

Dr. Miller received a phone call from Rick Routledge at SFU who was studying Rivers Inlet sockeye salmon and trying to determine what might be causing their declines in abundance. He noted that his student, Nicole, had collected out-migrating smolts at various locations along River's inlet in 2011 and noted that compared to other years, they were skinnier and looked less healthy and some were dying in the nets. He suggested that there may be parallels with what was going on in the Fraser, and was interested in getting his fish "tested" for the genomic signature Miller's lab had identified as associated with premature mortality of adults returning to the Fraser River to spawn. Unfortunately, his samples were not collected in a way that would permit genomic analysis, but Dr. Miller suggested that she could test them for parvovirus, which is a candidate virus

On Sept 29, 2011, Nicole, Rick Routledge's student, brought to the Molecular Genetics Laboratory 48 sockeye salmon smolts collected from Rivers Inlet. She worked with Derek Menard and Cowan Belanger, co-op students in the Molecular Genetics Lab, to dissect these fish. We took anterior kidneys and placed them in rows of 8 tubes on ice, and these were transferred to the -80 freezer when filled. Nicole was taking heart and stomach samples from each fish and placing the hearts in individually labelled whirl packs and stomachs in scintillation vials with 95% ethanol, also individually labelled. Well number, bag number, arbitrary fish number, length and weight were recorded by Nicole, but not give to us. The arbitrary fish numbers should be the same between our samples and hers. The carcasses were placed into individually labelled bags as well. She had brought perhaps 200 carcasses, but only 48 were dissected. She took the undissected carcasses back with her and left those that had been dissected in the molecular genetics lab in a -20 freezer.

On Oct 12 (or thereabouts), Dr. Miller received a phone call that they wanted the carcasses back, and they came and picked them up that afternoon.

On Oct 13, Cowan Belanger placed the frozen kidney samples in a trizol homogenate that enables us to extract both DNA and RNA from the sample. The Rivers Inlet samples were placed on a 96-well tray along with 34 herring samples that had been collected in the Strait of Georgia and which we intended to test for parvovirus. There was one glitch with these homogenates in that one of the steps involving incubation with BCP was incubated for 45 minutes as opposed to the recommended 10 minutes. Later analyses of the extracted DNA and RNA did not suggest that this caused significant harm to the samples. DNA was extracted from these homogenates on that day. Cowan took the RNA containing aqueous layer off the top of the trizol homogenates and placed them into three separate trays—i.e. they could be extracted 3 times.

On Oct 17, Angela Schulze, a technician in the Molecular Genetics Lab, extracted RNA from one of the three trays containing the aqueous layer of the Trizol homogenate. Quantitation of the RNA extraction showed decent yields of RNA (around 300-500 ng/ul), although a few samples were very low. Our students had noted that some samples

were in very poor condition, possibly long dead and degraded. Unfortunately they did not take notes that would reveal which fish these were. RNA degrades very rapidly after death.

We have not yet analysed these samples for parvovirus, as we had other deadlines to meet and they were not deemed "high priority" in our lab. We did not know when we obtained these samples that they were being sent out for ISA analysis, but Dr. Miller did suggest that if they were interested in a full workup on disease that they contact a diagnostic lab to do those analyses.

The RNA from these kidney samples will be sent to the OIE testing lab in Moncton, care of Nellie Gagne, on Monday, Oct 24, 2011.

A handwritten signature in black ink, appearing to read "Dr. Miller". The signature is fluid and cursive, with a long horizontal stroke at the end.

