

# Summary of Key MSC Certification Deliverables and their Status for Sockeye

## May 30, 2011

Performance Indicator	Condition	Unit	Deliverable	Work Product Description*	Lead		DFO Deliverable Timeline	Certification Condition Deadline	Status**
					Branch	Accountability Lead			
FR 1.1.1.3	1	Fraser	Report to Certifier: Sakinaw program update	A summary will be provided that covers that programs on harvest rate adjustment, enhancement and habitat improvements	FAM, Science - Area	Division Manager, SAFE	September, 2010	By 1st Surv Audit June 2011	Partial
FR 1.1.1.4	2	Fraser	Report to Certifier: Indicator status update	A report will be provided that demonstrates how the following requirements will be met: 1) Harvest decisions should consider all the component stocks in a management unit, not just the indicators stocks; 2) Indicator stocks should be distributed geographically across the region; 3) Indicator stocks should span a broad range of abundances and productiviteis in the region; Indicator stocks should account for a substantial portion of the harvest and spawning escapement; 5 escapement patterns should be correlated among indicator stocks and other stocks; and 6) status of indicator stocks should reflect the status of the other stocks in each management unit.	FAM, PSC	Lead Salmon Team	June, 2010	By 1st Surv Audit June 2011	Complete
FR 1.1.2.1	3	Fraser	Report to Certifier: Sakinaw program update	A summary will be provided that covers that programs on harvest rate adjustment, enhancement and habitat improvements	FAM, Science - Area	Division Manager, SAFE	September, 2010	By 1st Surv Audit June 2011	Partial
FR 1.1.2.4	4	Fraser	Report to Certifier: Sakinaw program update	A summary will be provided that covers that programs on harvest rate adjustment, enhancement and habitat improvements	FAM, Science - Area	Division Manager, SAFE	September, 2010	By 1st Surv Audit June 2011	Partial
FR 1.1.3.1	5	Fraser	PSARC paper: Fraser sockeye LRPs	Fraser Sockeye WSP Stock Status paper was reviewed and accepted at CSAP Nov. 15 & 16, 2010. This paper incorporates abundance and trends in abundance indicators of stock status for the 26 assessible CUs. This is the first assessment to present stochastic and structural uncertainty in biological benchmarks for abundance indicators. Formal reviewers include Dr. Randall Peterman, Dr. Kim Hyatt and Mr. Mike Staley. The paper is being finalized for the summer 2011 and a workshop will be planned to develop steps for finalizing status.	Science - Area	Division Manager, SAFE	December, 2011	By 2nd Surv Audit June 2012	Paper accepted at CSAP; currently being revised for publication and workshop planned for late Spring
FR 1.1.3.2	6	Fraser	WSP Strategy 4 Implementation: revised IFMP	IFMP will document the TRPs for each Fraser River sockeye management unit. Supporting documentation will be based upon FRSSI.	FAM, Science - Area	Lead, Salmon Team; Regional Salmon Manager	May, 2012	By 2nd Surv Audit June 2012	
FR 1.2.1	7	Fraser	Report to Certifier: Cultus program update	Supporting documentation wil be provided from 2010 South Coast IFMP and CSAP and SAR reports	FAM, Science - Area	Division Manager SAFE	December, 2010	By 1st Surv Audit June 2011	Complete
FR 1.2.2	8	Fraser	PSARC paper: Fraser sockeye LRPs		Science - Area	AC Stock Assessment BCI	December, 2011	By 2nd Surv Audit June 2012	Paper accepted at CSAP; currently being revised for publication and workshop planned for late Spring
BS 1.1.1.5	9	Barkley	PSARC paper: Henderson Lake SO stock status	PSARC paper: Henderson Lake SO stock status	Science - Area	AC Stock Assessment SC	February, 2010	By 1st Surv Audit June 2011	Complete
BS 1.1.2.2	10	Barkley	PSARC paper: Henderson Lake SO stock status	PSARC paper: Henderson Lake SO stock status	Science - Area	AC Stock Assessment SC	February, 2010	By 1st Surv Audit June 2011	Complete
BS 1.1.3.1	11	Barkley	Report to Certifier: Barkley sockeye LRPs	Report to Certifier: Barkley sockeye LRPs	Science - Area	AC Stock Assessment SC	December, 2011	By 2nd Surv Audit June 2012	
BS 1.1.3.2	12	Barkley	WSP Strategy 4 Implementation: revised IFMP	draft 2012/13 South Coast IFMP	FAM, Science - Area	Lead, Salmon Team; Regional Salmon Manager	May, 2012	By May 2012	

