kaouk River is above the 12-year average, whereas there are below average observations in the two other indicator systems (Artlish, Tahsish). Coho escapements are about the 12-year average for most systems. Chum escapements are well below average.

QUATSINO (AREA 27):

In Area 27, the Marble, Colonial/Cayeghle Rivers are surveyed by DFO in partnership the North Vancouver Island Salmon Enhancement Society. 5 surveys are planned this year at a frequency of about once per week, depending on river conditions.

2010 observations indicate Chinook escapements to Area 26 systems are similar to the recent 5-year average (i.e. lower than the longer-term 15 year average, but stable). Coho escapements are about the 15-year average for most systems.

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Table 1. 2010 escapement observations (peak count to date) for extensive indicator systems. Note the data reported below are 'peak counts'; they do not represent an estimate of total escapement.

Area	System	Number of Surveys	Chinook Adults	Coho Adults	Chum Adults	Sockeye Adults	Pink Adults
20	SAN JUAN RIVER	3	451	3363	22	17	1
22	NITINAT RIVER	3	4567	611	16900	68	3
23	NAHMINT RIVER	5	347	168	2661	1968	9
23	SARITA RIVER	5	874	965	3452	232	8
24	BEDWELL/URSUS	6	31	550	2265	465	42
24	MEGIN RIVER	1	4	3	414		
24	MOYEHA RIVER	5	162	1942	7623	423	11
24	TRANQUIL CREEK	12	128	533	6084	65	2
25	CONUMA RIVER	4	8883	868	2538	58	4
25	TAHSIS RIVER	5	282	1271	1188	305	
25	BURMAN RIVER	10	845	744	1867	780	
25	LEINER RIVER	9	265	390	766	916	10
25	ZEBALLOS RIVER	3	20	238	1460	573	
26	ARTLISH RIVER	3	65	454	1057	12	1
26	KAOUK RIVER	10	158	1699	5655	38	15
26	TAHSISH RIVER	3	250	437	210	42	6
27	CAYEGHLE SYSTEM	3	112	191	1518	1	
27	MARBLE RIVER	4	1398	777	2		1

Table 2. . 2010 escapement observations for less frequently surveyed systems. Note the data reported below are 'peak counts'; they do not represent an estimate of total escapement.

Tier	Area	System	Number of Surveys	Chinook Adults	Coho Adults	Chum Adults	SK Adults
2	21	KLANAWA RIVER	1	10	11	17	
2	23	CLEMENS CREEK	1	71	2303	71	29651
2	24	CLAYOQUOT RIVER (UPPER)	1				1078
2	24	KENNEDY RIVER	3	4	2	3	5507
2	24	CYPRE RIVER	2	240	373	989	15
2	24	ICE RIVER	1	3	43	142	1
2	24	SUTTON MILL CREEK	1			31	
2	24	SYDNEY RIVER	1	5	129	330	4
2	24	WARNE BAY CREEK	2	26	54	1372	2
2	24	WATTA CREEK	1	6	133	257	13
2	24	WOOD ISLETS CREEK	1			7	
2	25	CANTON CREEK	3	205	411	2468	8
2	25	SUCWOA RIVER	3	286	227	981	44
2	25	TLUPANA RIVER	3	20	106	3368	23
2	25	BLACK CREEK	2	2	30	3747	
2	25	BRODICK CREEK	2			151	
2	25	CHUM CREEK	2	4	62	1533	
2	25	DESERTED CREEK	3		1	1227	
2	25	ESPINOSA CREEK	2	21	172	1531	23
2	25	HAMMOND CREEK	2		151	405	6
2	25	HOISS CREEK	3	21	9	497	3
2	25	KLEEPTEE CREEK	3	154	233	5466	21
2	25	LITTLE ZEBALLOS RIVER	3	14	647	2733	100
2	25	LORD CREEK	3			674	
2	25	MARVINAS BAY CREEK	3	1	58	41	4
2	25	MOOYAH RIVER	3	47	265	253	16
2	25	PARK RIVER	2		62	9794	
2	25	INNER BASIN RIVER (Ransom (	2	2	169	99	
2	25	OWOSSITSA CREEK	2		29	1082	

Table 3. Average escapement (last 5 and 12 years) for the extensive WCVI indicator systems.

Area	System	Average Escapement Estimates					
		Chinook Adults		Coho Adults		Chum Adults	
		5yr avg	12yr avg	5yr avg	12yr avg	5yr avg	12yr avg
20	SAN JUAN RIVER	2,500	2,000	3,000	17,000		
22	NITINAT RIVER	13,600	20,000			180,000	187,000
23	NAHMINT RIVER	440	470	435	360	20,350	37,700
23	SARITA RIVER	2,100	2,000	400	640	9,300	13,150
24	BEDWELL RIVER	85	200	900	1,550	3,700	3,700
24	MEGIN RIVER	50	120	725	1,300	2,800	3,800
24	MOYEHA RIVER	165	140	2,500	3,000	14,400	12,700
24	TRANQUIL CREEK	525	900	480	650	12,500	9,200
25	BURMAN RIVER	930	1,200	1,250	960	5,000	9,000
25	CONUMA RIVER	18,700	20,400	2,300	4,400	12,400	40,600
25	LEINER RIVER	320	440	600	600	6,800	6,060
25	TAHSIS RIVER	330	670	1,200	1,250	8,500	11,300
25	ZEBALLOS RIVER	370	380	350	375	7,300	8,500
26	ARTLISH RIVER	250	260	870	960	4,700	4,700
26	KAOUK RIVER	360	400	1,600	2,000	8,400	8,900
26	TAHSISH RIVER	260	460	1,900	1,950	6,400	5,600
27	CAYEGHLE SYSTEM	500	475	1,000	1,200	9,000	8,000
27	MARBLE RIVER	2,900	2,900	700	960		