Note:
Sept 29 - dictation
press the let
swimtype

18-871

Product 3 + 2000

Plate: Nicole 2011 Juvenile Sockeye

Wikend SK

	1	2	3	4	5	6	7	8	9	10	11	12
A	Kidney	Kidney	Kidney	Kidney	Kidney	Kidney	Kidney H62-01	Kidney H62-01	Kidney H67-01	Kidney H71-03	Kidney H89-01	Kidney
B	Kidney	Kidney	Kidney	Kidney	Kidney	Kidney	Kidney H62-02	Kidney H62-10	Kidney H67-02	Kidney H73-01	Kidney H89-02	Kidney
C	Kidney	Kidney	Kidney	Kidney	Kidney	Kidney	Kidney H62-03	Kidney H63-01	Kidney H67-03	Kidney H73-02	Kidney	Kidney
D	Kidney	Kidney	Kidney	Kidney	Kidney	Kidney	Kidney H62-04	Kidney H63-02	Kidney H67-04	Kidney H73-03	Kidney	Kidney
E	Kidney	Kidney	Kidney	Kidney	Kidney	Kidney	Kidney H62-05	Kidney H63-03	Kidney H67-05	Kidney H73-04	Kidney	Kidney
F	Kidney	Kidney	Kidney	Kidney	Kidney	Kidney	Kidney H62-06	Kidney H63-04	Kidney H67-06	Kidney H73-05	Kidney	Kidney
G	Kidney	Kidney	Kidney	Kidney	Kidney	Kidney	Kidney H62-07	Kidney H63-05	Kidney H67-07	Kidney H73-06	Kidney	Kidney
H	Kidney	Kidney	Kidney	Kidney	Kidney	Kidney	Kidney H62-08	Kidney H63-06	Kidney H67-08	Kidney H73-07	Kidney	Kidney

Heating Samples from
Sept 2011 Ricker Survey

column 7 * After BCP - huge Interphase, almost no Aqueous layer
- not added to RNA plates

	1	2	3	4	5	6	7	8	9	10	11	12
A	1	9	17	25	33	41	49	57	65	73	81	89
B	2	10	18	26	34	42	50	58	66	74	82	90
C	3	11	19	27	35	43	51	59	67	75	83	91
D	4	12	20	28	36	44	52	60	68	76	84	92
E	5	13	21	29	37	45	53	61	69	77	85	93
F	6	14	22	30	38	46	54	62	70	78	86	94
G	7	15	23	31	39	47	55	63	71	79	87	95
H	8	16	24	32	40	48	56	64	72	80	88	96

- 45 min instead of 10 min BCP - room temp incubation

Conin Belcher

Okwilenko Onne Kidneys - 2011 / Sept 2011 Ricker survey Herring

2009 Fate Study Information recorded for each step

RNA extraction

Tray No#	Brief description	Samples set-up		TRI Reagent	Homogenate		aliquots	BCP	Isopropanol
		date	technician	Lot#	date	technician		Lot#	Lot#
Concan Plate #1	fin dissected in lab	Sept 29 2011	DM CB		Oct 13 2011	CB	3x100ul		
	Beads	Wash I	Lysis/ Binding Enhancer	Lot#	TURBO Dnase	TURBO Dnase Buffer	RNA re-binding	Lysis/ Binding Solution	Elution Buffer
	Lot#	Lot#	Lot#	Lot#	Lot#	Lot#	Lot#	Lot#	Lot#
	1006020	1007012	1007021	1007012	1007013	1006021	/	1007013	1007012

Total RNA extracted Oct 11 (PS)

- add 35ul EBd buffer (pre heated)
- spce 30ul (1st Eln)
- add 35ul more buffer
- spce 35ul (2nd Eln)
- aliquot 10ul of 1st Eln

incubated @ 37°C

Tray No#	Brief description	Samples set-up		TRI Reagent	Homogenate		aliquots	BCP	Isopropanol
		date	technician	Lot#	date	technician		Lot#	Lot#
	Beads	Wash I	Lysis/ Binding Enhancer	Lot#	TURBO Dnase	TURBO Dnase Buffer	RNA re-binding	Lysis/ Binding Solution	Elution Buffer
	Lot#	Lot#	Lot#	Lot#	Lot#	Lot#	Lot#	Lot#	Lot#

Tray No#	Brief description	Samples set-up		TRI Reagent	Homogenate		aliquots	BCP	Isopropanol
		date	technician	Lot#	date	technician		Lot#	Lot#
	Beads	Wash I	Lysis/ Binding Enhancer	Lot#	TURBO Dnase	TURBO Dnase Buffer	RNA re-binding	Lysis/ Binding Solution	Elution Buffer
	Lot#	Lot#	Lot#	Lot#	Lot#	Lot#	Lot#	Lot#	Lot#

