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Intertek Fisheries Certification (IFC)

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First Annual Surveillance Report

Alaska Salmon Fishery

Chinook Salmon – *Oncorhynchus tshawytscha*

Sockeye Salmon – *Oncorhynchus nerka*

Pink Salmon – *Oncorhynchus gorbuscha*

Chum Salmon – *Oncorhynchus keta*

Coho Salmon – *Oncorhynchus kisutch*

Certificate No.: MML-F-156

Intertek Fisheries Certification Ltd

February 2015

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1.0 GENERAL INFORMATION

Scope against which the surveillance is undertaken: MSC Principles and Criteria for Sustainable Fishing as applied to the Alaska Salmon Fishery

Species: Five species of Pacific salmon:

- Chinook Salmon – *Oncorhynchus tshawytscha*
- Sockeye Salmon – *Oncorhynchus nerka*
- Pink Salmon – *Oncorhynchus gorbuscha*
- Chum Salmon – *Oncorhynchus keta*
- Coho Salmon – *Oncorhynchus kisutch*

Area: The Alaska Salmon Fishery operates within the EEZ of the USA, in the rivers and coastal waters of the US State of Alaska.

Method of capture: Purse seine, drift gillnet and set gillnet are used variously across the 13 certified UoCs within the Alaska Salmon Fishery. Troll gear is also used in Southeast Alaska and Yakutat UoCs, beach seines are also used in the Yukon River, Kodiak and Alaska Peninsula UoCs, while fishwheels are also used in the Yukon River UoC.

Date of Surveillance Visit:	3 rd – 5 th December 2014			
Date of Current Certificate:	3 rd Certification: Nov 12 th 2013	Certificate Ref: MML-F-156		
Surveillance stage	1 st	2 nd	3 rd	4 th
Surveillance team:	Lead Assessor: Dr. Rob Blyth-Skyrme Assessors: Dr. Greg Ruggerone and Professor Jim Seeb			
Company Name: Address:	Alaska Salmon Processors Association (ASPA) 4055 21st Avenue West, Suite 203 Seattle WA 98199 USA			
Contact	Rob Zuanich rpz@psvoa.com			

2. RESULTS, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This report contains the findings of the first annual surveillance audit of this fishery. Progress against the commitments made in the Client Action Plan have been evaluated by the audit team and reported as being, “on target”, “ahead of target” or “behind target” with rationales set out in the “Observations” and “Conclusions” sections below. Where the requirements of a condition are met, the Performance Indicator (PI) is re-scored and the condition is closed.

The conditions, their related performance indicators and scoring indicators are provided in this report along with the scoring rationale taken from the Public Certification Report, which can found at: http://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/pacific/alaska-salmon/new-client-2nd-re-assessment-download-documents/20131114_PCR_V3_SAL002.pdf.

It is noted, however, that the client for the Alaska Salmon Fishery certificate has changed since the 13 of the 14 assessed UoCs were certified in November 2013. At the point of certification, the client was the Purse Seine Vessel Owners Association (PSVOA). On the 6th May 2014, notification was published on the MSC website that PSVOA had withdrawn as a client, and that the Alaska Salmon Processors Association (ASPA) had taken on the role of client, and responsibility for the conditions placed on the fishery. The actions in the Client Action Plan that were originally specified for PSVOA, have therefore been attributed to ASPA in this Year 1 audit report.

Year 1 Audit

Stakeholder notification advising of this first annual surveillance audit site visit was posted on the MSC website on 4th November 2014 (See Appendix 1) and was sent directly to known stakeholders.

The surveillance audit team consisted of Dr. Greg Ruggerone, Professor Jim Seeb and Dr. Rob Blyth-Skyrme (Lead Assessor). All team members attended the site visit and have contributed to and reviewed this audit report.

A summary of progress against the conditions is provided in Table 1, below. More detailed information is provided in the rest of this report.

Table 1: Summary of progress against Conditions.

Condition No.	PI	UoC	Progress Evaluation	Status against milestones
1	1.3.1	SEAK	The Year 1 milestone was for an independent peer review to be carried out on the Hatcheries Study plan. This has not occurred, but discussions with ADF&G indicated that an independent review is still warranted. The client will work with ADF&G to seek an independent review in coming months.	Behind target
2	1.3.2	SEAK	The Year 1 milestone of monitoring representative streams in NSI is largely met by sufficient sampling of stray hatchery chum salmon in 2013 and 2014 and through the provision of estimates of daily percentages of hatchery fish on the spawning grounds.	On target

3	1.3.3 & 2.5.2	SEAK	<p>There were two Year 1 milestones for this Condition.</p> <p>For the first milestone, an excellent summary of contribution of hatchery chum salmon in mixed stock fisheries in southern SEAK was provided, but no data or analyses were provided for northern SEAK.</p> <p>For the second milestone, available information suggests that straying of coho and Chinook salmon from hatchery release sites is very low, although there remains a question over straying from remote release sites. The client should work to provide more information on this issue over the coming year, including investigating the feasibility for a coho salmon straying study. For chum salmon, information on straying is already being collected in an ongoing ADF&G study, which should evaluate the possibility of increased straying from remote-release sites.</p>	<p>1st milestone component: Behind target</p> <p>2nd milestone component: On target</p>
4	1.3.1, 1.3.2 & 1.3.3	Copper /Bering Districts	The Year 1 milestone for this Condition required the preparation of a review of the Gulkana Hatchery, including an examination of potential impacts of hatchery sockeye salmon on wild stocks. This work has occurred, and a summary of the findings was presented.	On target
5	1.3.1, 1.3.3 & 2.5.2	Kodiak	The Year 1 milestone required that the client monitor and review a plan for 100% marking of hatchery pink and chum salmon, and for select sampling on spawning grounds and in fisheries. While chum salmon are now all marked, pink salmon are not. There is also no plan for monitoring of stray pink and chum salmon, and monitoring of hatchery fish in mixed-stock fishery locations has not been planned.	Behind target
6	1.1.2	Chignik	<p>The year 1 milestone required the client to consult with ADF&G and prepare a memo describing the approach for managing local Chignik coho salmon to ensure that the spawning escapement is adequate. This information was provided, as well as harvest rate information and information on coho salmon run timing relative to the cessation of fishing at the end of the season, as had been required in year 2.</p> <p>With this new information, and given that coho salmon make up just 3.1% of the total catch from the Chignik UoC, an analysis of Chignik coho salmon performance against the IPI requirements was undertaken; this showed that Chignik coho salmon meets the SG80 requirements of PI 2.1.1 - 2.1.3, and of Annex CH4.2. Condition 6 is therefore closed at this year 1 audit, and Chignik coho salmon are eligible to enter further certified chains of custody.</p>	Closed

Information Sources

Meetings

(NB: Stakeholders from the most recent full assessment (November 2013) were contacted prior to the surveillance audit taking place, but no meetings with the audit team were requested.)

Table 2: Meetings conducted as part of the first surveillance audit for the Alaska Salmon Fishery.

Date	Name	Position/Title	Issues Discussed
4th Dec 2014	Rob Blyth-Skyrme	Intertek Fisheries Certification (IFC) Lead Assessor	<ul style="list-style-type: none"> • Change of client • Performance of the certified fishery • Progress against the six conditions • Relevant changes to regulation and management • The existence or otherwise of complaints against the certified fishery • Assessment of the Prince William Sound UoC
	Greg Ruggerone	IFC Assessor	
	Jim Seeb	IFC Assessor	
	Rob Zuanich	Alaska Salmon Producers Association (ASPA) - Client	
	Colin Brannen	Accreditation Services International (ASI) - Auditor	
5th Dec 2014	Rob Blyth-Skyrme	IFC Lead Assessor	<ul style="list-style-type: none"> • Performance of the certified fishery • Progress against the six conditions • Relevant changes to regulation and management • Ongoing and developing science programmes • Data availability • Assessment of the Prince William Sound UoC
	Greg Ruggerone	IFC Assessor	
	Jim Seeb	IFC Assessor	
	Rob Zuanich	ASPA - Client	
	Eric Volk	Alaska Department of Fish and Game (ADF&G) - Science	
	Bill Templin	ADF&G - Science	

References

NB: References in the scoring rationales below may not appear in the list below and so should be checked back to the original Public Certification Report for the fishery (http://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/pacific/alaska-salmon/new-client-2nd-re-assessment-download-documents/20131114_PCR_V3_SAL002.pdf).

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Standards and Guidelines Used

1. MSC Principles and Criteria for Sustainable Fishing
2. MSC Certification Requirements v1.3
3. MSC Guidance to Certification Requirements, v. 1.3
4. TAB Directives – All
5. MSC Fisheries Certification Methodology (FCM), v.6.1

3. RESULTS, CONCLUSIONS AND RECOMMENDATIONS

Stock status and Catch Data	
Update on Stock Status	<p>This section of the report updates the information provided in the Public Certification Report for the Alaska Salmon Fishery, published October 2013 (Blyth-Skyrme <i>et al.</i> 2013).</p> <ul style="list-style-type: none"> UoC 1: Southeast Alaska (SEAK) <p>Three gear groups comprise Southeast Alaska (SEAK) salmon fisheries. Drift gillnet fisheries target pink, chum and sockeye salmon along with smaller numbers of coho and Chinook salmon. The purse seine fishery targets pink, chum, sockeye and Chinook salmon. The troll fishery primarily targets coho and Chinook salmon.</p> <p>Escapement goals for most stocks of sockeye (early, late stocks), Chinook, and pink (odd, even year) salmon have been met in most years, 2005-2013 (Munro & Volk 2014). It was noted in the 2012 MSC assessment that chum salmon in the Northern Southeast Inside subregion failed to meet the lower-bound SEG a number of years in a row; those escapements rebounded in 2012 and 2013.</p> <p>The primary conservation interests for chum salmon populations are the impacts of hatchery fish, especially the straying of hatchery returns into wild streams (Piston & Heintz 2012). Piston and Heintz (2012) observed that escapements into streams in the Northern Southeast Inside (NSI) subregion contained an average of 9.8% hatchery fish, with individual streams ranging from 0% to 65%.</p> <p>Commercial harvests during 2009-2013 averaged 61 million salmon, including 900K sockeye, 46 million pink, 10 million chum, 2.6 million coho, and 300K Chinook salmon. The mean commercial ex-vessel value during 2009-2013 was \$17.5 million.</p> UoC 2: Yakutat <p>Set net fisheries in the Yakutat UoC target sockeye salmon during June and July and coho salmon during August through September, with the exception of a targeted sockeye salmon fishery on the East Alsek River that typically occurs from late July through August (Woods & Zeiser 2014). Historically, the harvest of pink salmon and very small numbers of chum salmon was incidental. Increasing prices in 2011 provided economic incentive to target pink salmon. Chum salmon is therefore considered to be the only inseparable or practically inseparable (IPI) retained species in the Yakutat UoC.</p> <p>Set gillnetting is largely restricted to the intertidal areas of the rivers and streams where BEGs are established with the exception of two (goals for Lost River coho and sockeye salmon are considered sustainable escapement goals – SEGs). As such, the fishery is managed to meet 19 escapement goals for sockeye, Chinook, coho and pink salmon (Munro & Volk 2014, Woods & Zeiser 2014).</p> <p>Troll fisheries for Chinook and coho salmon are managed and reported as a part of the activities in the Southeast Alaska Region (Skannes <i>et al.</i> 2014) and are addressed primarily in the assessment of the SEAK UoC.</p> <p>Commercial harvests during 2013 totalled 168K sockeye, 67K pink, 1,400 chum, 158K coho, and 1,400 Chinook salmon. The mean commercial ex-vessel value during 2003-2012 was \$1.7 million.</p> <p>There are no hatcheries in the Yakutat area.</p>

- **UoC 3: Prince William Sound**

NB - Not recertified in 2013 - this UoC remained in assessment. For more information, please refer to the section at the end of this report.

- **UoC 4: Copper/Bering Districts**

The Copper River District and Bering River District are within the Prince William Sound management area. These districts are located immediately south of Prince William Sound where significant hatchery production takes place.

Commercial harvests during 2009-2013 averaged 1.693 million salmon, including 1.413 million sockeye, 27K pink, 10K chum, 232K coho, and 11.6K Chinook salmon (Botz *et al.* 2014). The mean commercial ex-vessel value during 2009-2013 was \$3.4 million. Escapement goals of sockeye (90% of years), Chinook (75%), pink (no goal), coho (100%) and chum salmon (no goal) have been met nearly every year, 2005-2013 (Munro & Volk 2014).

The Gulkana sockeye salmon hatchery (egg box program) produces numerous sockeye salmon in the Copper River using local broodstock. In 2013 and 2014 respectively, an estimated 521K and 509K hatchery adult sockeye salmon returned to the river (Vercessi 2014).

- **UoC 5: Lower Cook Inlet (LCI)**

The Lower Cook Inlet (LCI) Management Area includes waters west of the longitude of Cape Fairfield, north of the latitude of Cape Douglas, and south of the latitude of Anchor Point. The freshwater drainages are coastal streams dominated by pink salmon. There are five fishing districts with the Barren Islands District being the only fishing district where no salmon fishing occurs. The other four districts (Southern, Outer, Eastern, and Kamishak Bay) are separated into approximately 40 subdistricts and sections to facilitate management of discrete stocks of salmon. Escapement goals for Chinook salmon (3), chum salmon (12), pink salmon (17), and sockeye salmon (8) have generally been met or exceeded every year, 2005-2014 (Munro and Volk 2014). There are not streams with escapement goals for coho salmon.

Commercial fishing is limited to purse seines and set gill nets in LCI. All Pacific salmon species are harvested in LCI waters, with chum and sockeye salmon being the most valuable. Coho and Chinook salmon harvests are very limited and local stocks are small and not targeted. Fisheries enhancement has been important in LCI over the past 30 years and has contributed up to 90% of the harvest. The 2013 harvest of 2.3 million fish included 2.1 million pink, 171,000 sockeye, 54,400 chum, 7,600 coho, and 391 Chinook salmon. The value of the commercial harvest was estimated to be \$4.8 million based upon fish ticket reporting. Approximately 95% of the harvest was common property harvest; 118,000 fish were sold for hatchery cost recovery.

Cook Inlet's long term regional plan indicates no likely major expansions of hatchery operations in the foreseeable future, although facilities where production has recently ceased could reopen.

- **UoC 6: Upper Cook Inlet (UCI)**

The Upper Cook Inlet (UCI) commercial fisheries management area is that portion of Cook Inlet north of the latitude of the Anchor Point Light and is divided into the Central and Northern districts. The Central District is 75 miles long and 32 miles in width. The Northern District is 50 miles long and 20 miles in width. All five species of Pacific salmon are commercially harvested. Set gillnets are the only gear permitted in the Northern District,

while both set and drift gillnets are used in the Central District. The use of seine gear is restricted to the Chinitna Bay Sub-district, where they have been employed sporadically. The most recent reporting, Shields & Dupuis (2013), shows that the 2012 catch of 4.0 million fish had an exvessel value of \$34.6 million.