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SR 1.1.1.5	13	Skeena	PSARC paper: Skeena stock status	<p>PSARC paper on Skeena stock status scheduled for December 2011. This will include an assessment of Babine enhanced production on wild stocks. There is also a project underway through the Skeena Watershed Initiative to develop benchmarks for all Skeena salmon species. This project is being conducted through an independent science lead Josh Korman, in cooperation with DFO and FN technical staff on the Skeena Watershed Committee. The chair of the SWI technical committee is Brian Riddell (Pacific Salmon Foundatin CEO). In addition there is a regional stock assessment initiative lead by Blair Holtby to use escapement and harvest impact information organised by CU to estimate productivity parameters and evaluate a suite of potential status indicators. In a letter (sent Sept. 20, 2010) giving guidance to the Skeena Watershed Committee the DFO RDG indicated: "I would highlight a number of DFO priorities with respect to Skeena salmon. This work is designed to move us forward with WSP, as well as other initiatives such as the Sustainable Fisheries Framework, Pacific Fisheries Reform and Marine Stewardship Certification (MSC) Act</p> <p>...DFO will continue to engage the SWI and other partners in work related to Strategy 1 of the WSP, including the definition of conservation units (CUs) and benchmarks for CUs, as well as the determination of stock status for CUs. As new information is developed, it will be used to further shape and inform management plans for all salmon species in the Skeena. "</p>	Science - Area	AC Stock Assessment NC	December, 2011	By 2nd Surv Audit June 2012	

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SR 1.1.2.1	13a	Skeena	Report to Certifier: Catch monitoring framework	<p>DFO in cooperation with the Province of BC will develop a program for monitoring the by-catch in Skeena sockeye fisheries including steelhead. Fishery impacts on steelhead have been estimated using a model jointly created by DFO and MOE, and reviewed by PSARC. The Skeena Independent Science Review commented on the model and expressed concern over the uncertainty in the model parameters. As recommended, DFO will work with MOE to review the utility of the model to estimate steelhead catch in the Skeena sockeye fisheries.</p> <p>In a letter (sent Sept. 20, 2010) giving guidance to the Skeena Watershed Committee the DFO RDG indicated: "I would highlight a number of DFO priorities with respect to Skeena salmon. This work is designed to move us forward with WSP, as well as other initiatives such as the Sustainable Fisheries Framework, Pacific Fisheries Reform and Marine Stewardship Certification (MSC) Action Plans: ... DFO and the Province of BC have indicated the need to review and update the Skeena steelhead objectives and management plan. DFO's intent is to work cooperatively with the Province of BC to jointly move forward on this initiative."</p>	Science - Area; FAM PICFI	AC Stock Assessment NC: Enhanced Accountability Manager PICFI	December, 2011	By 2nd Surv Audit June 2012	
SR 1.1.2.2	13b	Skeena	PSARC paper: Skeena stock status	DFO will use the existing core stock assessment program to develop and implement a plan for monitoring sockeye escapements. The program will be developed in cooperation with the FN interests in the watershed and may include direct visual escapement surveys, weir counts, and mark recapture programs for adults or hydroacoustic lake surveys to identify juvenile abundance. The Skeena Fisheries Commission has been conducting hydro acoustic estimates in recent years, and DFO will continue to cooperate in planning and funding of these surveys. Working cooperatively through FN technical committees the sockeye enumeration plan will be updated in the spring of 2011 and a summary report prepared.	Science - Area	AC Stock Assessment NC	December, 2011	By 2nd Surv Audit June 2012	