Angela Schulte

Sequential	Name	Barcode	Well	Volume	Vini	A260VA280	A260VA230	RNA	Net260	Net280	Net230	A260	A280	A230
1	StockPlate1	A1	30	30	2.20042557	1.577227665	636.3787		2.6887	1.2219	1.7047	2.7918	1.2946	1.8392
1	StockPlate1	A2	30	30	2.35227739	1.813795286	542.7219		2.293	0.9748	1.2642	2.3853	1.0369	1.3863
1	StockPlate1	A3	30	30	1.93485523	0.749730313	82.24852		0.3475	0.1796	0.4635	0.4331	0.2355	0.5777
1	StockPlate1	A4	30	30	2.36616395	1.574051324	545.8698		2.3063	0.9747	1.4652	2.3922	1.0308	1.5798
1	StockPlate1	A5	30	30	2.41229679	1.502016896	467.1006		1.9735	0.8181	1.3139	2.0611	0.8761	1.4291
1	StockPlate1	A6	30	30	2.27188329	1.927155112	324.355		1.3704	0.6032	0.7111	1.4588	0.6622	0.8271
1	StockPlate1	A7	30	30	1.51069633	1.2768737	668.568		2.8247	1.8698	2.2122	2.911	1.9266	2.3251
1	StockPlate1	A8	30	30	1.90584085	1.327380109	664.9467		2.8094	1.4741	2.1165	2.8998	1.5347	2.2338
1	StockPlate1	A9	30	30	2.14408338	1.002005731	165.5385		0.6994	0.3262	0.698	0.7922	0.3883	0.8218
1	StockPlate1	A10	30	30	1.85588508	1.332272014	663.5503		2.8035	1.5106	2.1043	2.8942	1.5713	2.2232
1	StockPlate1	A11	30	30	2.12117249	1.44843709	652.568		2.7571	1.2998	1.9035	2.8624	1.374	2.0413
1	StockPlate1	A12	30	30	0.85507246	0.135217723	4.189349		0.0177	0.0207	0.1309	0.1063	0.0792	0.2476
1	StockPlate1	B1	30	30	2.26614081	1.819610603	367.1953		1.5514	0.6846	0.8526	1.643	0.7462	0.9746
1	StockPlate1	B2	30	30	2.20583153	1.49073128	241.7278		1.0213	0.463	0.6851	1.1103	0.5222	0.8043
1	StockPlate1	B3	30	30	2.14227291	1.369137974	644.7101		2.7239	1.2715	1.9895	2.8096	1.3275	2.1048
1	StockPlate1	B4	30	30	2.26149753	1.203478964	281.6568		1.19	0.5262	0.9888	1.2799	0.5863	1.1088
1	StockPlate1	B5	30	30	2.20451492	1.473769314	194.1538		0.8203	0.3721	0.5566	0.9118	0.4341	0.6768
1	StockPlate1	B6	30	30	1.83333333	0.717680226	42.17751		0.1782	0.0972	0.2483	0.2655	0.1547	0.3643
1	StockPlate1	B7	30	30	1.82794788	1.301256782	664.1183		2.8059	1.535	2.1563	2.8943	1.5936	2.2738
1	StockPlate1	B8	30	30	2.41919075	1.501901959	495.2899		2.0926	0.865	1.3933	2.1855	0.9279	1.515
1	StockPlate1	B9	30	30	2.27020244	1.347467726	321.1598		1.3569	0.5977	1.007	1.4449	0.6562	1.1228