Stocks of Chinook salmon with 21 formal escapement goals are closely monitored (Munro & Volk 2014). Because of the broad based regional decline in marine survival (<http://www.adfg.alaska.gov/index.cfm?adfg=chinookinitiative.main>), escapement of Chinook salmon to many streams has fallen short over the past five years. Several systems have been declared stocks of concern by the BOF and have action plans established to help them recover.

There are 11 sockeye salmon systems with formal escapement goals with the Kenai and Kasilof River dominating production. These systems in aggregate have met the lower end of the escapement goals approximately 85% of the time over the past nine years. The exception has been weak returns to the Susitna River, based on enumerations on the Yetna River. The Susitna sockeye salmon run has been declared as a stock of yield concern by the BOF.

There are three stocks of coho salmon and one stock of chum salmon with escapement goals; all goals were met or exceeded in 2013 and a most were met or exceeded during the past nine years.

- **UoC 7: Bristol Bay**

The Bristol Bay management area includes all coastal and inland waters east of a line from Cape Newenham to Cape Menshikof in the eastern Bering Sea. The area includes nine major river systems: Naknek, Kvichak, Alagnak, Egegik, Ugashik, Wood, Nushagak, Igushik, and Togiak rivers. Production from these rivers provides the largest commercial fishery for sockeye salmon in the world. Sockeye salmon are by far the most abundant salmon species that return to Bristol Bay each year, but Chinook, chum, coho, and pink salmon return to the Nushagak River and may be targeted or caught incidentally. Fishing periods (windows) are established through emergency order designed to (1) ensure that adequate numbers of salmon escape to spawn and (2) harvest the surplus of fish in excess of escapement needs. Gear types include drift gillnet and set gillnet.

Commercial harvests during 2009-2013 averaged approximately 25 million salmon, including 23.6 million sockeye, 400K pink, 900K chum, 86K coho, and 27K Chinook salmon. The mean commercial ex-vessel value during 2009-2013 was \$155 million. Escapement goals for sockeye, Chinook, pink, and coho salmon were met every year for the last nine years (pink salmon goal established 2012); the goal for chum salmon was met eight out of nine years (Munro & Volk 2014).

There are no enhanced stocks in Bristol Bay.

- **UoC 8: Yukon River**

The Yukon Management Area (YMA) is part of the Arctic-Yukon-Kuskokwim Region (AYK) and includes the Alaska portion of the Yukon River plus some nearby marine waters along the Bering Sea coast. The Yukon River is the largest river in Alaska, originating in British Columbia and the Yukon Territory and flowing over 2,300 miles to the Bering Sea. Commercial salmon fishing occurs throughout the 1,200 miles of the Alaska mainstem portion of the river, plus the lower 225 miles of the Tanana River and lower 12 miles of the Anvik River. The Yukon River Salmon Agreement between the United States and Canada factors in strongly with the management of Chinook and fall chum salmon. Canadian waters are responsible for approximately 50% of the production of Yukon River Chinook salmon and a large fraction of the fall chum salmon. In January 2013, the Alaska Board of Fisheries made it a priority to protect the first wave of Chinook salmon (Canada-bound) passing

through the Yukon River from both commercial and subsistence fishing.

Commercial harvests during 2009-2013 averaged 500K salmon, including just 200 sockeye, zero pink, 453K chum, 45K coho, and 2.4K Chinook salmon. The mean commercial ex-vessel value during 2009-2013 was \$2.5 million. Escapement goals of sockeye (no goals), Chinook (60%), pink (no goals), coho (100%) and chum salmon (summer and fall runs: 90%) have been met in most years, 2005-2013 (Munro & Volk 2014). However, during the past four years, Chinook salmon populations did not meet the lower escapement goal about 45% of the time; the goal for Chinook salmon entering Canada was only met in one of the past four years, even though commercial catch has been close to zero.

There is no commercial-level hatchery production in the US Yukon River area, but there is small hatchery production of Chinook and coho salmon to support recreational fisheries near Fairbanks (Vercessi 2014).

- **UoC 9: Kuskokwim**

Kuskokwim Management Area (KMA) is part of the Arctic-Yukon-Kuskokwim Region (AYK) and includes the Kuskokwim River and Kuskokwim Bay drainages of the Bering Sea coast. The KMA includes three active commercial fishing districts, each managed as an independent terminal fishery. Fishers are restricted currently to using gillnets. A new escapement goal (fewer spawners) was developed for five Kuskokwim River Chinook salmon populations in 2012.

Commercial harvests during 2009-2013 averaged 451K salmon, including 119K sockeye, 400 pink, 186K chum, 132K coho, and 14.2K Chinook salmon. The mean commercial ex-vessel value during 2009-2013 was \$2.5 million. Escapement goals of sockeye (95% of years), Chinook (70%), pink (no goals), coho (100%) and chum salmon (95%) have been met nearly every year, 2005-2013 (Munro & Volk 2014). During the past four years, Chinook salmon populations often did not meet the lower escapement goal. In 2013, nine of 12 stocks (including the new all-river goal) did not reach the lower escapement goal; 3,000 Chinook salmon were taken in the commercial fisheries, i.e., 5% of the lower goal for the entire Kuskokwim River. Five new/revised goals were established in 2013 but all have escapement data back to at least 2005.

There is no commercial-level hatchery production in the Kuskokwim area (Vercessi 2014).

- **UoC 10: Kotzebue**

The Kotzebue District is part of the AYK management area and it includes all waters from Cape Prince of Wales to Point Hope, i.e., north of Norton Sound. This region supports the northern most commercial fishery in Alaska. Chum salmon is the most abundant salmon, though other salmon species occur in small numbers. Commercial harvests are dependent on chum salmon abundance and the presence of a buyer.

Commercial harvests during 2009-2013 averaged 253K chum salmon. The mean commercial ex-vessel value during 2009-2013 was \$670,000. Escapement goals of chum salmon were met in the few years when weather and water clarity allowed monitoring to take place, but most years had no monitoring, 2005-2013 (Munro & Volk 2014). The fishery is monitored using a test fishery.

There is no commercial-level hatchery production in Kotzebue (Vercessi 2014).

- **UoC 11: Norton Sound**

The Norton Sound unit of certification includes the Norton Sound District and the Port Clarence District, an expansive area (>500 miles of coastline) that is located in northwestern Alaska, including the City of Nome. Norton Sound is part of the AYK management area. The

Norton Sound district is divided into 6 subdistricts. All commercial salmon fishing is by set gillnets in marine waters; however, fishing effort is usually concentrated near river mouths.

Commercial harvests during 2009-2013 averaged 203K salmon, including 1K sockeye, 54K pink, 89K chum, 60K coho, and 400 Chinook salmon (caught incidentally in other fisheries). The mean commercial ex-vessel value during 2009-2013 was \$1.1 million. Escapement goals of sockeye (70% of years), pink (odd, even year: 100%), coho (95%) and chum salmon (65%) have been met in most years, except for Chinook salmon (only 30%), 2005-2013 (Munro & Volk 2014). Most Chinook salmon goals were not met in 2011-2013 in spite of no directed commercial fishing on Chinook salmon.

There is no commercial-level hatchery production in Norton Sound (Vercessi 2014).

- **UoC 12: Kodiak**

The Kodiak salmon fishery is located on the Kodiak Island archipelago and the southeastern border of the Alaska Peninsula extending from Cape Douglas just south of Cook Inlet, and along the peninsula to the southwest where it adjoins the Chignik Management Area. All five species of Pacific salmon are targeted by a mixture of primarily purse seine and set gill net fisheries with a small number of beach seine permits.

Commercial harvests during 2009-2013 averaged 22.782 million salmon, including 2.047 million sockeye, 19.638 million pink, 834K chum, 244K coho, and 17.5K Chinook salmon. The mean commercial ex-vessel value during 2009-2013 was \$46.6 million. Escapement goals of sockeye (85% of years), Chinook (50%), pink (odd, even year: 90%), coho (75%) and chum salmon (70%) have been met in most years, 2005-2013 (Munro & Volk 2014). All goals were met in 2013 except for the two monitored Chinook salmon populations.

Major hatcheries operate at Pillar Creek near Kodiak and at Kitoi Bay, with some production of all five species but major efforts are focused on pink, chum and sockeye salmon. Kodiak's long term regional plan indicates substantial expansion of fisheries enhancement from hatcheries until it equals or exceeds wild production (KRPT 2011). In 2013, hatcheries accounted for 35% of the total number of salmon in the commercial common property harvest; 12% of the chum, 20% of the coho, 15% of the sockeye, and 38% of the pink salmon (Vercessi 2014).

- **UoC 13: Chignik**

The Chignik Management Area (CMA) is in the Westward Management Region and located on the south side of the Alaska Peninsula, approximately 250 miles southwest of Kodiak. The Chignik salmon fishery focuses on catches of sockeye salmon, largely while fishing in Chignik Lagoon and Chignik Bay. Fishing can also occur in districts along the south side of the Alaska Peninsula when areas are opened by the manager. Harvests of other salmon species are largely incidental to sockeye salmon, but they do contribute significantly to the overall value of the fishery.

Commercial harvests during 2009-2013 averaged 2.988 million salmon, including 1.853 million sockeye, 762K pink, 285K chum, 82K coho, and 5K Chinook salmon. The mean commercial ex-vessel value during 2009-2013 was \$17.96 million. Escapement goals of sockeye (100% of years), Chinook (90%), pink (100%), coho (no goal) and chum salmon (100%) have been met nearly every year, 2005-2013 (Munro & Volk 2014). The Chinook salmon goal was not met in 2013.

There is no commercial hatchery production in Chignik at this time.

- **UoC 14: Peninsula/Aleutian Islands**

The Peninsula/Aleutian Islands UoC is in the Westward Management Region and has three

components. The South Unimak and Shumagin Islands management area is located on the southern portion of the south side of the Alaska Peninsula adjacent to the southern boundary of the Chignik management area. The Aleutian Islands and Atka-Amlia Islands management area extends southwest from Unimak Island and encompasses all of the Aleutian Islands to the Russian border and the Pribilof Islands. The Northern portion of the Peninsula/Aleutian Islands UoC extends along the northern side of the Alaska Peninsula from Cape Sarichef on Unimak Island to Cape Menshikof near Port Heiden where it joins Bristol Bay.

The Peninsula fishery primarily targets sockeye salmon. Local stocks originate mostly along the north side of the Alaska Peninsula, and intercepted stocks are bound for Bristol Bay. Large numbers of pink salmon are also caught but are generally taken incidental to harvests of sockeye salmon. Purse seines, drift gill nets, and beach seines are the only commercial gear allowed.

Commercial harvests during 2009-2013 averaged approximately 9.6 million salmon, including 3.2 million sockeye, 4.9 million pink, 1.2 million chum, 200K coho, and 9K Chinook salmon. The mean commercial ex-vessel value during 2009-2013 was \$30 million.

Most escapement goals (13 for sockeye, two for coho, two for pink, and six for chum salmon) have been met each year for the last 9 years. The one goal for Chinook salmon was not met since 2011. The Swanson Lagoon stock of sockeye salmon was listed as a stock of management concern at the February 2013 meeting of the BoF. The stock's decline is related to natural causes where a berm was formed at the mouth preventing escapements from entering the system. Fisheries that may impact the stock were closed.

There are no significant hatchery contributions to the Alaska Peninsula fishery.

Stocks of Concern

ADF&G and the Board of Fisheries (BOF) have a process in which Stocks of Concern (SOCs) are designated if:

- 1) A stock is not consistently meeting harvest levels even though escapement levels are met (yield concern), or
- 2) When escapement levels have not been met within the past 3 of 5 years (management concern).

The BOF makes the SOC designation based on a recommendation by ADF&G. The SOC designation triggers a written action plan to identify factors of decline and develop a plan to increase abundance and harvests. This management approach effectively replaces the limit reference point approach. From an MSC viewpoint, a depleted stock might be one that is not meeting the escapement goal, e.g., management concern. However, the yield SOC is likely above the depleted stock status identified by MSC. Therefore, the ADF&G approach to depleted stocks is precautionary.

When the Alaska salmon fishery was certified in 2013, six populations were considered management stocks of concern, and therefore were considered to be depleted (Munro & Volk 2013). In the 2013 Board of Fisheries regulatory cycle, Goose Creek Chinook salmon was changed from being a stock of yield concern to a stock of management concern, while Sheep Creek Chinook salmon (UoC 6: UCI) was newly designated as a stock of management concern (Munro & Volk 2014).

The BOF requires recovery plans for stocks of concern. ADF&G has developed or is in the process of developing recovery plans for all stocks listed as of management concern. As stocks are not depleted as a result of the fishery, ongoing research continues to look for the causes of decline. Declines are likely related to marine conditions unrelated to the fishery, while directed fisheries on these stocks of concern are reduced to not significantly impact recovery. No changes to scoring of any UoC is required due to the changes in the stocks of

concern since the AK salmon fishery was recertified in 2013.

Table 1, showing stocks of concern for 2014, is on the following page.

Table 1: Alaska statewide summary of salmon stocks of concern for 2014.

	UoC	System	Species	Year Designated ^a	Level of Concern	Year Last Reviewed
6	UCI	Susitna (Yentna) River	Sockeye	2007	Yield	2010
6	UCI	Chuitna River	Chinook	2010	Management	2010
6	UCI	Theodore River	Chinook	2010	Management	2010
6	UCI	Lewis River	Chinook	2010	Management	2010
6	UCI	Alexander Creek	Chinook	2010	Management	2010
6	UCI	Willow Creek	Chinook	2010	Yield	2010
6	UCI	Goose Creek	Chinook	2010	Management	2013
6	UCI	Sheep Creek	Chinook	2013	Management	2013
8	Yukon	Yukon River	Chinook	2000	Yield	2012
11	Norton Sound	Norton Sound Sub-district 5 & 6	Chinook	2003	Yield	2012
11	Norton Sound	Norton Sound Sub-district 2 & 3	Chum	2000	Yield	2012
11	Norton Sound	Norton Sound Sub-District 1	Chum	2006	Yield	2012
12	Kodiak	Karluk River	Chinook	2010	Management	2010
14	Peninsula / Aleutians	Swanson Lagoon	Sockeye	2012 ^b	Management	2012

^a Indicates start of BOF cycle in which stock of concern was designated or last reviewed (e.g., 2011/2012 BOF cycle = 2011).

^b The stock of concern designation for Swanson Lagoon sockeye salmon was designated at the February 2013 Alaska Peninsula/Aleutian Islands BoF meeting.

Source: <http://www.adfg.alaska.gov/index.cfm?adfg=specialstatus.akfishstocks>.

Total landings in most recent fishing year

Data presented here are catches from the entire Alaska salmon fishery, including from the Prince William Sound UoC (which remained in assessment during the 2013 and 2014 fishing seasons).