SR 1.1.2.4	13c	Skeena	PSARC paper: Skeena stock status	DFO commits to providing periodic assessments of the relative productivity for Skeena sockeye CU's, or representative indicators. Our experience has been that the productivity of the sockeye systems are relatively stable, and will place priority on assessments of systems for stocks of concern, those most susceptible to climate change impacts or subject to recent habitat perturbations. This will be included in the enumeration plan review and report outlined in 13b.	Science - Area	AC Stock Assessment NC	December, 2011	By 2nd Surv Audit June 2012	
SR 1.1.3.2	14	Skeena	WSP Strategy 4 Implementation: revised IFMP	<p>DFO adopted a precautionary management objective for the 2009 and 2010 seasons) by reducing the Canadian commercial exploitation rate on Skeena sockeye to begin rebuilding individual stocks of concern by maintaining on average, A Canadian commercial exploitation rate in the range of 20 to 30%. This represents a reduction of 30 to 50% from recent decade averages. This range was consistent with the advice provided in the Skeena ISRP (Independent Science Review Panel) to rebuild weak stocks.</p> <p>DFO also supports Recommendation # 1 of the ISRP, "There is a need to confront the major trade-off decisions that are implied by the Wild Salmon policy and the impacts of mixed-stock ocean fisheries on Skeena stocks. There should be an explicit public decision about the loss of biodiversity (number of weak stocks allowed to remain overfished or at risk of extinction) that is deemed acceptable and changes required to fisheries in order to achieve particular harvest objectives." Resolving this issue will be the central focus of the Skeena Watershed Process over the next few years.</p> <p>In a letter (sent Sept. 20, 2010) giving guidance to the Skeena Watershed Committee the DFO RDG indicated: "Over the longer-term, DFO will move forward with integrated planning for Skeena CUs under Strategy 4 of the WSP. As outlined in the Policy, Strategy 4 provides for the development of strategic plans that will incorporate information under Strategies 1-3 and identify: i) long-term biological targets for CUs and groups of CUs; ii) recommendations regarding resource management actions to protect or restore Pacific salmon, their habitats and ecosystems; and iii) timeframes and priorities for actions. If the SWI is successful in contributing to the initiatives outlined above, we would provide an opportunity for continued SWP participation in the broader WSP implementation."</p>	FAM, Science - Area	Lead, Salmon Team; Regional Salmon Manager	May, 2009	By 1st Surv Audit June 2011	Complete
NR 1.1.2.2	15	Nass	Technical workshop, Nass monitoring plan	DFO will use the current core stock assessment program to develop and implement a plan for monitoring the escapement of sockeye stocks targeted in fisheries. DFO intends to continue monitoring escapements to the dominant Meziadin stock using direct counts at the fishway. For the other lake rearing stocks (Fred Wright, Damdochax, Bowser), an escapement monitoring program will be developed in cooperation with the FN interests in the watershed and may include direct visual escapement surveys, stock specific escapement estimates derived from Nisga'a fishwheel DNA analysis, scale pattern analysis from Nisga'a fishwheel biological samples, and/or hydroacoustic lake surveys to assess juvenile abundance as an indirect measure of spawning success.	Science - Area	AC Stock Assessment NC	December, 2010	By 1st Surv Audit June 2011	Complete