1	StockPlate1	B10	30	30	2.35499114	1.367283951	377.4675		1.5948	0.6772	1.1664	1.6806	0.7333	1.2794
1	StockPlate1	B11	30	30	2.41294964	1.795091368	555.6923		2.3478	0.973	1.3079	2.4436	1.0396	1.4292
1	StockPlate1	B12	30	30	0.85840708	9.09E-02	4.591716		0.0194	0.0226	0.2134	0.1089	0.0826	0.3282
1	StockPlate1	C1	30	30	2.12225833	1.656363925	247.3373		1.045	0.4924	0.6309	1.137	0.5541	0.7535
1	StockPlate1	C2	30	30	2.29753876	1.429638108	620.8521		2.6231	1.1417	1.8348	2.7127	1.2012	1.9548
1	StockPlate1	C3	30	30	2.38838937	1.416777784	578.4142		2.4438	1.0232	1.7249	2.5318	1.0813	1.8431
1	StockPlate1	C4	30	30	2.33533672	1.412828641	358.6746		1.5154	0.6489	1.0726	1.6055	0.7094	1.1929
1	StockPlate1	C5	30	30	2.41392117	1.372641188	476.8994		2.0149	0.8347	1.4679	2.1017	0.8917	1.5838
1	StockPlate1	C6	30	30	2.25211297	1.444150694	258.5799		1.0925	0.4851	0.7565	1.1813	0.5445	0.874
1	StockPlate1	C7	30	30	2.31706009	1.424942263	613.3491		2.5914	1.1184	1.8186	2.6813	1.1788	1.937
1	StockPlate1	C8	30	30	2.41543352	1.645091452	521.5621		2.2036	0.9123	1.3395	2.2992	0.9783	1.4639
1	StockPlate1	C9	30	30	2.22864209	1.305028963	234.6272		0.9913	0.4448	0.7596	1.0791	0.5026	0.8757
1	StockPlate1	C10	30	30	2.1786105	1.160233066	188.5207		0.7965	0.3656	0.6865	0.8837	0.4229	0.8007
1	StockPlate1	C11	30	30	0.95355191	0.111858974	8.260355		0.0349	0.0366	0.312	0.1247	0.0972	0.4295
1	StockPlate1	C12	30	30	0.93119266	0.146888567	4.804734		0.0203	0.0218	0.1382	0.1097	0.0816	0.2538
1	StockPlate1	D1	30	30	0.90551181	0.258426966	2.721893		0.0115	0.0127	0.0445	0.1015	0.0724	0.1647
1	StockPlate1	D2	30	30	1.99598566	1.35639127	659.0296		2.7844	1.395	2.0528	2.8781	1.4587	2.1769
1	StockPlate1	D3	30	30	2.23628219	1.406668232	283.5976		1.1982	0.5358	0.8518	1.2872	0.595	0.97
1	StockPlate1	D4	30	30	2.39846045	1.303175389	560.4734		2.368	0.9873	1.8171	2.4595	1.049	1.9376
1	StockPlate1	D5	30	30	1.8134715	0.523481902	41.42012		0.175	0.0965	0.3343	0.2692	0.1605	0.4582
1	StockPlate1	D6	30	30	2.31518905	1.532801036	336.2367		1.4206	0.6136	0.9268	1.5089	0.672	1.044
1	StockPlate1	D7	30	30	2.31236655	1.528792424	615.1716		2.5991	1.124	1.7001	2.6985	1.1927	1.8293