2014 total landings by the Alaska salmon fishery for the five Pacific salmon species:

- Chinook Salmon: 2,625 t (5.8 Mlb; 479K fish)
- Sockeye Salmon: 111,293 t (245.4 Mlb; 43,566K fish)
- Pink Salmon: 149,272 t (329.1 Mlb; 95,306K fish)
- Chum Salmon: 42,487 t (93.7 Mlb; 11,220K fish)
- Coho Salmon: 19,714 t (43.5 Mlb; 6,105K fish)

Data from (<http://www.adfg.alaska.gov/index.cfm?adfg=CommercialByFisherySalmon.exvesselquery>). Note these data are reported to be preliminary and may therefore be subject to change.

UoC share of landings

Data presented here are catches from the Alaska salmon fishery without the Prince William Sound UoC (which remained in assessment during the 2013 and 2014 fishing seasons).

2014 total landings by the certified fishery for the five species were:

- Chinook Salmon: 2,544 t (5.6 Mlb; 469K fish)
- Sockeye Salmon: 102,395 t (225.7 Mlb; 40,259K fish)
- Pink Salmon: 82,098 t (181.0 Mlb; 51,404K fish)
- Chum Salmon: 37,198 t (82.0 Mlb; 9,690K fish)

	<ul style="list-style-type: none"> • Coho Salmon: 17,513 t (38.6 Mlb; 5,505K fish) <p>Data from (http://www.adfg.alaska.gov/index.cfm?adfg=CommercialByFisherySalmon.exvesselquery). Note these data are reported to be preliminary and may therefore be subject to change.</p>
Client share of landings	<p>Any salmon from the Alaska salmon fishery other than from the Prince William Sound UoC are eligible to enter in to certified chains of custody, and so the same data are reported here as for the UoC share of the TAC, above.</p> <p>2014 total landings by the certified fishery for the five species were:</p> <ul style="list-style-type: none"> • Chinook Salmon: 2,544 t (5.6 Mlb; 469K fish) • Sockeye Salmon: 102,395 t (225.7 Mlb; 40,259K fish) • Pink Salmon: 82,098 t (181.0 Mlb; 51,404K fish) • Chum Salmon: 37,198 t (82.0 Mlb; 9,690K fish) • Coho Salmon: 17,513 t (38.6 Mlb; 5,505K fish) <p>Data from (http://www.adfg.alaska.gov/index.cfm?adfg=CommercialByFisherySalmon.exvesselquery). Note these data are reported to be preliminary and may therefore be subject to change.</p>
Green Weight¹ of catch taken by client group	<p>Most recent calendar year: 2014</p> <p>2014 total landings by the client group for the five species were:</p> <ul style="list-style-type: none"> • Chinook Salmon: 431 t (0.95 Mlb) • Sockeye Salmon: 17,418 t (38.4 Mlb) • Pink Salmon: 22,589 t (49.8 Mlb) • Chum Salmon: 7,620 t (16.8 Mlb) • Coho Salmon: 3,357 t (7.4 Mlb)

¹ The weight of a catch prior to processing

Condition 1	
UoC	Southeast Alaska (SEAK)
PI	1.3.1 Enhancement activities do not negatively impact wild stocks or substitute for a stock rebuilding strategy.
Score at Certification	60
Scoring Rationale	Investigations of chum salmon hatchery straying in the NSI subarea indicate extensive straying into wild streams (Piston & Heintz 2012a, Piston & Heintz 2012b), including from remote release sites, with averages exceeding 9% of the total escapement and with a range to > 60% in individual streams. The presence of such large straying rates suggests that enhancement activities for this species may have negative impacts on the local adaptation of wild stocks through introgression with the hatchery fish, which has a risk of decreasing the reproductive performance and diversity of wild stocks. In order to meet the SG80 level of performance, a condition of certification is introduced.
Condition	<p>By the end of 2023, the SG 80 scoring requirements must be met in full. This will be achieved when it has been demonstrated that:</p> <p>a) (PI 1.3.1, SG80a): It is highly likely that the chum salmon enhancement activities in SEAK do not have significant negative impacts on the local adaptation, reproductive performance and productivity or diversity of wild chum salmon stocks.</p>
Client Action Plan	<p>To meet the intent of this condition, ASPA, in consultation with the hatchery study science panel, agrees to the following action milestones:</p> <p>Year 1:</p> <ul style="list-style-type: none"> • ASPA will commission an independent peer review of the study plan. <p>Year 2:</p> <ul style="list-style-type: none"> • ASPA will provide the peer review and a report on the findings of the peer review and, where appropriate, provide a rationale for incorporation of reviewer recommendations to the study plan. <p>Years 3-9:</p> <ul style="list-style-type: none"> • Provide annual reports on progress of the investigation, including straying and genetic findings. • Review possible management actions for potential implementation as appropriate to ameliorate adverse effects if found. <p>Year 10:</p> <ul style="list-style-type: none"> • Provide a detailed technical report, including peer review of the final report by the same independent review panel members (to the extent possible), demonstrating: <ul style="list-style-type: none"> a) It is highly likely that chum salmon enhancement activities in SEAK do not have significant negative impacts on the local adaptation, reproductive performance and productivity or diversity of wild chum salmon stocks.
Client Update	An independent peer review of the Hatcheries Research study plan was not undertaken or commissioned by ASPA this year. ASPA was advised by ADF&G that, in the absence

	<p>of agreement for an independent peer review from the study's participants, such a review would not have a positive impact on the study design. Nevertheless, the assessment team was informed at the site visit by ADF&G that a review was warranted and that they would seek to initiate a review by diverse-minded scientists. ADF&G discussed the value of undertaking an independent review at a meeting with the industry contributors in Anchorage in December 2014. No agreement was reached at that meeting to initiate an independent peer review, but it is understood that ADF&G will continue to look to initiate such a study during the next 6 months.</p>
Observations	<p>The Client Action Plan for year one called for ASPA to commission an independent peer review of the Hatcheries Research study plan currently being implemented by ADF&G (http://www.adfg.alaska.gov/index.cfm?adfg=fishingHatcheriesResearch.current_research). This peer review has yet to be commissioned.</p> <p>ADF&G implemented the hatchery research, in part, in order to provide a basis for PAR evaluations in the wake of aggressive industry efforts to increase hatchery production of pink and chum salmon in Prince William Sound and Southeast Alaska.</p> <p>An initial \$5 million to fund the study was secured through legislative appropriation and industry contributions. The ADF&G web site (see above) describes the study design process (but not the details of study design): “ADF&G organized a science panel composed of current and retired scientists from ADF&G, University of Alaska, aquaculture associations, and National Marine Fisheries Service. Panel members have broad experience in salmon enhancement, management, and wild and hatchery interactions.” Unfortunately, early efforts by the science panel were rushed, and the detailed study plan was not completed by the time ADF&G released the request for proposals for the field sampling. The actual study design reportedly has gone through change and has never been fully made public. During the 2012 site visit the assessment team raised questions about the robustness of the study design, which was unclear at the time, and suggested the need for an external peer review consistent with those done for similarly contentious ADF&G studies, such as WASSIP.</p> <p>ADF&G informed the Assessment Team in 2012, the Audit Team in 2014, and the client, that a peer review of the study plan was warranted and ADF&G would take steps to implement an independent review by scientists from diverse perspectives. Eric Volk, ADF&G Chief Fisheries Scientist, mentioned that the industry contributors would need to approve the proposed peer review. Further discussions with Eric also suggested that a third-party peer review, commissioned by the client but without the support of study contributors, would not have a significant or positive effect on the planning and implementation of the study.</p> <p>The assessment team understands and agrees with the Eric Volk assessment but nevertheless is disappointed that an independent study has yet to be commissioned. Furthermore, given the high cost of this investigation, it is critical to ensure the study is properly designed for testing hypotheses.</p>
Conclusion	<p>Progress on this condition is ‘<i>behind target</i>’. The client has one year to address the Year 1 milestone. No new milestones or corrective actions are set.</p> <p>It is noted that, in the event that a condition is not back ‘on target’ within 12 months of falling ‘behind target’, the MSC directs that the CAB shall consider progress to be inadequate and suspend or withdraw the certificate for the SEAK UoC (MSC 2013a).</p>

Condition 2	
UoC	Southeast Alaska (SEAK)
PI	1.3.2: Effective enhancement and fishery strategies are in place to address effects of enhancement activities on wild stock status
Score at Certification	70
Scoring Rationale	For chum salmon, the assessment team noted the high levels of hatchery chum salmon relative to wild chum salmon, and the levels of straying that have been observed in the NSI (Piston & Heintz 2012a, Piston & Heintz 2012b). As such, the assessment team concluded that the hatchery management strategies were not being implemented to the extent that the fisheries would meet this level of performance, and a condition of certification is introduced.
Condition	<p>By the end of the fourth year of certification, the SG 80b scoring requirements must be met for chum salmon. This will be achieved when it has been demonstrated that:</p> <p>a) (PI 1.3.2, SG80b): There is some objective basis for confidence that the strategy is effective, based on evidence that the strategy is achieving the outcome metrics used to define the minimum detrimental impacts (e.g., related to verifying and achieving acceptable proportions of hatchery-origin fish in the natural spawning escapement).</p>
Client Action Plan	<p>To meet the intent of this condition, ADF&G and other entities as appropriate will continue to monitor straying of chum salmon in Northern Southeast Inside (NSI) subarea streams as part of their long term hatchery research program. They will identify possible approaches to reduce stray levels. Action milestones for addressing this condition are as follows:</p> <p>Year 1:</p> <ul style="list-style-type: none"> • ADF&G and hatchery operators will continue to monitor representative streams in NSI for straying, as outlined in the recently launched hatchery straying and fitness study. (e.g., equivalent to random sampling of 18 NSI streams in 2010 (29% of total available)). ASPA will review these efforts and provide a progress report showing hatchery/wild chum salmon composition on the spawning grounds. <p>Year 2:</p> <ul style="list-style-type: none"> • ASPA will consult with hatchery operators and ADF&G on possible stray reduction strategies in conjunction with continued monitoring of representative streams for stray proportions as part of the hatchery study plan. A progress report will be provided. <p>Year 3:</p> <ul style="list-style-type: none"> • ASPA will begin preparation of a report examining methods of controlling hatchery strays. A progress report will be provided. <p>Year 4:</p> <ul style="list-style-type: none"> • ASPA will present a report on controlling hatchery strays, demonstrating: <ul style="list-style-type: none"> a) There is some objective basis for confidence that the management strategy is effective, based on evidence that the strategy is achieving the outcome metrics used to define the minimum detrimental impacts (e.g., related to verifying and

	achieving acceptable proportions of hatchery-origin fish in the natural spawning escapement).																																		
Client Update	<p>The Prince William Science Center and its sub-contracting partner, Sitka Sound Science Center, have completed the second season of a three year field study designed to determine the extent and annual variability in straying of chum salmon in Southeast Alaska. This work is expected to continue again during the 2015 season with the final report due at the end of March 2016.</p> <p>The proportion of hatchery fish in wild stock streams was estimated using methods that closely follow those used by Piston & Heintz (2012). Nearly all of the hatchery produced chum salmon returning to Southeast Alaska have been thermally marked, the exceptions being chum salmon produced by the Tamgass hatchery near Metlakatla, AK. The proportion of fish of hatchery origin in a wild stock stream can be estimated by collecting otoliths from spawned-out fish present in the stream. The collected otoliths are then sent to the ADF&G Mark Lab in Juneau for reading and determination of hatchery or wild origin. Piston and Heintz (2012) tended to visit their study streams 2-3 times during the spawning season while this study collected otoliths 3-4 times.</p> <p>Four streams were examined in 2012, while 33 and 32 streams were sampled in 2013 and 2014 (Table 1.). Sampling was spread across the three subregions of Southeast Alaska with the majority of the effort being concentrated in the Northern Southeast Inside subregion (Table 1). The proportions of fish of hatchery origin for each of the sampling events from 2008 through 2013 are presented in Tables 2, 3, and 4. Not all of the samples from 2014 have been read and verified by the ADF&G Mark Lab; consequently the reporting for 2014 is not complete. Estimates of the overall proportion of hatchery fish present by stream and year were not made or presented here. The final estimates will need to take into account run timing to each stream and it was felt that it would be best if those responsible for making the estimates were to do so and not have potentially competing estimates be presented here.</p> <p>Table 1. The number of streams sampled for chum salmon strays of hatchery origin by subregion and year in Southeast Alaska.</p> <table><tr><th rowspan="2">Year</th><th rowspan="2">Southern Southeast</th><th colspan="2">Northern Southeast</th></tr><tr><th>Inside</th><th>Outside</th></tr><tr><td>2008</td><td>1</td><td>5</td><td>3</td></tr><tr><td>2009</td><td>4</td><td>8</td><td>3</td></tr><tr><td>2010</td><td>5</td><td>17</td><td>3</td></tr><tr><td>2011</td><td></td><td>16</td><td></td></tr><tr><td>2012</td><td></td><td>4</td><td></td></tr><tr><td>2013</td><td>5</td><td>25</td><td>3</td></tr><tr><td>2014</td><td>5</td><td>24</td><td>3</td></tr></table>	Year	Southern Southeast	Northern Southeast		Inside	Outside	2008	1	5	3	2009	4	8	3	2010	5	17	3	2011		16		2012		4		2013	5	25	3	2014	5	24	3
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2014	5	24	3																																
Observations	<p>Twenty-five Northern Southeast Inside (NSI) streams were sampled for stray hatchery chum salmon in 2013 and 24 streams were sampled in 2014. Other areas of Southeast Alaska were sampled as well. Raw data showing daily proportion of hatchery chum salmon in each stream were presented in tables. Additional effort is needed to analyze the data and calculate the proportion of spawners that are hatchery chum salmon in each stream and in NSI as a whole. These estimates should be compared with stream-specific and NSI-region estimates presented in previous ADF&G reports. They should also be compared with release locations, including remote release sites.</p> <p>Numerous additional chum salmon (and other salmon species) were approved for annual</p>																																		

	release into Southeast Alaska in 2013 and 2014 (ADF&G 2013, ADF&G 2014). These releases include fish transferred to remote release locations, which may contribute to increased rather than decreased straying in the near future.
Conclusion	<p>Condition 2 is largely on target. The Year 1 goal is largely met by sufficient sampling of stray hatchery chum salmon in 2013 and 2014 and through the provision of estimates of daily percentages of hatchery fish on the spawning grounds. A synthesis of the data is needed, however. This analysis should be presented in Year 2 (2015), along with preliminary data from 2015.</p> <p>Although good progress has been made with sampling of strays, the assessment team notes that additional hatchery chum salmon were approved for release, including fish transferred to remote release sites. In Year 2, the assessment team anticipates the need for a description of how ongoing actions are consistent with a strategy to minimize the numbers and proportions of hatchery fish interbreeding with wild fish in natural spawning areas, consistent with the requirements of the MSC SamFAM guidelines (MSC 2012, MSC 2014), and a description of a strategy to reduce straying if straying levels in 2013 and 2014 exceed MSC guidelines.</p>