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				Stream-type sockeye stocks comprise a small component of the Nass aggregate sockeye stock and currently two systems are monitored by FNs for escapements using visual survey methods (Brown Bear and Gingit). DFO intends to continue to support these programs and as part of the overall Nass escapement monitoring plan will examine the feasibility of using fishwheel DNA analysis to develop annual estimates of the stream-type sockeye stocks (these are a single CU under the WSP).					

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				A technical workshop was held in the spring of 2010 with DFO and FN technical representatives. This lead to a PSARC report that will be presented in November 2010. The report reviews spawning escapements, the core assessment plan and makes specific enumeration recommendations.					
NR 1.1.3.1	16	Nass	PSARC paper: Nass sockeye LRPs	In addition to the development and implementation of an overall Nass sockeye escapement monitoring plan described above and consistent with the regional approach and schedule for LRP development, DFO will work cooperatively with the First Nation interests in the watershed to develop Nass sockeye LRP's. Initially the discussions are expected to focus on the existing lake productivity assessments (to indicate capacity) for non-Meziadin sockeye stocks, and stock recruit analysis for Meziadin. A PSARC paper on Nass sockeye stock status will be presented Nov. 2011. This did not include reference points. The reference points will be developed building from the processes outlined for the Skeena in condition 13.	Science - Area	AC Stock Assessment NC	December, 2011	By 2nd Surv Audit June 2012	
FR 2.2.1	17	Fraser	Report to Certifier: Bycatch update		FAM - Area	AC FAM LFA	May, 2011	By 2nd Surv Audit June 2012	
FR 2.3.1	18	Fraser	Report to Certifier: Sakinaw program update	A summary will be provided that covers that programs on harvest rate adjustment, enhancement and habitat improvements	FAM - Area	Division Manager, SAFE	September, 2010	By 1st Surv Audit June 2011	Partial
FR 2.3.1	19	Fraser	WSP Strategy 4 Implementation: revised IFMP	2011/12 and draft 2012/13 South Coast IFMPs	FAM, Science - Area	Lead, Salmon Team; Regional Salmon Manager	May, 2012	By 2nd Surv Audit June 2012	
BS 2.3.1	20	Barkley	WSP Strategy 4 Implementation: revised IFMP	draft 2012/13 IFMP	FAM, Science - Area	Lead, Salmon Team; Regional Salmon Manager Lead, Salmon Team	May, 2012	By 2nd Surv Audit June 2012	
SR 2.1.1	21a	Skeena	Refer to condition 13a	Please refer to condition 13a				By 2nd Surv Audit June 2012	
SR 2.3.1	21b	Skeena	WSP Strategy 4 Implementation: revised IFMP	Please refer to conditions 13 and 14.	FAM, Science - Area	Lead, Salmon Team; Regional Salmon Manager	May, 2009	By 1st Surv Audit June 2011	Complete
			PSARC paper: Skeena sockeye LRPs		Science - Area	AC Stock Assessment NC	December, 2011	By 2nd Surv Audit June 2012	
SR 2.3.1	22	Skeena	WSP Strategy 4 Implementation: revised IFMP  Report to Certifier: Skeena chum management plan	A PSARC paper on Skeena chum stock status will be presented at the Nov. 2010 PSARC meeting. This is expected to form the technical basis for development of the Skeena chum management plans for incorporation into the 2012/13 North Coast IFMP  In a letter (sent Sept. 20, 2010) giving guidance to the Skeena Watershed Committee the DFO RDG indicated: "I would highlight a number of DFO priorities with respect to Skeena salmon. This work is designed to move us forward with WSP, as well as other initiatives such as the Sustainable Fisheries Framework, Pacific Fisheries Reform and Marine Stewardship Certification (MSC) Action Plans: ... Over the coming months, DFO will develop a new management plan for Skeena chum. While this work will be lead by DFO and supported through consultations with First Nations and with the Integrated Harvest Planning Committee (IHPC), we would welcome input and advice from the SWI on the development of this plan. This work will be informed largely by the completion of a stock status review of Skeena chum salmon in preparation for the DFO Scientific Review Process meeting in November 2010."	FAM, Science - Area  Science - Area	Lead, Salmon Team; Regional Salmon Manager  AC Stock Assessment NC	May, 2009  December, 2011	By 2nd Surv Audit June 2012	
NR 2.3.1	23	Nass	WSP Strategy 4 Implementation: revised IFMP	2011/12 and draft 2012/13 South Coast IFMPs	FAM, Science - Area	Lead, Salmon Team	May, 2011	By 2nd Surv Audit June 2012	
			PSARC paper: Nass chum LRPs	A PSARC paper on Nass chum stock status will be presented at the Nov. 2010 PSARC meeting. This is expected to form the technical basis for development of the Nass chum management plans. DFO will work cooperatively with the FN interests in the area to develop a chum rebuilding plan for Area 3 chum included chum spawning in the Nass River and its tributaries. The development of escapement benchmarks (LRP) for the Area 3 chum aggregates in each conservation unit will be an important aspect of a chum re-building strategy. Analytical approaches to determining LRPs for chum are not well developed. The results from the initiatives outlined in the response to condition 13 are expected to be applied to Nass chum.	Science - Area	AC Stock Assessment NC	December, 2011		
FR 3.1.1	24	Fraser	Bycatch update, Report to Certifier	Bycatch update, Report to Certifier	FAM - Area	AC FAM LFA	May, 2011	By 2nd Surv Audit June 2012	
FR 3.1.4	25	Fraser	Report to Certifier: Sakinaw program update	A summary will be provided that covers that programs on harvest rate adjustment, enhancement and habitat improvements	FAM, Science - Area	Division Manager, SAFE	September, 2010	By 1st Surv Audit June 2011	Partial