Angie Schwilke

1	StockPlate1	D8	30	2.18374502	1.344881735	648.6627	2.7406	1.255	2.0378	2.8329	1.3175	2.1585
1	StockPlate1	D9	30	2.06355738	0.832810482	106.8166	0.4513	0.2187	0.5419	0.5415	0.2793	0.6602
1	StockPlate1	D10	30	2.22321886	1.384676776	205.3254	0.8675	0.3902	0.6265	0.9637	0.456	0.7509
1	StockPlate1	D11	30	0.88963211	9.28E-02	6.295858	0.0266	0.0299	0.2866	0.1138	0.0873	0.4007
1	StockPlate1	D12	30	0.81893004	6.12E-02	4.710059	0.0199	0.0243	0.3252	0.1092	0.084	0.4408
1	StockPlate1	E1	30	2.26234542	1.672825881	627.8343	2.6526	1.1725	1.5857	2.7427	1.2321	1.7065
1	StockPlate1	E2	30	2.39939407	1.602497907	543.5976	2.2967	0.9572	1.4332	2.3854	1.0158	1.5519
1	StockPlate1	E3	30	2.38062954	1.543291266	581.7751	2.458	1.0325	1.5927	2.544	1.0884	1.7076
1	StockPlate1	E4	30	2.39926249	1.474757882	508.1893	2.1471	0.8949	1.4559	2.2429	0.9597	1.5817
1	StockPlate1	E5	30	2.42020666	1.777736132	449.0414	1.8972	0.7839	1.0672	1.994	0.8499	1.1937
1	StockPlate1	E6	30	2.30413194	1.67694889	307.5266	1.2993	0.5639	0.7748	1.3893	0.6238	0.8937
1	StockPlate1	E7	30	1.8498672	1.300485482	659.3846	2.7859	1.506	2.1422	2.8835	1.5722	2.2699
1	StockPlate1	E8	30	2.06422087	1.36451101	651.2189	2.7514	1.3329	2.0164	2.8475	1.3985	2.1418
1	StockPlate1	E9	30	2.15373845	1.043271839	182.0355	0.7691	0.3571	0.7372	0.857	0.4152	0.8526
1	StockPlate1	E10	30	2.3275347	1.045626776	313.5148	1.3246	0.5691	1.2668	1.4178	0.6327	1.3871
1	StockPlate1	E11	30	0.90222222	0.113916947	4.804734	0.0203	0.0225	0.1782	0.1143	0.0863	0.3003
1	StockPlate1	E12	30	0.73333333	5.68E-02	2.863905	0.0121	0.0165	0.2132	0.1058	0.0799	0.3343
1	StockPlate1	F1	30	2.07954329	1.811370794	258.6509	1.0928	0.5255	0.6033	1.1836	0.586	0.7238
1	StockPlate1	F2	30	2.38376844	1.587497165	497.0651	2.1001	0.881	1.3229	2.1932	0.9441	1.4455
1	StockPlate1	F3	30	2.39719924	1.213507766	445.6805	1.883	0.7855	1.5517	1.9811	0.8528	1.6804
1	StockPlate1	F4	30	2.39856944	1.54650269	571.4556	2.4144	1.0066	1.5612	2.5132	1.0742	1.6912
1	StockPlate1	F5	30	2.20493685	0.862758311	181.8225	0.7682	0.3484	0.8904	0.8679	0.4171	1.0208
1	StockPlate1	F6	30	2.26722988	1.49028204	241.3728	1.0198	0.4498	0.6843	1.1158	0.5146	0.8107
1	StockPlate1	F7	30	2.30589476	1.425979247	621.2544	2.6248	1.1383	1.8407	2.7128	1.1964	1.9568
1	StockPlate1	F8	30	2.09950134	1.443940273	647.7396	2.7367	1.3035	1.8953	2.8329	1.369	2.0212
1	StockPlate1	F9	30	2.11814051	0.830933772	143.432	0.606	0.2861	0.7293	0.6931	0.3431	0.8447
1	StockPlate1	F10	30	2.42171977	1.545249198	501.9408	2.1207	0.8757	1.3724	2.2088	0.9336	1.4875
1	StockPlate1	F11	30	0.88148148	9.61E-02	5.633136	0.0238	0.027	0.2477	0.1116	0.085	0.362
1	StockPlate1	F12	30	0.88392857	0.10766721	4.686391	0.0198	0.0224	0.1839	0.1084	0.0814	0.2988
1	StockPlate1	G1	30	2.40850748	1.810173005	537.3964	2.2705	0.9427	1.2543	2.359	1.001	1.3727
1	StockPlate1	G2	30	2.31676083	1.703524199	582.3432	2.4604	1.062	1.4443	2.559	1.1297	1.5733
1	StockPlate1	G3	30	2.19103568	1.295899108	357.5148	1.5105	0.6894	1.1656	1.5975	0.7463	1.2814
1	StockPlate1	G4	30	2.32955509	1.34539413	344.9941	1.4576	0.6257	1.0834	1.5492	0.6864	1.2048
1	StockPlate1	G5	30	2.17827381	1.264731294	173.2308	0.7319	0.336	0.5787	0.826	0.399	0.7031
1	StockPlate1	G6	30	2.24724011	1.531744788	231.2663	0.9771	0.4348	0.6379	1.0672	0.4943	0.7572
1	StockPlate1	G7	30	2.26977929	1.434365109	632.8521	2.6738	1.178	1.8641	2.7626	1.2368	1.9814
1	StockPlate1	G8	30	1.80055313	1.292295619	662.6036	2.7995	1.5548	2.1663	2.8944	1.6189	2.2912
1	StockPlate1	G9	30	2.39097835	1.5030409	467.9527	1.9771	0.8269	1.3154	2.0669	0.8864	1.4335
1	StockPlate1	G10	30	2.31351784	1.557359372	615.3136	2.5997	1.1237	1.6693	2.6916	1.1858	1.7877
1	StockPlate1	G11	30	0.90595611	0.101688951	6.840237	0.0289	0.0319	0.2842	0.1181	0.0911	0.4005
1	StockPlate1	G12	30	0.8271028	7.20E-02	4.189349	0.0177	0.0214	0.2458	0.1089	0.0827	0.3639
1	StockPlate1	H1	30	2.28685657	1.790437436	541.5385	2.288	1.0005	1.2779	2.3771	1.0594	1.3969
1	StockPlate1	H2	30	2.32660796	1.69511898	494.0118	2.0872	0.8971	1.2313	2.1751	0.9548	1.3486
1	StockPlate1	H3	30	2.37494883	1.516070029	411.9763	1.7406	0.7329	1.1481	1.8306	0.7926	1.2675