Condition 3	
UoC	Southeast Alaska (SEAK)
PI	<p>PI 1.3.3: Relevant information is collected and assessments are adequate to determine the effect of enhancement activities on wild stock status</p> <p>PI 2.5.2: There are measures in place to ensure the fishery does not pose a risk of serious or irreversible harm to ecosystem structure and function</p> <p>NB: In recognition of their interlinked nature, the text of this condition was drafted to address the deficiencies identified for both PI 1.3.3 and PI 2.5.2. The MSC agreed to this variation from CR 27.11.1.1.</p>
Score at Certification	<p>PI 1.3.3: 60</p> <p>PI 2.5.2: 75</p>
Scoring Rationale	The assessment team is aware of some studies and assessments that include estimates of the impacts of enhancement activities on wild stock status of Chinook, coho and chum salmon, but it is not clear that this work has included consideration of the impact of enhancement on productivity and diversity of wild stocks. This condition therefore requires that the assessment includes estimates of the impacts of enhancement activities on wild stock status, productivity and diversity of Chinook, coho and chum salmon.
Condition	<p>By the end of the fourth year of certification, the SG 80 scoring requirements for PI 1.3.3, and the SG80e scoring requirements for PI 2.5.2 must be met in full. This will be achieved when it has been demonstrated that:</p> <ul style="list-style-type: none"> a) (PI 1.3.3, SG80a): Sufficient relevant information is available on the contribution of enhanced Chinook, coho, pink and chum salmon to the harvest and wild escapement of the stocks. b) (PI 1.3.3, SG80b): The assessment includes estimates of the impacts of enhancement activities on wild stock status, productivity and diversity. c) (PI 2.5.2, SG80e): There is a tested and evaluated artificial production strategy, if necessary, with sufficient monitoring in place and evidence is available to reasonably ensure with high likelihood that strategy is effective in achieving the SG 80 outcome.
Client Action Plan	<p>The assessment team concluded that a key issue with regard to these Indicators is the effect of remote releases on increased stray rates of chum, Chinook, and coho salmon, and the potential that a reduction in remote releases (or other ways to improve homing) might be used to reduce straying. Action milestones for addressing this condition are as follows:</p> <p>Year 1:</p> <ul style="list-style-type: none"> • ASPA will review ongoing ADF&G efforts to estimate numbers of wild and hatchery chum salmon harvested in mixed stock fisheries where the proportion of hatchery fish is demonstrated or likely to be more than minimal (facilitated by previous and ongoing studies). This includes review of data informing the extent to which remote releases of hatchery chum salmon stray to spawning streams. • ASPA will prepare a risk assessment for Chinook and coho salmon straying (e.g., based on CWT recoveries, release numbers, harvests of local hatchery Chinook and coho salmon, and local wild salmon abundance), and design field studies to

	<p>estimate chum salmon straying in selected streams. A progress report will be provided.</p> <p>Year 2:</p> <ul style="list-style-type: none"> • ASPA will develop an approach to implement the risk assessment and field studies developed in Year 1. ASPA will provide a progress report based on data provided by ADF&G. <p>Year 3:</p> <ul style="list-style-type: none"> • ASPA, using available data, will estimate numbers of wild and hatchery salmon harvested in mixed stock fisheries, including fish released from remote release sites. ASPA will provide a progress report. • ASPA, using all available data collected by ADF&G will estimate remote release and direct-release strays on the spawning grounds, including the Northern Southeast Inside (NSI) subarea, and test whether fish released remotely have higher straying rates. ASPA will provide a progress report to include approaches to control straying. <p>Year 4:</p> <ul style="list-style-type: none"> • Continue to estimate numbers of wild and hatchery salmon harvested in mixed stock fisheries, including from remote release sites. • If NSI chum salmon stray rates are exceeding levels as set out in MSC guidelines (i.e. SamFAM), ASPA will develop and seek implementation of approaches to reduce straying. Otherwise, demonstrate that: <ul style="list-style-type: none"> a) Sufficient relevant information is available on the contribution of enhanced Chinook, coho, pink and chum salmon to the harvest and wild escapement of the stocks. b) The assessment includes estimates of the impacts of enhancement activities on wild stock status, productivity and diversity. c) There is a tested and evaluated artificial production strategy, if necessary, with sufficient monitoring in place and evidence is available to reasonably ensure with high likelihood that strategy is effective in achieving the SG 80 outcome.
Client Update	<p><i>Chum Salmon</i></p> <p>All of the chum salmon produced in hatcheries in Southeast Alaska with the possible exception of those produced by the Tamgass Hatchery near Metlakatla, Alaska, are thermally marked. Southern Southeast Regional Aquaculture Association (SSRAA) has sampled otoliths from traditional mixed stock fisheries at Ketchikan and Petersburg since 2005. Brunette <i>et al.</i> (2013) reports on the estimates of hatchery contribution of chum salmon to Southern Southeast Alaska net fisheries for 2006-2010 with the reporting of contribution estimates for 2011-2014 presently being prepared (ADF&G Ketchikan). Douglas Island Pink and Chum Inc. (DIPAC) evaluated the harvest at specific delivery locations in northern Southeast Alaska while Northern Southeast Regional Aquaculture Association (NSRAA) has sampled terminal harvest fisheries.</p> <p>The ADF&G does not have a coordinated region-wide program to sample and evaluate mixed-stock harvests for hatchery contributions (Gray <i>et al.</i> 2014; Brunette <i>et al.</i> 2013).</p> <p>The Prince William Science Center and its sub-contracting partner, Sitka Sound Science Center, have completed the second season of a three year field study designed to determine the extent and annual variability in straying of chum salmon in Southeast Alaska. This work is expected to continue again during the 2015 season with the final report due at the end of March 2016. The project proposal can found here:</p>

	<p>http://www.adfg.alaska.gov/static/fishing/PDFs/hatcheries/research/pwssc_h-w_proposal_6-29-12.pdf . A summary of the data collected for the chum salmon straying study to date can be found in the response to Condition 2.</p> <p><i>Coho Salmon</i></p> <p>Coho salmon are produced by thousands of streams in Southeast Alaska. Many of these streams produce only a few fish and little is known about the system. ADF&G assesses the status of the coho salmon stock by trends in abundance and escapement for 14 indicator systems spread across the area, and concluded that the stocks appear to be in excellent condition (Shaul <i>et al.</i> 2011). Approximately 19-20 million coho salmon smolt are released annually in Southeast Alaska at numerous sites (Shaul <i>et al.</i> 2011). Hatcheries contributed an average of 19% of the coho salmon in the Southeast Alaska commercial harvest between 2001 and 2010 (Shaul <i>et al.</i> 2011); although it appears that recent contributions have been approaching 30% (L. Shaul, ADF&G, per comm.). A retrospective study of historical CWT returns from streams where wild coho salmon had been tagged as fry or smolt was undertaken by Shaul (2010). A total of 4,558 tags were recovered from adults in 34 systems from the years 1976-2007. Seventy four of the recovered tags had been placed in fish released outside of the system where they were recovered; of these 21 were wild fish and 53 were of hatchery origin (Shaul 2010). While no conclusion about the level of straying for coho salmon could be drawn from this study, 98% of the recovered tags were found in their natal stream (Shaul <i>et al.</i> 2011). The number of wild coho salmon streams in close proximity to the large releases of hatchery coho salmon suggests that a straying study may be warranted. A very superficial discussion of the study logistics indicated that a straying study for coho salmon would not be as easy to undertake as with pink and chum salmon since not all coho salmon are marked and the carcasses disappear very quickly from the spawning grounds.</p> <p><i>Chinook Salmon</i></p> <p>Chinook salmon are known to occur in 34 rivers in, or draining into, the Southeast region of Alaska (Der Hovanisian <i>et al.</i> 2011). ADF&G assesses the status of the Chinook salmon stock by trends in abundance and escapement for 11 drainages spread across the area and judged the monitored systems to be healthy (Der Hovanisian <i>et al.</i> 2011). Approximately 3 million Chinook salmon smolts are released annually in Southeast Alaska with the release sites being generally located away from the wild Chinook salmon systems. Hatcheries contributed an average of 19% of the Chinook salmon in the Southeast Alaska commercial harvest between 2001 and 2010 (Der Hovanisian <i>et al.</i> 2011). Very limited straying information has been collected from adipose clipped fish returning to the major Chinook salmon systems. These data are not published and are inappropriate for making estimates of straying rates. That being said, very few of the CWT's recovered at these sites have been strays. Ed Jones ADF&G described a dataset from the Taku River where 4 out of 606 tags recovered were considered strays. These tags were recovered over the period 1994 through 2013. Likewise 8 out of 872 tags recovered from the Unuk River between 1996 and 2014 were considered strays (per comm., Phillip Richards, ADF&G).</p>
Observations	<p><i>Chum Salmon</i></p> <p>Brunette <i>et al.</i> (2013) provided an excellent review of hatchery chum salmon contributions to commercial purse seine and gillnet fisheries in southern Southeast Alaska. Hatchery percentages often varied with year, indicating annual monitoring is needed to estimate composition in many fisheries. In northern Southeast Alaska, hatcheries estimate the overall contribution of hatchery fish to the commercial catch, but estimates were not provided for key mixed-stock fisheries.</p> <p>Hatchery chum salmon stray data for each region of Southeast Alaska were provided</p>

	<p>(see Table 1 of Condition 2). No information was provided on strays that originated from remote release sites. It is unclear whether remote release chum salmon have a unique thermal mark, but data collected through the ongoing study may provide information regarding the relative straying rates of onsite versus remote released chum salmon.</p> <p><i>Coho and Chinook Salmon</i></p> <p>ASPA examined available coho salmon data and concluded that a straying study may be warranted for streams near the release sites. However, relatively few coho salmon are currently marked & coho salmon carcasses can be difficult to recover. Additional discussion of study feasibility with key coho salmon experts in SEAK, such as Leon Shaul, is warranted.</p> <p>The assessment team recognizes that Chinook salmon released at the site of their hatchery rearing are less prone to stray than fish released from remote sites. For Chinook salmon, the assessment team needs an initial risk assessment that might be based on expanded hatchery CWT recoveries on sampled streams, or recovered at hatchery racks, relative to total Chinook salmon returning to the respective recovery site. The assessment team recognizes that expansion of hatchery CWT recoveries can lead to highly imprecise estimates but it may provide sufficient information for a risk assessment as to whether an additional straying investigation is warranted.</p>
Conclusion	<p>There were two year 1 milestones for this Condition.</p> <p>For the first milestone, an excellent summary of contribution of hatchery chum salmon in mixed stock fisheries in southern SEAK was provided. However, while some information was provided suggesting that data are being collected on contribution of hatchery chum salmon in mixed stock fisheries in northern SEAK, no data or analyses were provided. Progress against the first milestone in Year 1 is therefore ‘behind target’.</p> <p>For the second milestone, the assessment team is generally satisfied that progress is ‘on target’. For coho and Chinook salmon, available information suggests that straying from hatchery release sites is low, although there remains a question over straying from remote release sites. The client should work to provide more information on this issue over the coming year, including through investigating the feasibility for a coho salmon straying study. For chum salmon, information on straying is already being collected in an ongoing ADF&G study. This study should evaluate the possibility of increased straying from remote-release sites.</p> <p>No new milestones or corrective actions are set at this Year 1 audit, but the client will need to meet the existing year 1 milestones at the Year 2 audit.</p> <p>It is noted that, in the event that a condition is not back ‘on target’ within 12 months of falling ‘behind target’, the MSC directs that the CAB shall consider progress to be inadequate and suspend or withdraw the certificate for the SEAK UoC (MSC 2013a).</p>

Condition 4	
UoC	Copper/Bering Districts
PI	<p>PI 1.3.1: Enhancement activities do not negatively impact wild stocks or substitute for a stock rebuilding strategy</p> <p>PI 1.3.2: Effective enhancement and fishery strategies are in place to address effects of enhancement activities on wild stock status</p> <p>PI 1.3.3: Relevant information is collected and assessments are adequate to determine the effect of enhancement activities on wild stock status</p> <p>NB: In recognition of their interlinked nature, which in this case is in part because of their derivation from existing Condition 29, placed on the fishery when it was certified in 2007, the text of this condition was drafted to address the deficiencies identified for PI 1.3.1, PI 1.3.2 and PI 1.3.3. The MSC agreed to this variation from CR 27.11.1.1.</p>
Score at Certification	<p>PI 1.3.1: 60</p> <p>PI 1.3.2: 70</p> <p>PI 1.3.3: 60</p>
Scoring Rationale	<p>This condition is related to and a supplement of the carry-over from Condition 29 on the previous Alaska salmon fishery certification from 2007. Condition 29 of that certification was to “<i>Conduct a review of the Gulkana sockeye hatchery program with emphasis on potential impacts to wild stocks.</i>”</p> <p>This new condition must now account for concerns raised in the observations of the Audit 4 report of the previous certification that noted “<i>It is difficult to determine from these hatchery evaluations whether the evaluation of the Gulkana Hatchery in 2012 will be sufficiently detailed to meet the intent of this condition.</i>”</p>
Condition	<p>By the end of the fourth year of certification, the SG 80 scoring requirements must be met in full. This will be achieved when it has been demonstrated that:</p> <ul style="list-style-type: none"> a) (PI 1.3.1, SG80a): It is highly likely that the Gulkana hatchery enhancement activities do not have significant negative impacts on the local adaptation, reproductive performance and productivity or diversity of Copper/Bering District stocks of sockeye salmon, b) (PI 1.3.2, SG80b): There is some objective basis for confidence that the strategy is effective, based on evidence that the strategy is achieving the outcome metrics used to define the minimum detrimental impacts (e.g., related to verifying and achieving acceptable proportions of hatchery-origin fish in the natural spawning escapement), c) (PI 1.3.3, SG80a): Sufficient relevant information is available on the contribution of enhanced sockeye salmon to the harvest and wild escapement of the wild sockeye salmon stock, d) (PI 1.3.3, SG80b): The assessment includes estimates of the impacts of enhancement activities on wild sockeye salmon stock status, productivity and diversity.
Client Action Plan	The Copper River/Bering District fishery will remain conditional until it is established that the Gulkana Hatchery enhancement activities do not have a significant negative impact on the productivity and diversity of wild stocks. A key outcome for this condition is to demonstrate acceptable straying of hatchery sockeye salmon while also meeting the