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					Branch	Accountability Lead			
			Report to Certifier: Cultus program update	CSAP paper May 2010 Bradford et al. Status of Cultus lake Sockeye Salmon	FAM, Science - Area	Division Manager, SAFE	December, 2010	By 1st Surv Audit June 2011	Complete
			Revised IFMP: Fraser sockeye fisheries	2011/12 and draft 2012/13 South Coast IFMPs	FAM, Science - Area	Regional Salmon Manager	May, 2012	By 2nd Surv Audit June 2012	
FR 3.1.8	26	Fraser	Report to Certifier: Harvester compliance	2012/13 North and South Coast IFMPss	FAM - Area	AC FAM LFA	December, 2010	By 2nd Surv Audit June 2012	
FR 3.2.1	27	Fraser	Resource Assessment Framework	Resource Assessment Framework	FAM, Science - Area	Division Manager, SAFE	May, 2008	By 2nd Surv Audit June 2012	
			Revised IFMP: Fraser sockeye fisheries	2011/12 and draft 2012/13 South Coast IFMPs	FAM, Science - Area	Lead, Salmon Team; Regional Salmon Manager	May, 2012		
FR 3.4.1.2	28	Fraser	Report to Certifier: Cultus program update	CSAP paper May 2010 Bradford et al. Status of Cultus lake Sockeye Salmon	FAM, Science - Area	Division Manager SAFE	December, 2010	By 1st Surv Audit June 2011	Complete
FR 3.6.3	29	Fraser	Report to Certifier: First Nation fisheries	Please see regional response.	TAPD	RD, Treaty and Aboriginal Policy	December, 2010	By 1st Surv Audit June 2011	Complete
FR 3.7.4	30	Fraser	Refer to conditions 17, 24	Refer to conditions 17, 24				By May 2012	
BS 3.1.4	31	Barkley	Refer to condition 20	Refer to condition 20				By May 2012	
BS 3.1.8	32	Barkley	Report to Certifier: Harvester compliance	Report to Certifier: Harvester compliance	FAM - Area	AC FAM SC	December, 2010	By 2nd Surv Audit June 2012	
BS 3.2.1	33	Barkley	Revised IFMP: Barkley sockeye fisheries	Revised IFMP: Barkley sockeye fisheries	FAM, Science - Area	Regional Salmon Manager	May, 2012	By 3rd Surv Audit June 2013	
BS 3.6.3	34	Barkley	Report to Certifier: First Nation fisheries	Report to Certifier: First Nation fisheries	TAPD	RD, Treaty and Aboriginal Policy	December, 2010	By 1st Surv Audit June 2011	Complete
No Cond 35.	35	Skeena	Revised IFMP: Skeena sockeye fisheries	The resonses to conditions 13a and 14 will form part of the response to this condition. Regional DFO stock assessment is also developing an assessment framework that will help meet this condition.	FAM, Science - Area	Regional Salmon Manager	May, 2012		
SR 3.1.1	35a	Skeena	Refer to condition 13a	Please see response to 13a.				By 2nd Surv Audit June 2012	
SR 3.1.4	35b	Skeena	Refer to condition 13a	Please see response to 13a.				By 2nd Surv Audit June 2012	
SR 3.1.7	35c	Skeena	Report to Certifier: selective fishing practices	There has been extensive research over the last 15 years to evaluate selective harvest approaches. Many of these have been implemented, resulting in very significant changes to commercial fishing seasons, geographical areas fished, daylight only fisheries, changes to gillnet configurations and the length of sets. These programs will continue to be evaluated and implemented. Monitoring and compliance of the selective fishing practices is recognized as an essential component of the management of the Skeena gillnet fishery. A report will be prepared selective fishing measures and outcomes.	FAM, Science - Area	AC FAM NC	December, 2010	By 1st Surv Audit June 2011	Partial
SR 3.2.1	35d	Skeena	Revised IFMP: Skeena sockeye fisheries	Please see response to condition 35.	FAM, Science - Area	Regional Salmon Manager	May, 2012	By May 2012	
SR 3.6.3	36a	Skeena	Report to Certifier: First Nation fisheries	Please see regional response.	TAPD	RD, Treaty and Aboriginal Policy	December, 2010	By 1st Surv Audit June 2011	Complete
PI 3.7.1	36b	Skeena	Report to Certifier: selective fishing practices	Please see response to 35c.	FAM, Science - Area	AC FAM NC	March, 2010	By 2nd Surv Audit June 2012	
PI 3.7.4	36c	Skeena	Report to Certifier: Catch monitoring framework	Re: Catch Monitoring Framework. Discussion paper was released Nov 2010 for consultation. Document outlines key principles/objectives/goal and proposes a consistent framework to determine the level of monitoring required. This recognizes that some more complex and risky (primarily conservation and management risk) will require higher levels of monitoring rigor. Low, moderate(or generic) and enhanced levels of monitoring are proposed. Key information requirements include ; target catch, non-target catch , effort, and biological or ecological information. Where bycatch of stocks of concern are an issue, enhanced monitoring would be required. This level would require sufficient independent information or verification of data to address risks. Consultation will help to inform and determine the extent of verification and target precision levels.	Science - Area	AC Stock Assessment NC: Enhanced Accountability Manager PICFI	December, 2011	By 2nd Surv Audit June 2013	

\* The description of work product deliverables may include more than one document and may change as more information becomes available

\*\*Status determination is incomplete

200	1600	
164	0.5	
200		
564	800	1030
84.6		
648.6		