1 StockPlate1	H4	30	2.37361097	1.478917166	561.1834	2.371	0.9989	1.6032	2.4616	1.0589	1.7239
1 StockPlate1	H5	30	2.39114547	1.423920321	402.6746	1.7013	0.7115	1.1948	1.7921	0.7722	1.3139
1 StockPlate1	H6	30	2.28979821	1.691744892	290.0592	1.2255	0.5352	0.7244	1.3122	0.5915	0.8394
1 StockPlate1	H7	30	2.19185952	1.470441344	641.1124	2.7087	1.2358	1.8421	2.7964	1.2934	1.9581
1 StockPlate1	H8	30	2.43354138	1.604924156	498.3432	2.1055	0.8652	1.3119	2.2043	0.9332	1.4403
1 StockPlate1	H9	30	1.86384226	1.312321186	662.2485	2.798	1.5012	2.1321	2.8944	1.567	2.2585
1 StockPlate1	H10	30	2.34214876	1.600125471	603.6923	2.5506	1.089	1.594	2.6398	1.1481	1.7108
1 StockPlate1	H11	30	0.92307692	0.121904762	4.544379	0.0192	0.0208	0.1575	0.1149	0.0867	0.2802
1 StockPlate1	H12	30	0.89071038	0.133497133	3.857988	0.0163	0.0183	0.1221	0.1122	0.0839	0.2451

Miller-Saunders, Kristi

From: Candy, John
Sent: October 19, 2011 4:30 PM
To: Miller-Saunders, Kristi
Cc: Ginther, Norma
Subject: Rivers Inlet smolts

GST

Hi kristi
They all allocate to Owikeno lake.



sockeye11RiversInl
etSmolts10-1...

jc

GSI

Species = sockeye Number of populations = 244 Baseline Description = coastwide031111.bse Number of loci = 19 Max missing loci = 8
 Number of chains = 10 Number of Reps = 10000 Reps Kept = 500