	<p>spawning escapement goals for the wild stock. Action milestones for addressing this condition are as follows:</p> <p>Year 1:</p> <ul style="list-style-type: none"> Using existing information available from ADF&G and PWSAC, ASPA will prepare a review of the Gulkana Hatchery, including an examination of potential impacts of hatchery sockeye salmon on wild stocks. A key metric for evaluating impact is the proportion of hatchery sockeye salmon on the spawning grounds. <p>Year 2:</p> <ul style="list-style-type: none"> ASPA will consult with ADF&G and develop a plan utilizing escapement surveys to assess impacts of Gulkana Hatchery sockeye salmon on wild stocks. <p>Year 3:</p> <ul style="list-style-type: none"> ASPA will seek to implement the plan and provide a progress report. <p>Year 4:</p> <ul style="list-style-type: none"> ASPA will seek to demonstrate that the plan is implemented then demonstrate that the plan is capable of achieving an appropriately low level of hatchery fish in the spawning escapement thereby effectively minimizing detrimental impacts, and therefore: <ol style="list-style-type: none"> It is highly likely that the Gulkana Hatchery enhancement activities do not have significant negative impacts on the local adaptation, reproductive performance and productivity or diversity of Copper/Bering District stocks of sockeye salmon, There is some objective basis for confidence that the strategy is effective, based on evidence that the strategy is achieving the outcome metrics used to define the minimum detrimental impacts (e.g., related to verifying and achieving acceptable proportions of hatchery-origin fish in the natural spawning escapement), Sufficient relevant information is available on the contribution of enhanced sockeye salmon to the harvest and wild escapement of the wild sockeye salmon stock, The assessment includes estimates of the impacts of enhancement activities on wild sockeye salmon stock status, productivity and diversity.
Client Update	<p>A review of the Gulkana Hatchery was performed in 2012 by ADF&G (Stopha 2013) largely in response to a previous certification review by the Marine Stewardship Council (Chaffee <i>et al.</i> 2007). The Department of Fish and Game through their review, determined that Prince William Sound Aquaculture Corporation was in compliance with its hatchery permit, annual management plans and other agreements with the Department.</p> <p>The donor stock for the Gulkana Hatchery is indigenous to the Gulkana River watershed. Roberson & Holder (1993) describe the initial egg takes as coming from aquifer springs located within 400m of the hatchery with additional gametes coming from fish collected at Gunn Creek on Summit Lake. The eggs are incubated in stream-side incubators and all emergent fry since 2000 (1999 brood year) have been treated with strontium chloride to place distinctive marks on the otoliths of the fry. Sockeye salmon otoliths can then be examined at various life stages for presence or absence of marks created by strontium chloride to identify whether the fish is of hatchery origin.</p> <p>The Gulkana Hatchery is an integrated hatchery program (Morbrand <i>et al.</i> 2005) where the hatchery broodstock is composed of individuals of both hatchery and naturally</p>

produced origins, at times approaching 40% naturally produced fish (Steve Moffitt, ADF&G Cordova, personal communication).

An informal study designed to assess straying into Upper Copper River tributaries was undertaken in 2008 by Bidlack & Valentine (2009). In this work six known sockeye salmon spawning sites, Swede Lake, Dickey Lake, Upper Fish Lake, lower Paxson Lake, Mentasta Lake, and Gunn Creek were opportunistically sampled (Figure 1). Seventy or more readable otoliths were collected from all sites with the exception of Dickey Lake where only 14 readable otoliths were obtained. No fish with strontium chloride marks were found in five of the locations with all of the otoliths obtained from Gunn Creek being marked (Table 1). Gunn Creek is the release site for fish released into Summit Lake. Interestingly, there were no marked fish found out of 71 examined from Upper Fish Lake, the closest sampling site to the Gulkana Hatchery.

The commercial, subsistence, and personal use fisheries for sockeye salmon in the Copper River are sampled for the presence and absence of otolith marked fish in order to estimate the contribution of Gulkana Hatchery fish to the fisheries. The Gulkana Hatchery contributed approximately 14% to the total upriver return of sockeye salmon to the Copper River for the 2003 through 2013 seasons (Appendix A.2 of Sheridan *et al.* 2014). Sockeye salmon escapement goals for the Copper River are evaluated every three years with the most recent being completed in the fall of 2014 (Moffitt *et al.* 2014). The contribution of Gulkana Hatchery fish to the escapement was taken into account when establishing the escapement goal. The present goal was set in 2003 at 300,000 to 500,000 sockeye salmon passing the Miles Lake sonar; this escapement goal has been achieved or exceeded every year since 2003 (Appendix A.2 of Sheridan *et al.* 2014).

Figure 1: Sample site locations (denoted by stars) and hatchery locations (round fish symbols). Upper inset shows Copper River watershed within the State of Alaska. Lower inset shows six survey sites (one furthest right is Mentasta Lake). (Source: Bidlack & Valentine 2009).

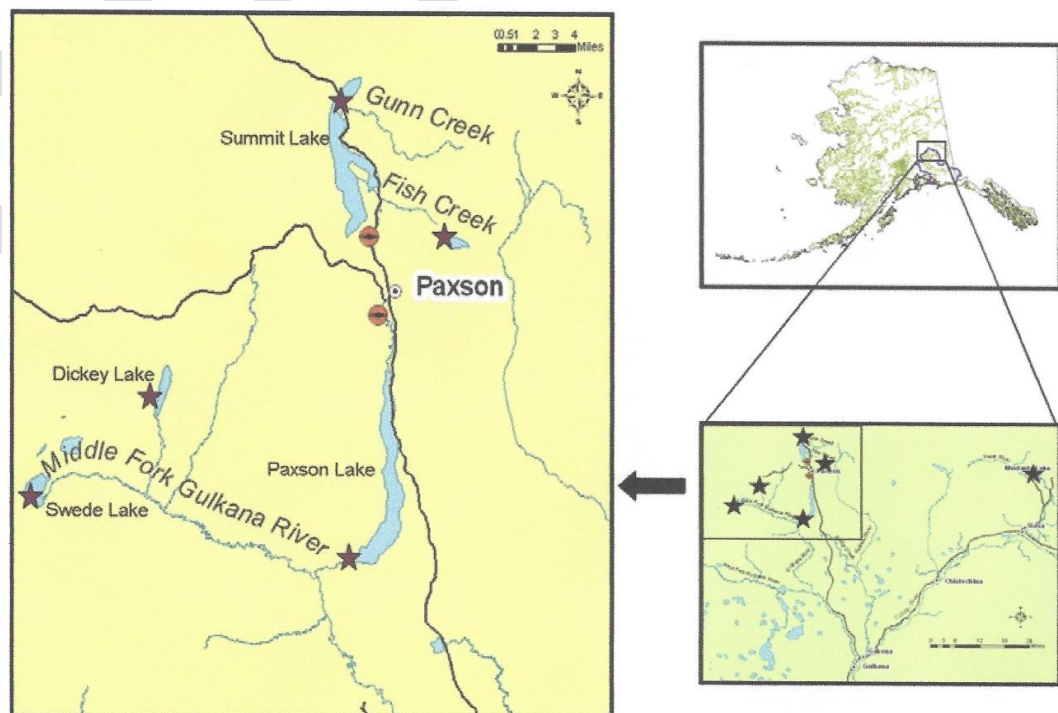


Table 1. Sample site locations, dates and numbers collected, sex ratio of samples, and otolith markings. (Source: Bidlack & Valentine 2009).

Date Collected	Site Name	Anadromous Stream Number	Total # Samples	Readable Samples	% Female	% Hatchery Origin
8/22/2008	Swede Lake	212-20-10080-2461-3171-4042-0010	96	94	64	0
8/22/2008	Dickey Lake	212-20-10080-2461-3171-0030	14	14	29	0
8/24/2008	Upper Fish Lake	212-20-10080-2461-3272-0020	72	71	60	0
8/25/2008	Mentasta Lake	212-20-10080-2605-3050-0010	96	94	44	0
9/25/2008	Paxson Lake (South End)	212-20-10080-2461	96	83	50	0
9/26/2008	Gunn Creek	212-20-10080-2461-3292	74	70	66	100
Total			448	426		

Observations

This condition is a continuation of the unmet Condition 29 from the 2009 audit: “*Conduct a review of the Gulkana sockeye hatchery program with emphasis on potential impacts to wild stocks*” (Knapman *et al.* 2009). The 2012 Assessment Team added the emphasis for this new Condition 4: “*A key metric for evaluating impact is the proportion of hatchery sockeye salmon on the spawning grounds.*”

ADF&G released the final review (Stopha 2013), written specifically as a response to the 2009 condition, although the overall objective was slightly wide of the mark: “*An Evaluation of the Gulkana Salmon Hatchery for Consistency with Statewide Policies and Prescribed Management Practices.*” This review, although an imperfect match with the Condition, contains information useful for evaluating progress towards evaluating impact of the hatchery program on wild stocks. The Client Update notes the following from Stopha (2013):

- The donor stock for the Gulkana Hatchery is indigenous to the Gulkana River watershed, consistent with the State of Alaska Genetics Policy which is designed to minimize hatchery impacts on wild stocks.
- The Gulkana Hatchery is an integrated hatchery program where the hatchery broodstock is composed of up 40% naturally produced fish—a program that minimizes the opportunity for domestication selection to alter the genetic makeup of the hatchery stock.
- A third-party project by an NGO assessed straying of Gulkana Hatchery fish into Upper Copper River tributaries in 2008 (Bidlack and Valentine 2009). One-hundred percent of the spawners returning to the hatchery release site were of hatchery origin; no spawners observed in proximal spawning areas were of hatchery origin.
- The contribution of Gulkana Hatchery fish to the escapement was taken into account when establishing the Copper River escapement goal (300,000L 500,000U); the escapement has been near or above the upper bound every year since 2003.

The Assessment Team noted in Stopha (2013) that the current hatchery operator is functioning within stricter compliance of State of Alaska policies and practices than did Alaska Department of Fish and Game FRED Division when it operated the hatchery from 1973-1993.

Conclusion

Following review of the evidence presented, Year 1 progress against Condition 4 is considered to be ‘on target’.

Bidlack and Valentine (2009) provides useful information on the absence of straying in a set of opportunistically collected samples. In Year 2 ASPA needs to consult with ADF&G to develop a systematic plan utilizing escapement surveys to assess impacts of Gulkana hatchery sockeye salmon on wild stocks.

Condition 5	
UoC	Kodiak
PI	<p>PI 1.3.1: Enhancement activities do not negatively impact wild stocks or substitute for a stock rebuilding strategy</p> <p>PI 1.3.3: Relevant information is collected and assessments are adequate to determine the effect of enhancement activities on wild stock status</p> <p>PI 2.5.2: There are measures in place to ensure the fishery does not pose a risk of serious or irreversible harm to ecosystem structure and function</p> <p>NB: In recognition of their interlinked nature, the text of this condition was drafted to address the deficiencies identified for PI 1.3.1, PI 1.3.3 and PI 2.5.2. The MSC agreed to this variation from CR 27.11.1.1.</p>
Score at Certification	<p>PI 1.3.1: 60</p> <p>PI 1.3.3: 60</p> <p>PI 2.5.2: 75</p>
Scoring Rationale	Hatchery stocks of all species do not comprise a major part of the harvests in the Kodiak UoC to date, and so the concern raised by the assessment team with respect to meeting the SG 80 level of performance is primarily related to straying into other systems at the current levels of release.
Condition	<p>By the end of the fifth year of certification, the SG 80 scoring requirements for PI 1.3.1 and PI 1.3.3, and the SI 80e requirements for PI 2.5.2, must be met in full. With respect to the current hatchery programs at Pillar Creek and Kitoi Bay for Chinook, coho, pink and chum salmon, this will be achieved when it has been demonstrated that:</p> <ul style="list-style-type: none"> a) (PI 1.3.1, SG80a) it is highly likely that the enhancement activities do not have significant negative impacts on the local adaptation, reproductive performance and productivity or diversity of wild stocks. b) (PI 1.3.3, SG80a) sufficient relevant information is available on the contribution of enhanced Chinook, coho, pink and chum salmon to the harvest and wild escapement of the stocks. c) (PI 1.3.3, SG80b) the assessment includes estimates of the impacts of enhancement activities on wild stock status, productivity and diversity. d) (PI 2.5.2, SG80e) there is a tested and evaluated artificial production strategy, if necessary, with sufficient monitoring in place and evidence is available to reasonably ensure with high likelihood that strategy is effective in achieving the SG 80 outcome.
Client Action Plan	<p>To satisfy the intent of this condition, ASPA will monitor and review study plans by KRAA and ADF&G to develop a chum and pink salmon mark and recovery plan, including sampling of selected streams for rates of straying.</p> <p>Year 1:</p> <ul style="list-style-type: none"> • Monitor and review plan for 100% marking of hatchery pink and chum salmon and for select sampling on spawning grounds and in fisheries. ASPA will provide a report.

	<p>Year 2:</p> <ul style="list-style-type: none"> For Chinook and coho salmon, ASPA will conduct a risk assessment to evaluate whether or not releases might contribute to more than minimal proportions of hatchery fish on the spawning grounds. ASPA will provide a report. <p>Year 3:</p> <ul style="list-style-type: none"> ASPA will seek implementation of the plan and will provide a progress report. <p>Year 4:</p> <ul style="list-style-type: none"> ASPA will provide a progress report, identifying any concerns that the SG80 level of performance will not be met and, if so, potential plan revisions necessary to meet SG80. <p>Year 5:</p> <ul style="list-style-type: none"> If appropriate, ASPA will seek implementation of plan revisions devised in Year 4, or otherwise demonstrate that: <ol style="list-style-type: none"> It is highly likely that the enhancement activities do not have significant negative impacts on the local adaptation, reproductive performance and productivity or diversity of wild stocks. Sufficient relevant information is available on the contribution of enhanced Chinook, coho, pink and chum salmon to the harvest and wild escapement of the stocks. The assessment includes estimates of the impacts of enhancement activities on wild stock status, productivity and diversity. There is a tested and evaluated artificial production strategy, if necessary, with sufficient monitoring in place and evidence is available to reasonably ensure with high likelihood that strategy is effective in achieving the SG 80 outcome.
Client Update	<p>Kodiak Regional Aquaculture Association (KRAA) operates the Kitoi Bay and Pillar Creek Hatcheries in the Kodiak area. The Kitoi Bay Hatchery produces chum, pink, coho, and sockeye salmon to enhance the common property salmon fisheries. The Pillar Creek Hatchery produces sockeye salmon to enhance the common property fisheries as well as coho salmon, Chinook salmon, and rainbow trout to enhance sport fishing opportunities on the Kodiak road system. Both hatcheries have been found to be operating in accordance with Alaska policies and prescribed practices (Musslewhite 2011a, 2011b).</p> <p>All the chum salmon produced at the Kitoi Bay Hatchery are thermally marked by making use of the difference in temperature between the water sources used for incubation. None of the pink salmon are thermally marked. The difference in water temperature between incubation sources has diminished by the time the pink salmon embryos reach the critical marking stage and no funds are available for heating equipment. The Kitoi Bay Hatchery was recently remodeled and considerations were made for installing the equipment necessary for marking pink salmon (per comm. Tina Fairbanks, Executive Director KRAA). At this time there is no marking requirement for chum, pink or coho salmon at the Kitoi Bay Hatchery while there is a marking requirement for all sockeye salmon produced (Musslewhite 2011a, 2014 Annual Management Plan, Kitoi Bay Hatchery, Kodiak Regional Aquaculture Association, obtained from ADF&G, Juneau).</p> <p>No evaluation of straying of chum or pink salmon has been undertaken in the Kodiak area since the early 1980's. In addition, no sampling of the common property fisheries to determine the enhanced contribution is performed.</p>

Observations	<p>Acceptance of the request for increased chum salmon production at Kitoi Bay allows green egg take to increase from 28 to 36 million eggs in 2014 (ADF&G 2014). All chum salmon are reportedly marked. A new, apparently yet to be adopted PAR request (dated Oct 13, 2014) stipulates up to 4 million chum salmon fry to be released from a remote net pen site, which may enhance the probability of straying. Monitoring of strays would be conducted in two nearby areas. Chinook salmon are reportedly released for sport rather than commercial fisheries, whereas numerous coho salmon released from Kitoi Bay (~1.4 million) are largely for commercial purposes.</p> <p>No pink salmon have been marked even though more than 100 million pink salmon fry are released each year. Coho salmon (and Chinook salmon for sport) are not marked.</p> <p>It is noted that all hatchery sockeye salmon are now required to be otolith marked (ADF&G 2014).</p>
Conclusion	<p>Some progress has been made towards meeting this condition, in that all chum salmon are marked. However, while marking of pink salmon has been considered, a plan for marking them has not been developed. Also, other than a proposed action and study of a specific remote release of chum salmon, no monitoring of stray pink and chum salmon has been planned or performed. No monitoring of hatchery fish in mixed-stock fishery locations has been planned. Progress for Condition 5 is therefore 'behind target' at this year 1 audit.</p> <p>No additional milestones are considered necessary, but an action plan to mark hatchery pink salmon and to monitor relevant spawning grounds and fisheries for the contribution by hatchery fish (i.e., completion of the Year 1 milestone) is needed.</p> <p>It is noted that, in the event that a condition is not back 'on target' within 12 months of falling 'behind target', the MSC directs that the CAB shall consider progress to be inadequate and suspend or withdraw the certificate for the Kodiak UoC (MSC 2013a).</p>

Condition 6	
UoC	Chignik
PI	PI 1.1.2: Limit and target reference points or operational equivalents are appropriate for the wild production components of the stock
Score at Certification	60
Scoring Rationale	Coho salmon escapements to the Chignik lake system (the dominant coho salmon stock) are monitored via weir from the beginning of the run in early August through early September, which is prior to the mid-point of the run. Nevertheless, in recent years fishing has occurred daily during this period and quantitative reference points have not been developed for Chignik coho salmon, and so the fishery does not meet the SG80 level of performance for PI 1.1.2.
Condition	<p>By the end of the fourth year of certification, the SG 80 scoring requirements must be met in full. This will be achieved when it has been demonstrated that:</p> <ul style="list-style-type: none"> • (PI 1.1.2, SG80a) Reference points are appropriate for the wild stock and can be estimated, • (PI 1.1.2, SG80b) The limit reference point (e.g., lower end of the Sustainable Escapement Goal or equivalent) is set above the level at which there is an appreciable risk of impairing reproductive capacity, • (PI 1.1.2, SG80c) The target reference point is such that the stock is maintained at a level consistent with BMSY or some measure or surrogate with similar intent or outcome and, • (PI 1.1.2, SG80e) Where the wild stock is a management unit comprised of more than one subcomponent, it is highly likely that the target and limit reference points are consistent with maintaining the inherent diversity and reproductive capacity of each stock subcomponent.
Client Action Plan	<p>The annual harvest of coho salmon may in some years not qualify under MSC standards as an IPI species and a target reference point may be needed to show that the fishery is managed to meet MSC standards. This condition will be met with the following actions:</p> <p>Year 1:</p> <ul style="list-style-type: none"> • ASPA will consult with ADF&G and prepare a memo describing the approach for managing local Chignik coho salmon to ensure that the spawning escapement is adequate. <p>Year 2:</p> <ul style="list-style-type: none"> • ASPA will review and provide an initial report on existing information available from ADF&G on the harvest and escapement of local Chignik coho during the fishing period. <p>Year 3:</p> <ul style="list-style-type: none"> • ASPA will provide an updated report if new information becomes available. <p>Year 4:</p> <ul style="list-style-type: none"> • ASPA will provide a final report demonstrating that ADF&G management

	<p>strategies achieve the SG80 scoring requirements:</p> <ul style="list-style-type: none"> a) Reference points are appropriate for the wild stock and can be estimated. b) The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity. c) The target reference point is such that the stock is maintained at a level consistent with BMSY or some measure or surrogate with similar intent or outcome. d) Where the wild stock is a management unit comprised of more than one subcomponent, it is highly likely that the target and limit reference points are consistent with maintaining the inherent diversity and reproductive capacity of each stock subcomponent.
Client Update	<p>Escapements goals are established for Chinook salmon (BEG), sockeye salmon (SEG), pink salmon (SEG) and chum salmon (SEG) in the Chignik Management Area (Figure 1). All of these goals are based on counts past a weir on the Chignik River with the pink and chum salmon goals also incorporating peak aerial survey observations for neighboring streams (Sagalkin <i>et al.</i> 2013).</p> <p>At this time there are no plans for establishing an escapement goal for coho salmon to the Chignik River. The Chignik Weir is typically operated from approximately late May through the first few days of September with the peak coho salmon escapement occurring after the weir is pulled. Harvests of coho salmon are generally incidental to the sockeye salmon fishery. An examination of the harvest by year of the five species of salmon caught in the Chignik Bay District and Outer Chignik Bay Section illustrate that the coho salmon harvest is a small component of the total salmon harvest and strongly suggests it is an IPI species (Inseparable or Practically Inseparable). Coho salmon comprised less than 6% of the total salmon harvest for all years between 1995 and 2014 and contributed less than 15% of the total late season salmon harvest for 14 out of the last 15 seasons (Table 1).</p> <p>The ADF&G obtained a grant through the Alaska Sustainable Salmon Fund (AKSSF) to examine the late season escapement of salmon after the weir was pulled for the 2012 through 2016 seasons. The project used DIDSON sonar for counting and gillnetting for species apportionment. The project has been run into late September the past three years. Less than 15% of the coho salmon escapement was enumerated by the weir during the evaluation to date (Table 2). The exploitation rate for coho salmon was estimated for 2012-2014 and found to be less than 0.16 for all three seasons (Table 2). At this time there is no funding commitment for operating the DIDSON project after the 2016 season.</p> <p>A modeling study has been undertaken by Timothy Walsworth and Daniel Schindler, School of Aquatic and Fishery Sciences, University of Washington, where historic coho salmon escapements to the Chignik River were estimated. A manuscript describing the work is presently in journal review. The estimates were made using a Bayesian hierarchical model which made use of run timing information obtained by weir counts for seasons that ran into late September (1922-1936) and the recent DIDSON estimates, to estimate the escapement for years when weir counting was stopped in early September (1995-2011). While it appears that estimates of total escapement can be made using this method, these estimates were based on very little information and an evaluation of the methodology needs to be undertaken to determine if it would be useful for use in setting escapement goals.</p>

Figure 1. Chignik Management Area illustrating district and section boundaries, and statistical areas.

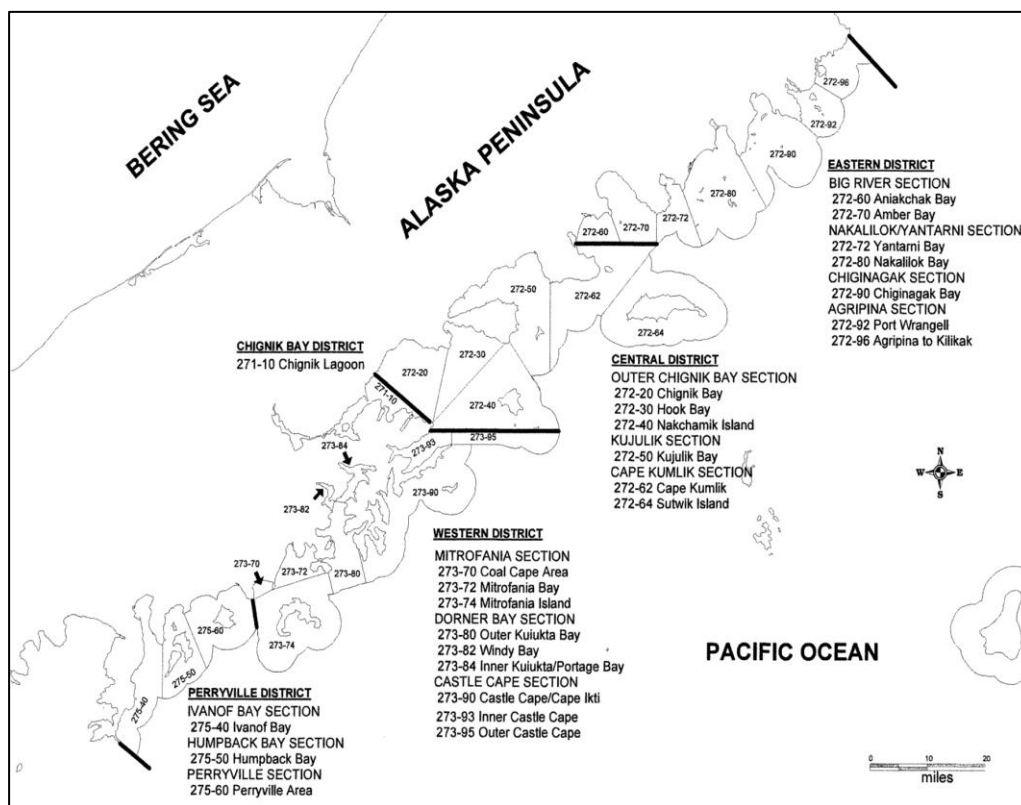


Table 1. Salmon harvest by year and the percent of that harvest made up of coho salmon for the complete season (1a) and for the later part of the salmon season (1b). Salmon harvests are from the Chignik Bay District and Outer Chignik Bay Section (Figure 1; Statistical areas 271-10, 272-20, 272-30, and 272 40). These harvests do not include the entire Chignik Management Area, but they do largely reflect harvests of sockeye, Chinook, and coho salmon returning to the Chignik Lake system.

1a	Harvest for the Complete season					
Year	Coho	Chinook	Sockeye	Pink	Chum	% Coho
2000	43,428	811	1,441,425	188,585	51,159	2.6%
2001	24,818	1,366	1,240,560	399,691	52,216	1.5%
2002	11,802	896	1,009,285	20,216	11,550	1.1%
2003	44,659	2,611	1,044,707	128,211	20,362	3.7%
2004	37	2,337	697,043	2,380	505	0.0%
2005	1,073	2,765	1,103,952	150,167	6,512	0.1%
2006	8,517	2,055	803,051	105,823	9,945	0.9%
2007	17,037	777	588,435	414,209	13,732	1.7%
2008	52,674	323	573,006	469,759	37,009	4.9%
2009	13,601	729	939,507	184,222	43,763	1.2%
2010	38,356	2,945	971,235	139,177	155,565	3.0%
2011	11,404	2,577	1,897,189	158,921	75,982	0.5%
2012	8,908	1,154	1,313,092	45,744	44,320	0.6%
2013	8,382	1,071	1,775,317	221,562	33,239	0.4%
2014	17,205	2,008	246,707	65,719	15,528	5.2%

1b	Harvest between August 1 the end of the season					
Year	Coho	Chinook	Sockeye	Pink	Chum	% Coho
2000	34,222	138	168,140	116,892	21,564	11.2%
2001	19,844	137	476,990	240,149	18,183	2.7%
2002	11,283	44	119,611	16,639	6,708	7.9%
2003	41,822	205	196,970	61,739	11,261	15.5%
2004	4	44	5,284	708	90	0.1%
2005	133	6	5,263	18,355	592	0.5%
2006	7,529	16	72,121	80,476	1,839	4.9%
2007	14,496	25	95,938	273,166	6,582	3.9%
2008	50,970	63	167,307	302,723	16,731	10.5%
2009	9,985	38	135,959	91,314	18,662	4.1%
2010	30,854	95	163,700	72,982	58,405	10.5%
2011	6,987	268	51,650	91,330	20,883	4.3%
2012	7,803	39	96,994	20,214	7,687	6.2%
2013	4,399	16	121,896	124,339	8,087	1.7%
2014	11,469	511	55,132	27,476	4,652	13.1%

Table 2. Number of coho salmon enumerated past the Chignik weir during weir operations and past the DIDSON sonar after the weir was discontinued for the season. The coho salmon harvest is the season total from the Chignik Bay District and Outer Chignik Bay Section (Figure 1; Statistical areas 271-10, 272-20, 272-30, and 272 40).

Year	Escapement Counts			% counted by weir	Harvest	Exploitation rate
	Weir	DIDSON	Total			
2012	2,663	66,812	69,475	3.8%	8,908	0.128
2013	16,783	106,249	123,032	13.6%	8,382	0.068
2014	15,572	93,383	108,955	14.3%	17,205	0.158

Final days of DIDSON counting: 2012: September 28, 2013: September 27, 2014: September 26

Observations

Coho salmon in the Chignik Management Area are largely captured incidentally to sockeye salmon. This year, the client provided important information showing that the harvest rate on Chignik Lake system coho salmon during implementation of the commercial fishery is currently low: 12.8% in 2012, 6.8% in 2013, and 15.8% in 2014. Also, the harvest rate on the entire Chignik Lake system coho salmon population is somewhat lower than estimated here because some coho salmon continue to enter the watershed after fishing ends and after the Didson sonar counts that ended in late September.

During the past four years, harvested coho salmon represented 3.1% of the total Chignik salmon catch by weight. This percentage exceeds the 2% threshold for an exemption to the MSC's Inseparable/Practically Inseparable (IPI) requirements, but is within the 2% - 15% range over which IPI requirements can be applied, as confirmed through an accepted variation request (VR) submitted to the MSC in March 2013

	<p>(http://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/pacific/alaska-salmon/new-client-2nd-reassessment-downloads). It also falls below the 5% IPI threshold now adopted by the MSC for the SamFAM in the new Certification Requirements (MSC 2014). Given the new information on harvest rate and run timing, the assessment team is now satisfied that the IPI requirements should be applied to the Chignik coho salmon stock. An assessment of the Chignik coho salmon performance against PI 2.1.1 - 2.1.3 and Annex CH4.2 was therefore undertaken, the results of which are provided in the section on IPI species, below. This analysis showed that Chignik coho salmon scores 80 for PIs 2.1.1, 2.1.2 and 2.1.3, and that it meets the requirements of Annex CH4.2; hence, Chignik coho salmon is considered to meet the IPI requirements.</p>
Conclusion	<p>The assessment team recognizes that the current harvest rate on Chignik Lake system coho salmon is very low and does not warrant a conservation concern, especially given that the habitat is relatively pristine and there is no hatchery production. The information on run timing relative to the end of the fishing season in recent years was also valuable.</p> <p>An analysis of Chignik coho salmon performance against the IPI requirements showed that this species meets the SG80 requirements of PI 2.1.1 - 2.1.3, and the Annex CH4.2 (see analysis in section on IPI species, below).</p> <p>Condition 6 is therefore closed at this Year 1 audit, and Chignik coho salmon are eligible to enter further certified chains of custody.</p>

Any complaints against the certified operation; recorded, reviewed and action taken

To the audit team's knowledge, no complaints against the certified operation have been recorded, reviewed or action taken.