Fish	Comment	Stock 1	Region Prob 1	Stock 2	Region Prob 2	Stock 3	Region
			0				
RivInletSmolt(11) trap 274 1		Washwash	18 0.53 Inziana		18 0.31 Ashlulm		18
RivInletSmolt(11) trap 274 10		Washwash	18 0.84 Inziana		18 0.14 Ashlulm		18
RivInletSmolt(11) trap 274 11		Washwash	18 0.68 Inziana		18 0.21 Ashlulm		18
RivInletSmolt(11) trap 274 12		Washwash	18 0.65 Inziana		18 0.34 Ashlulm		18
RivInletSmolt(11) trap 274 13		Inziana	18 0.71 Washwash		18 0.20 Ashlulm		18
RivInletSmolt(11) trap 274 14		Washwash	18 0.63 Inziana		18 0.37		
RivInletSmolt(11) trap 274 15		Inziana	18 0.72 Washwash		18 0.27 Ashlulm		18
RivInletSmolt(11) trap 274 16		Inziana	18 0.83 Washwash		18 0.10 Ashlulm		18
RivInletSmolt(11) trap 274 17		Washwash	18 0.54 Inziana		18 0.45 Ashlulm		18
RivInletSmolt(11) trap 274 18		Washwash	18 0.71 Inziana		18 0.24 Ashlulm		18
RivInletSmolt(11) trap 274 19		Inziana	18 0.49 Washwash		18 0.44 Ashlulm		18
RivInletSmolt(11) trap 274 2		Washwash	18 0.60 Inziana		18 0.34 Ashlulm		18
RivInletSmolt(11) trap 274 20		Inziana	18 0.74 Washwash		18 0.25 Ashlulm		18
RivInletSmolt(11) trap 274 21		Inziana	18 0.73 Washwash		18 0.24 Ashlulm		18
RivInletSmolt(11) trap 274 22		Inziana	18 0.65 Washwash		18 0.29 Ashlulm		18
RivInletSmolt(11) trap 274 23		Inziana	18 0.92 Ashlulm		18 0.08 Washwash		18
RivInletSmolt(11) trap 274 24		Inziana	18 0.51 Ashlulm		18 0.23 Tahlo		13
RivInletSmolt(11) trap 274 25		Inziana	18 0.76 Washwash		18 0.19 Ashlulm		18
RivInletSmolt(11) trap 274 26		Washwash	18 0.61 Inziana		18 0.32 Ashlulm		18
RivInletSmolt(11) trap 274 27		Washwash	18 0.71 Inziana		18 0.16 Ashlulm		18
RivInletSmolt(11) trap 274 28		Washwash	18 0.50 Inziana		18 0.49 Lagoon_Cr		15
RivInletSmolt(11) trap 274 29		Inziana	18 0.52 Ashlulm		18 0.24 Washwash		18
RivInletSmolt(11) trap 274 3		Inziana	18 0.41 Washwash		18 0.40 Ashlulm		18
RivInletSmolt(11) trap 274 30		Inziana	18 0.88 Washwash		18 0.11 Ashlulm		18
RivInletSmolt(11) trap 274 31		Inziana	18 0.80 Washwash		18 0.19 Ashlulm		18
RivInletSmolt(11) trap 274 32		Washwash	18 0.55 Inziana		18 0.43 Ashlulm		18
RivInletSmolt(11) trap 274 33		Washwash	18 0.98 Ashlulm		18 0.02 Inziana		18
RivInletSmolt(11) trap 274 34		Washwash	18 0.99 Ashlulm		18 0.01 Inziana		18
RivInletSmolt(11) trap 274 35		Inziana	18 0.67 Washwash		18 0.22 Ashlulm		18
RivInletSmolt(11) trap 274 36		Washwash	18 0.56 Inziana		18 0.23 Ashlulm		18
RivInletSmolt(11) trap 274 37		Inziana	18 0.89 Washwash		18 0.11 Ashlulm		18
RivInletSmolt(11) trap 274 38		Inziana	18 0.59 Washwash		18 0.34 Ashlulm		18
RivInletSmolt(11) trap 274 39		Washwash	18 0.72 Inziana		18 0.16 Ashlulm		18
RivInletSmolt(11) trap 274 40		Inziana	18 0.82 Washwash		18 0.17 Ashlulm		18
RivInletSmolt(11) trap 274 41		Inziana	18 0.99 Washwash		18 0.01 Ashlulm		18
RivInletSmolt(11) trap 274 42		Washwash	18 0.83 Inziana		18 0.11 Ashlulm		18
RivInletSmolt(11) trap 274 43		Washwash	18 0.64 Inziana		18 0.34 Ashlulm		18
RivInletSmolt(11) trap 274 44		Washwash	18 0.91 Inziana		18 0.06 Ashlulm		18
RivInletSmolt(11) trap 274 45		Inziana	18 0.66 Washwash		18 0.34		
RivInletSmolt(11) trap 274 46		Inziana	18 0.62 Washwash		18 0.26 Ashlulm		18
RivInletSmolt(11) trap 274 47		Washwash	18 0.66 Inziana		18 0.32 Ashlulm		18
RivInletSmolt(11) trap 274 48		Inziana	18 0.92 Ashlulm		18 0.06 Washwash		18
RivInletSmolt(11) trap 274 5		Inziana	18 0.90 Washwash		18 0.10		
RivInletSmolt(11) trap 274 6		Inziana	18 0.92 Washwash		18 0.07 Ashlulm		18
RivInletSmolt(11) trap 274 7		Inziana	18 0.81 Washwash		18 0.15 Ashlulm		18
RivInletSmolt(11) trap 274 8		Inziana	18 0.60 Washwash		18 0.38 Ashlulm		18
RivInletSmolt(11) trap 274 9		Inziana	18 0.72 Washwash		18 0.24 Ashlulm		18

Species = sockeye Number of populations = 244 Baseline Description = coastwide031111.bse Number of chains = 10 Number of Reps = 10000 Reps Kept = 500

0

GSI

47(0)