Any relevant changes to legislation or regulation

No relevant changes to legislation or regulation occurred in the last year.

Any relevant changes to management regime

The Commissioner for ADF&G was Cora Campbell from December 2010 to November 2014. Commissioner Campbell was replaced by Acting Commissioner Sam Cotten in December 2014, just prior to the site visit for this Year 1 audit of the Alaska Salmon Fishery. It is not known at this time if there will be any change in focus for ADF&G as a result of this change in personnel, but it is not thought likely and the role of the Office of the Commissioner remains the same.

Inseparable/Practically Inseparable (IPI) considerations

With respect to inseparable/practically inseparable (IPI) stocks and annual surveillance audits, the MSC CR (MSC 2013a) specifies the following requirements:

CH5.1 If the fishery involves IPI stocks, the CAB shall review and document the continuing performance of IPI stock(s) eligible to enter further certified chains of custody against the requirements of Annex CH 4.2.1 to 4.2.4.

CH4.2.1 The IPI stock(s) are likely to be within biologically based limits, or if outside the limits, there are measures in place that are expected to make sure that all fishing-related mortality does not hinder the recovery and rebuilding of the depleted IPI stock(s).

CH4.2.2 If the stock status is poorly known, there are measures or practices in place that are expected to keep the IPI retained stock(s) within biologically based limits, or to prevent all fishing activity from hindering recovery.

CH4.2.3 The measures are considered likely to work, based on plausible argument (e.g. general experience, theory or comparison with similar fisheries/species).

In carrying out these requirements, a review of the status of the IPI stocks identified in the Alaska Salmon Fishery Public Certification Report (Blyth-Skyrme *et al.* 2013) was carried out at this 1st annual audit. The Table below replicates Table 6 in that report, with updated figures and analysis.

	Target Species				
Unit of Certification	Sockeye	Chinook	Coho	Pink	Chum
1: Southeast	Non-local IPI	Non-local IPI	Non-local IPI	Non-local IPI	Non-local IPI

There are no non-target salmon species to be considered against IPI category ‘a’ criteria in the SEAK UoC. However, sockeye, Chinook, coho, chum and pink salmon harvested in the SEAK UoCs may originate from transboundary and non-Alaskan rivers. (PSC 2012c). These fish are considered against IPI category ‘b’ criteria because they are from non-local stocks of a species targeted in the fishery.

In the years 2010 – 2014, 260,000, 344,000, 278,000, 200,000 and 423,000 Chinook salmon were taken in the Southeast Region fishery, from a total salmon harvest of 36.7 million, 73.7 million, 40.0 million, 104.1 million and 49.2 million, respectively; the Chinook salmon harvest therefore comprised an average of 0.5% of the total salmon harvest from these UoCs (data from: <http://www.adfg.alaska.gov/index.cfm?adfg=CommercialByFisherySalmon.exvesselquery>).

Approximately 20% of the SEAK troll catch of Chinook salmon is comprised of Alaska hatchery fish, which are not included in the information on USA-Canada Treaty catch. In addition, the origin of approximately 17% of the Chinook salmon taken in the SEAK fishery is not accounted for or ‘explained’ by the existing model. These unexplained fish are considered likely to be comprised mostly of wild stocks from the SEAK region that are either not included in the present 30 model stocks (Situk, Alek, Chilkat, Taku and Stikine) or various other local stocks which are not enumerated (PSC 2014a).

Of the remaining 63% (approximately), an average of approximately 96.3% of the Chinook salmon taken in the Southeast Region fishery originated outside of Alaska. As such, non-local Chinook salmon made up an average of less than 0.5% the total all species catch within the Southeast Region. Major components of the harvest were derived from the North/Central British Columbia (10.9%), Columbia Upriver Bright (22.4%), West Coast Vancouver Island Hatchery (13.2%), Oregon Coastal North Migrating (12.7%), Fraser Early (5.5%), Mid-Columbia Brights (8.2%), Columbia upriver summer (6.5%) and Upper Strait of Georgia (5.7%) runs (PSC 2014a). Chinook salmon from a number of other non-local runs may also be taken in the fishery, but no run made up an average of more than 5% of the catch annually.

It is considered that the majority of the Chinook salmon taken in the SEAK fishery are derived from healthy runs. Although comprising a small percentage of the SEAK Chinook salmon harvest (1985 - 2011 average = 3.2%; 2011: 1.5%), the status of wild West Coast Vancouver Island stock is considered to be poor (DFO 2012). A review of WCVI escapement estimation and stock aggregation procedures was conducted in 2013 (DFO 2014), but new assessments of the WCVI runs have yet to be published following the 2013 review (as of January 2015). From 1995 to 2009, the average estimated annual fishing mortality in the Southeast Region fishery for this run was 18% (DFO 2012). In order to address conservation concerns in this and other runs, the renewal of the Pacific Salmon Treaty in 2009 resulted in agreement to reduce the total mortality of Chinook salmon by 15% in the Southeast Region fishery and by 30% in the Canadian West Coast of Vancouver Island fishery relative to Table 1 of the 1999 agreement (http://www.psc.org/about_treaty.htm).

ADF&G management reports show that the total take of Chinook salmon in SEAK is very close to the catch allowed under the Pacific Salmon Treaty (<http://www.adfg.alaska.gov/FedAidpdfs/FMR14-10.pdf>). PSC (2014, Appendix D1) provides harvest rate estimates for 30 monitored Chinook salmon stocks in the all-gear SEAK fishery. The highest harvest rate is for local Alaska Chinook salmon (avg. 34.5%, 1985-2011), followed by Upper Georgia Strait (19.6%), WCVI (16.9%), Oregon Coast North (15.9%), Columbia Upriver Summer (14.5%), Mid-Columbia Bright (13.5%), Columbia Upriver Bright (13.3%), Columbia North/Central BC (10.1%), and WA Coastal Hatchery (10.2%) Chinook salmon. Harvest rates on all other monitored Chinook salmon stocks are less than 10% and typically less than 5%.

Fish from four ESA-listed Chinook salmon runs are also harvested through Federally-issued incidental take permits in the Southeast Region fishery. The four runs are the Puget Sound, Upper Willamette, Lower Columbia River Bright and Snake River Fall Runs. In all cases, factors other than fishing are considered to be the major limiting factors for Chinook salmon populations in these four ESA-listed ESUs, and average catches of Chinook salmon in the Southeast Region fishery comprise a maximum of 18% of the total catches from any of these runs, and in most cases comprise much less (see table below). We note that in all cases, catches of ESA-listed runs in 2012 as a percentage of the total Southeast Alaska Chinook salmon catch were very similar to the average for the period 1985-2011. As shown in the table below, the highest average Alaskan exploitation rate on any of the ESA-listed stocks was 7.8% (Lewis River component of

Lower Columbia Bright). Spawning escapement goals have been achieved for most of the 25 Chinook Technical Committee-approved Chinook salmon stocks in all years (PSC 2014a).

ESU	Runs found in Southeast Alaska catches	% of Southeast Alaska all-gears Chinook catch, 2012	Mean % of Southeast Alaska all-gears Chinook catch, 1985 - 2011	Southeast Alaska catch of run as % of stock total catch	Southeast Alaska catch of run as % of stock total return
Puget Sound	Skagit Summer / Fall	0.02	0.09	3.63	1.02
	Stillaguamish Summer / Fall	0.08	0.06	17.36	6.54
	Puget Sound Natural	0.03	0.04	0.55	0.26
	Snohomish Summer / Fall	0.04	0.04	2.77	1.11
	Nooksack Fall	0.03	0.04	0.15	0.11
	Nooksack Spring	0.00	0.00	0.00	0.00
Upper Willamette	Willamette River Hatchery	2.56	2.21	11.73	5.08
Lower Columbia Bright	Fall Cowlitz	0.30	0.98	5.32	2.04
	Lewis River	0.93	0.81	18.03	7.80
	Spring Cowlitz	0.08	0.08	1.60	0.83
Snake River Fall	Snake River Fall	0.63	0.14	8.63	5.20

In the years 2010 - 2013, 703,300, 1,210,800, 926,800 and 902,500 sockeye salmon were taken in the SEAK fishery, from a total salmon harvest of 36.3 million, 73.2 million, 36.7 million and 103.7 million fish in the respective years (calculation based on harvest figures from ADF&G [<http://www.adfg.alaska.gov/index.cfm?adfg=CommercialByFisherySalmon.exvesselquery>] minus figures from the Yakutat annual management report (Woods and Zeiser 2014). The sockeye salmon harvest therefore comprised an average of just under 1.3% of the total salmon harvest from the SEAK UoC.

Four transboundary sockeye salmon runs are identified as potential IPI runs in SEAK. These are fish from the Nass and Skeena rivers that are taken in SEAK District 104 and District 101 fisheries (PSC 2014b), the Stikine run that is taken in Districts 106 and 108, and the Taku River run that is taken in District 111 (PSC 2014c). Over the period 2010 – 2011, these runs have comprised an average of 16.8% of the total annual SEAK sockeye salmon harvest, but 0.3% of the total salmon harvest in SEAK. The last ten years of data (2002 – 2011) show that catches of Nass and Skeena rivers fish in these fisheries have consistently been below the annual allowable harvest (PSC 2014b), while U.S. catches of Stikine and Taku rivers fish have been around or sometimes over the TAC for the years 2007-2009 (PSC 2010, PSC 2013a, PSC 2014c). Escapement for the Stikine and Taku sockeye salmon have met or exceeded the goals in 8 of the last 9 years (Munro & Volk 2014). English *et al.* (2012) estimated exploitation rates (ER) in Alaska for sockeye salmon originating from key North Coast/Central Coast statistical areas for 1980-2008. Average ERs in Alaska fisheries were 24%, 9%, and 1% for sockeye salmon originating from BC areas 3, 4, and 5, respectively, during 2006-2008.

Relatively small quantities of coho salmon are also taken from transboundary Taku, Stikine, Nass and Skeena runs. The Pacific Salmon Treaty includes requirements for US managers to provide for upriver escapement of transboundary stocks, and escapement to the Taku is actively monitored by ADF&G; this was just missed in 2013 (68,118 fish estimated against an escapement goal of 70,000), but was met in each of the previous nine years (Munro & Volk 2014). ERs in Alaska fisheries were estimated to be 4%, 4%, 37%, 14%, 5%, 14%, 8%, 8%, 3%, and 3% for coho salmon originating from BC areas 2E, 2W, 3, 4, 5, 6, 7, 8, 9, and 10, respectively, during 2006-2010 (English *et al.* 2012).

ADF&G also manages its pink salmon fisheries to achieve spawning escapement of wild pink salmon. ERs in Alaska fisheries were estimated to be 9%, 9% and 8% for pink salmon originating from BC areas 3, 4, and 5, respectively during 2006-2010 (English *et al.* 2012).

Chum salmon return to rivers in British Columbia including the Nass, Skeena and Taku rivers. Few BC chum salmon are taken in Alaska fisheries relative to Alaska chum salmon, and the average exploitation rate by Alaska fishers for chum salmon from British Columbia north coast statistical areas 3 (including Portland Canal), 4 and 5 for the period 2006 - 2010 was 24%, 10% and 10% respectively. Annex IV of the Pacific Salmon Treaty states, “*With respect to the Portland Canal chum salmon fishery, neither Party shall conduct net fisheries in Alaskan Section 1A and Canadian sub-areas 3-15 and 3-16 nor conduct directed chum fisheries in Alaskan Section 1B north and east of Akeku Point or in Canadian sub-areas 3-11 and 3-13 unless agreed otherwise by the Parties.*” For this evaluation, Alaska catch of other British Columbia chum salmon stocks is considered to be negligible relative to the overall catch (English *et al.* 2012).

Overall, the total combined catch of non-local salmon in the SEAK UoC is approximately 1.0%, and therefore non-local sockeye, Chinook, coho, pink and chum salmon qualify for an exemption from IPI requirements under CR 27.4.10.2 (MSC 2013a).

Unit of Certification	Sockeye	Chinook	Coho	Pink	Chum
2: Yakutat	Non-local IPI	Non-local IPI	Non-local IPI		Non-target IPI

Chum salmon comprised a very minor component of the Yakutat harvest in the years 2010 – 2013. Of total salmon harvests of approximately 446,000, 501,000, 254,000 and 397,000 respectively, only 1,239, 900, 2,162 and 1,428 chum salmon were taken in the same years (Woods & Zeiser 2014). On average, chum salmon therefore makes up approximately 0.4% of the total salmon harvest in the Yakutat UoC.

As noted against the SEAK UoC, Chinook salmon harvested in the Southeast Region fishery (i.e., SEAK + Yakutat UoCs) may originate from rivers in British Columbia, Washington, Oregon and California (PSC 2012c). These fish are considered to be potential IPI because they are from non-local stocks of a species targeted in the fishery (i.e., IPI category ‘b’). More details on the range of runs encountered are provided in the SEAK section above, but it is noted that the non-local Chinook salmon harvest comprises an average of just 0.5% of the total salmon harvest from these UoCs.

The Alsek River terminates in Yakutat but is transboundary with Canada. Sockeye, Chinook and coho salmon from the Alsek River are taken in the Yakutat fishery. The average Chinook and coho salmon harvest over the years 2010-2013 have represented <1% of the total salmon harvest from the Yakutat UoC (Woods & Zeiser 2014), and these species are therefore exempt from the IPI requirements CR 27.4.10.2 (MSC 2013a).

The Alsek River sockeye salmon harvest has averaged 3.9% of the salmon harvest in the Yakutat UoC over the period 2010 - 2013 (Woods & Zeiser 2014), and therefore the Alsek River sockeye salmon run is not exempt from the IPI requirements. Sockeye salmon comfortably exceeded the upriver Klukshu River Weir escapement goal from 2010 – 2012, but escapement was under the goal in 2013; this was consistent with the pre-run forecast, and management measures were introduced to limit fishing effort on this stock, such that the 2013 catch was just 40% of the 2010 – 2012 average (Woods & Zeiser 2014).

Unit of Certification	Sockeye	Chinook	Coho	Pink	Chum
3: Prince William Sound		Non-target IPI	Non-target IPI		

The PWS UoC has been withdrawn from assessment at this first annual surveillance audit. For more information see: <http://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/pacific/alaska-salmon/reassessment-prince-william-sound>.

Unit of Certification	Sockeye	Chinook	Coho	Pink	Chum
4: Copper/Bering Districts				Non-target IPI	Non-target IPI

Pink and chum salmon are considered to be IPI species in the Copper/Bering Districts Unit of Certification. The pink salmon harvest amounted to 21,167, 24,058, 6,193, 62,855 and 11,618 animals in the years 2010-2014, accounting for an average of 1.3% of the total salmon harvest annually during that time period. Chum salmon harvests amounted to 15,694, 11,475, 29,219, 11,639 and 42,633 fish annually in the same four-year period, accounting for an average of 1.1% of the total salmon harvest annually (Data from Prince William Sound management area season summaries, available here:

<http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareapws.salmon#harvest>).

The total combined catch of non-target pink and chum salmon in the Copper/Bering Districts UoC is approximately 2.4%. It is considered that the relatively low overall catches, minimal targeting and relatively pristine habitat in the area mean that pink and chum salmon meet the 2% - 15 % IPI requirements in this area.

Unit of Certification	Sockeye	Chinook	Coho	Pink	Chum
5: Lower Cook Inlet		Non-target IPI	Non-target IPI		

Chinook and coho salmon are incidental catches in the LCI UoC. Catches of Chinook salmon in the years 2010 – 2014 were 39, 136, 133, 391 and 368 fish respectively, while catches of coho salmon were 760, 152, 182, 5,571 and 791 fish in the same years (Data from Lower Cook Inlet management area season summaries, available here: <http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyarealci.salmon#harvest>). The total annual harvest of all salmon in LCI during this same five-year period was approximately 467,000, 815,000, 499,000, 2.465 million and 651,000 fish respectively. Both species together constitute 0.15 % of the salmon catch with time UoC. As such, Chinook and coho salmon qualify for an exemption from IPI requirements under CR 27.4.10.2 (MSC 2013a).

Unit of Certification	Sockeye	Chinook	Coho	Pink	Chum
6: Upper Cook Inlet					

There are considered to be no IPI salmon species in the Upper Cook Inlet UoC.

Unit of Certification	Sockeye	Chinook	Coho	Pink	Chum
7: Bristol Bay			Non-target IPI		

Coho salmon is considered to be an IPI species in the Bristol Bay UoC. 109,000, 13,000, 116,000, 135,000 and 266,000 coho salmon were taken annually in the years 2010 – 2014, out of totals of 31.5 million, 22.9 million, 22.6 million, 16.4 million and 30.9 million fish in the same years (<http://www.adfg.alaska.gov/index.cfm?adfg=CommercialByFisherySalmon.exvesselquery>). These coho salmon catches amount to an average of 0.5% of the total salmon catch in the Bristol Bay UoC. As such, coho salmon qualifies for an exemption from IPI requirements under CR 27.4.10.2 (MSC 2013a).

Unit of Certification	Sockeye	Chinook	Coho	Pink	Chum
8: Yukon River	Non-target IPI			Non-target IPI	

Sockeye and pink salmon harvest in the Yukon UoC is incidental to harvest of Chinook, coho and chum salmon. From the years 2010 – 2014, a catch of sockeye salmon was recorded by ADF&G in only one year (<1000 fish in 2012), while the only take of pink salmon reported was of 55,000 animals in 2014 (<http://www.adfg.alaska.gov/index.cfm?adfg=CommercialByFisherySalmon.exvesselquery>).

The total combined catch of non-target sockeye and pink salmon in the Yukon UoC for the period 2010 – 2014 is 1.8 %, and these species therefore qualify for an exemption from IPI requirements under CR 27.4.10.2 (MSC 2013a).

Unit of Certification	Sockeye	Chinook	Coho	Pink	Chum
9: Kuskokwim				Non-target IPI	

Pink salmon is harvested incidentally to the other four Pacific salmon species in the Kuskokwim UoC. No pink salmon were recorded in 2012 and 2013, but a figure of <1000 was reported in 2010, 2011 and 2014 (<http://www.adfg.alaska.gov/index.cfm?adfg=CommercialByFisherySalmon.exvesselquery>). The total number of salmon taken in each year in the same period was 529,000, 455,000, 394,000, 334,000 and 344,000 in the period 2010 – 2014. Overall, pink salmon accounted for an average of 0.1 % of the harvest, and this species therefore qualifies for an exemption from IPI requirements under CR 27.4.10.2 (MSC 2013a).

Unit of Certification	Sockeye	Chinook	Coho	Pink	Chum
10: Kotzebue	Non-target	Non-target	Non-target	Non-target	

	IPI	IPI	IPI	IPI	
The only target species in the Kotzebue UoC is chum salmon, and ADF&G data show that no catches of the sockeye, Chinook, coho and pink salmon were taken in the years 2010 – 2014 (http://www.adfg.alaska.gov/index.cfm?adfg=CommercialByFisherySalmon.exvesselquery). Sockeye, Chinook, coho and pink salmon therefore qualify for an exemption from IPI requirements under CR 27.4.10.2 (MSC 2013a).					
Unit of Certification	Sockeye	Chinook	Coho	Pink	Chum
11: Norton Sound					
There are considered to be no IPI salmon species in the Norton Sound UoC.					
Unit of Certification	Sockeye	Chinook	Coho	Pink	Chum
12: Kodiak					
There are considered to be no IPI salmon species in the Kodiak UoC.					
Unit of Certification	Sockeye	Chinook	Coho	Pink	Chum
13: Chignik			Non-target IPI		
Chignik coho salmon has made up just 3.1% of the total Chignik salmon harvest by weight in the last four years (calculation based on harvest figures from ADF&G [http://www.adfg.alaska.gov/index.cfm?adfg=CommercialByFisherySalmon.exvesselquery]). However, at reassessment, there were not considered to be any IPI salmon species in the Chignik UoC. Now, at this Year 1 audit, and following the receipt of new information on exploitation rate and run timing for Chignik coho salmon, the CAB has determined that it is appropriate to move this species in to the IPI category. This requires that Chignik coho salmon is assessed against PI 2.1.1 - PI 2.1.3, and Annex CH4.2 (the latter in order to enter further certified chains of custody).					
With respect to its status as a 'main' or 'minor' retained species, at 3.1% of the harvest within the Chignik UoC, coho salmon is considered a 'minor' retained species.					
For PI 2.1.1, as a minor species, Chignik coho salmon meets the SG80 level of performance by default for SIa, SIc and SIId. Chignik coho salmon does not meet the SG100 level of performance for any SI as reference points are not defined for this species. Chignik coho salmon therefore scores 80 for PI 2.1.1.					
For PI 2.1.2, it is not considered necessary for a partial strategy to be in place to manage Chignik coho salmon, given the late run timing relative to the fishery. This run timing means that, for the last three years, an average of 89.4% or more of the coho salmon running in to the Chignik lagoon escapes the fishery because effort has been low and the fishery typically ends well before the end of the coho salmon run (see 'Client Update' for Condition 6, above.) Chignik coho salmon therefore scores 80 for PI 2.1.2, but cannot score higher as there is not a strategy in place to manage retained species.					
For PI 2.1.3, Chignik coho salmon meets the SG80 level of performance for SIa, SIb and SIc because quantitative information is available on the amount of coho salmon taken in the Chignik UoC, this information is sufficient to estimate outcome status (i.e., to recognize that the fishery poses no risk to the ongoing status of Chignik coho salmon) and to support a partial strategy if one was needed. Chignik coho salmon also meets the SG80 level of performance for SIId, because sufficient data continue to be collected (i.e., on catches in the fishery and early-season escapement) to detect any increase in risk level. Chignik coho salmon therefore scores 80 for PI 2.1.3.					
Chignik coho salmon also meets the requirements of Annex CH4.2 because it is likely to be within biologically based limits, based on the low exploitation rate and run timing relative to the season-end of the fishery, and especially given that the habitat is relatively pristine and there is no hatchery production.					
Overall, therefore, Chignik coho salmon meets the MSC's 2% - 15% IPI species requirements, and is eligible to enter further certified chains of custody.					
Unit of Certification	Sockeye	Chinook	Coho	Pink	Chum
14: Peninsula / Aleutian Islands		Non-target IPI			
Chinook salmon is harvested incidentally to other salmon species in the Alaska Peninsula and Aleutian Islands UoC, with a total of 11,000, 10,000, 9,000, 7,000 and 9,000 fish reported for the years 2010 – 2014 (http://www.adfg.alaska.gov/index.cfm?adfg=CommercialByFisherySalmon.exvesselquery). The total Peninsula / Aleutian Islands salmon harvest for the same years was reported to be 5.7 million, 10.0 million,					

4.4 million, 12.1 million and 5.2 million fish, such that Chinook salmon accounted for an average of 0.1% of the annual salmon harvest. This species therefore qualifies for an exemption from IPI requirements under CR 27.4.10.2 (MSC 2013a).

In summary, and based on the review and analysis of information as provided in the table above, the only material changes to the status of any IPI species or runs since the Alaska salmon fishery was recertified in 2013 is that Chignik coho salmon is now considered to be a non-target IPI species, and is eligible to enter further certified chains of custody. Information on IPI species will be reviewed, annually, during the course of the certification.

The assessment status of the Prince William Sound Unit of Certification (PWS UoC)

The Prince William Sound (PWS) Unit of Certification (UoC) was not certified in November 2013 with the other 13 Alaska Salmon Fishery UoCs, and has remained 'in assessment', pending further analysis of:

- 1) An ADF&G multi-year study relating to hatchery wild salmon stock interactions and how outcomes might influence future management practices; and,
- 2) Evidence relating to hatchery releases on the productivity of PWS herring.

A variation request was then submitted in April 2014, to extend the 18 month period within which the Public Comment Draft Report for the PWS UoC should be published since the last site visit, which occurred in October 2012. 2014. This variation request was accepted, and a 12 month period from the site visit of this Year 1 audit was set for the production of the report, or for the PWS UoC to be withdrawn from the assessment process.

At this first audit, and following discussion with ADF&G representatives and the client, it was determined by the assessment team that, since the rest of the Alaska salmon fishery was certified in 2013, no new information had become available that would support the progression of the PWS UoC through the assessment process. In particular, the findings of the ongoing ADF&G multi-year study will not be available for some time. As such, and given the requirement to produce a Public Comment Draft Report within the next 12 months, it was determined that the PWS UoC would be withdrawn from assessment. This decision does not preclude the PWS UoC from re-entering the MSC assessment process at some point in the future (MSC Certification Requirements, Version 2, Section 7.21).

Overall Conclusions

There were six Conditions of Certification placed on the 13 certified UoCs of the Alaska salmon fishery following the 2013 reassessment.

Of these conditions, one (#6, on the Chignik UoC) is closed, two (#2 on the SEAK UoC and #4 on the Copper/Bering UoC) are 'on target', and three (#1 and #3 on the SEAK UoC, and #5 on the Kodiak UoC) are 'behind target' (accepting that Condition 3 had two milestones at Year 1, and the second one was considered to be 'on target' at this Year 1 audit).

Overall, the assessment team considers that progress is mixed although generally encouraging. There is clearly still some work to do to meet the Year 1 milestones for some conditions, as well as to meet the upcoming Year 2 milestones, but the Client has contracted an expert scientist to provide support, and is committed to maintaining the certification – this commitment is welcomed by the assessment team.

With respect to conditions that are behind target, no additional milestones or corrective actions have been set at this Year 1 audit. However, it is noted that, in the event that a condition is not back 'on target' within 12 months of falling 'behind target', the MSC directs that the CAB shall consider progress to be

inadequate and suspend or withdraw the certificate for relevant UoCs (MSC 2013a).

At this Year 1 audit, it is confirmed that no destructive fishing practices or controversial unilateral exemptions to an international agreement have been introduced. No changes were made to the status of any existing IPI stocks were noted at this audit, but Chignik coho salmon was added to the list of non-target IPI species.

The Prince William Sound UoC was withdrawn from the assessment process at this Year 1 audit (see section above). There is nothing to preclude the PWS UoC from re-entering the MSC assessment process at some point in future.

DRAFT

Appendix 1: Site visit notification

Intertek Fisheries Certification (IFC)

10A Victory Park
Victory Road
Derby
DE24 8ZF
UKwww.intertek.com/food/msc-certification

Marine Stewardship Council (MSC) Fishery Certification Assessment
Alaska Salmon Fisheries
Certification Body: Intertek Fisheries Certification

Annual Surveillance Audit and Further Information Gathering in Relation to the On-going Assessment of the Prince William Sound Unit of Certification

Following certification of this fishery, we are now continuing the process of annual surveillance audits of the fishery. These audits have two principal functions:

1. To review any changes in the management of the fishery, including regulations, key management or scientific staff, or stock evaluation
2. To evaluate the progress of the fishery against any Conditions of Certification raised during the Full Assessment

We are also using the annual audit site visit as an opportunity to gather any new relevant information about the Prince William Sound (PWS) unit of certification that remains in assessment.

During the audit, or at separate meetings, we shall be speaking with representatives of the fishery and fishery management organisations. We expect to carry out meetings between 3rd and 5th December 2014.

Meetings will be held in Seattle and attended by Audit Team members:

Rob Blyth-Skyrme	Coordinator / L/A
Greg Ruggerone	Specialist Team Member
Jim Seeb	Specialist Team Member

All of these team members were on the original assessment team for the re-certification. Their CVs can be found on the MSC website at <http://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/pacific/alaska-salmon/new-client-2nd-reassessment-downloads>.

Should you have any information on this fishery with respect to the annual audit or, in relation to the on-going assessment of PWS, that you feel should be considered, please advise us. We may be available to meet with stakeholders as appropriate. If you would like to arrange a meeting, please advise us of:

- a) your name and contact details
- b) your association with the fishery
- c) the issues you would like to discuss (in order for us to arrange appropriate representation)
- d) where and when you would like to meet

Lead Assessor Rob Blyth-Skyrme
E-mail: rob@ichthysmarine.com
4th November 2014

Appendix 2: Determination of surveillance level

A surveillance audit may be conducted as either an “on-site” or “offsite audit”. This is determined by using criteria set out by the MSC:

Criteria	Surveillance Score	Alaska Salmon Fishery
1. Default Assessment Tree		
Yes	0	0
No	2	
2. Number of Conditions		
Zero Conditions	0	
1-5 Conditions	1	1
>5 Conditions	2	
3. Principle Level Scores		
≥ 85	0	
<85	2	2
4. Conditions on outcome PIs?		
Yes	2	2
No	0	
Total		5

The score for the fishery is used to determine the surveillance level appropriate to the fishery using the table below:

Surveillance score	Surveillance level		Years after certification or re-certification			
			Year 1	Year 2	Year 3	Year 4
2 or more	Normal surveillance		On-site surveillance audit	On-site surveillance audit	On-site surveillance audit	On-site surveillance audit & recertification visit
1	Remote surveillance	Option 1	Off-site surveillance audit	On-site surveillance audit	Off-site surveillance audit	On-site surveillance audit & recertification visit
		Option 2	On-site surveillance audit	Off-site surveillance audit	On-site surveillance audit	
0	Reduced surveillance		Review new information	On-site surveillance audit	Review new information	On-site surveillance audit & recertification visit

The Alaska salmon fishery scores 5 and so requires a normal on-site surveillance audit in 2015.