Code	Region1	Estimate	SD
1	Early Stuart(Fr)	0.0	(0.6)
2	Early Summer(Fr)	0.0	(0.5)
3	Summer(Fr)	0.0	(0.6)
4	Late(Fr)	0.0	(0.5)
5	Washington	0.0	(0.1)
6	South Coast	0.0	(0.2)
7	VI	0.0	(0.3)
8	Columbia	0.0	(0.1)
9	Nass	0.0	(0.4)
10	Lower Skeena	0.0	(0.7)
11	Upper Skeena	0.0	(0.3)
12	Bulkley	0.0	(0.1)
13	Babine	0.5	(1.6)
14	Stikine	0.0	(0.6)
15	Central Coast	0.1	(1.2)
16	Taku	0.0	(0.6)
17	Alsek	0.0	(0.7)
18	Owikeno	99.3	(2.8)
19	QCI	0.0	(0.1)
20	SE Alaska	0.0	(0.7)

GSI

Species = sockeye Number of populations = 244 Baseline Description = coastwide031111.bse Number of loci = 19 Max r
 Number of chains = 10 Number of Reps = 10000 Reps Kept = 500

Fish	Comment	Region 1	Prob 1	Region 2	Prob 2	Region 3	Prob 3
		0					
RivInletSmolt(11) trap 274 1		18	1.00				
RivInletSmolt(11) trap 274 10		18	1.00				
RivInletSmolt(11) trap 274 11		18	1.00	4	0.00	14	0.00
RivInletSmolt(11) trap 274 12		18	1.00				
RivInletSmolt(11) trap 274 13		18	1.00				
RivInletSmolt(11) trap 274 14		18	1.00				
RivInletSmolt(11) trap 274 15		18	1.00				
RivInletSmolt(11) trap 274 16		18	1.00				
RivInletSmolt(11) trap 274 17		18	1.00				
RivInletSmolt(11) trap 274 18		18	1.00				
RivInletSmolt(11) trap 274 19		18	1.00				
RivInletSmolt(11) trap 274 2		18	1.00				
RivInletSmolt(11) trap 274 20		18	1.00				
RivInletSmolt(11) trap 274 21		18	1.00				
RivInletSmolt(11) trap 274 22		18	1.00				
RivInletSmolt(11) trap 274 23		18	1.00				
RivInletSmolt(11) trap 274 24		18	0.74	13	0.23		
RivInletSmolt(11) trap 274 25		18	1.00	16	0.00		
RivInletSmolt(11) trap 274 26		18	1.00				
RivInletSmolt(11) trap 274 27		18	1.00				
RivInletSmolt(11) trap 274 28		18	0.99	15	0.01		
RivInletSmolt(11) trap 274 29		18	1.00	14	0.00		
RivInletSmolt(11) trap 274 3		18	0.95	17	0.01		
RivInletSmolt(11) trap 274 30		18	1.00				
RivInletSmolt(11) trap 274 31		18	1.00				
RivInletSmolt(11) trap 274 32		18	1.00				
RivInletSmolt(11) trap 274 33		18	1.00				
RivInletSmolt(11) trap 274 34		18	1.00				
RivInletSmolt(11) trap 274 35		18	1.00				
RivInletSmolt(11) trap 274 36		18	0.96	15	0.02		
RivInletSmolt(11) trap 274 37		18	1.00				
RivInletSmolt(11) trap 274 38		18	1.00				
RivInletSmolt(11) trap 274 39		18	1.00				
RivInletSmolt(11) trap 274 40		18	1.00				
RivInletSmolt(11) trap 274 41		18	1.00				
RivInletSmolt(11) trap 274 42		18	1.00				
RivInletSmolt(11) trap 274 43		18	1.00				
RivInletSmolt(11) trap 274 44		18	1.00				
RivInletSmolt(11) trap 274 45		18	1.00				
RivInletSmolt(11) trap 274 46		18	1.00	17	0.00		
RivInletSmolt(11) trap 274 47		18	1.00				
RivInletSmolt(11) trap 274 48		18	1.00				
RivInletSmolt(11) trap 274 5		18	1.00				
RivInletSmolt(11) trap 274 6		18	1.00				
RivInletSmolt(11) trap 274 7		18	1.00				
RivInletSmolt(11) trap 274 8		18	1.00				
RivInletSmolt(11) trap 274 9		18	1.00				