

Pacific Integrated Commercial Fisheries Initiative: Okanagan Nation Alliance

Pilot Demo Fisheries 2010-2011



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Disclaimer: Okanagan Nation Alliance Fisheries Department reports frequently contain preliminary data, and conclusions based on these may be subject to change. Reports may be cited in publications but their manuscript status (MS) must be noted.

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EXECUTIVE SUMMARY

This report provides a summary of Okanagan Nation Alliance (ONA) pilot demo fisheries conducted in 2010. The 2010 field season represented the 3rd consecutive year of operation for this experimental program. When the Pilot Demo Fishery opened in 2010 (9 August to 8 September), site monitors also interviewed fishery participants to keep track of the number of fish that were captured. Data collected by the monitors were turned in on a weekly basis to the ONA Fisheries office where data were checked and entered into a database. This information was then used to generate estimates of catch for all species of salmon (and exotic species) by ONA fishers. It is estimated that ONA members caught 18,069 sockeye (17,002 communal (94%), 1,067 demo (6%)) in 2010. A summary of catch and effort, by ONA fishery is summarized in the following table.

Table 1: Summary of catch and effort, by ONA Fishery

ONA Fishery	Catch	Effort (hrs)	Period
OK Falls gill net communal	80	10	9-21 July
OK Falls angling communal	12,350*	3,660	7 July to 24 September
Osoyoos Lake seine communal	291	40	2-5 August
Osoyoos Lake gill net communal	4,281	1080	15 Jul to 31 August
Total communal	17,002		
Demo Osoyoos Lake seine	686	50	9-13 August
Demo Osoyoos Lake troll	62	12	25 August, 31 August, 2 September
Demo Okanagan Falls gill net	319	7	8 September
Total pilot demo	1,067		

The marketing campaign set forth for the 2010 Okanagan sockeye pilot demo fishery was one of determining market value, consumer interest and building relationships. This process was carried out by ONAFD members with a vision of ‘Lake-to-Plate’, local, wild, fresh sockeye salmon. Market value and consumer interest was determined through market research using telemarketing, emails, and product trials within the region. This campaign developed twenty repeat customers, and fifteen customers willing to buy, in 2011. From these communications and trials we were able to determine that fresh product was preferred to frozen, that ‘blush’ Okanagan Salmon were generally unheard of, and that eco-labeling may be beneficial in the marketing process.

Various product forms were delivered to customers throughout the Southern Okanagan region. Fresh sales of whole, round sockeye were sold direct to high end restaurants. Fresh-frozen sockeye packaged in kraft-wax paper were headed and gutted at Ocean Masters (Maple Ridge, BC) and Siska Plant (Siska, BC), flash-frozen at Ocean Masters, and temporarily stored at Versa Cold Storage (-20°C, Westminster/Vancouver), before return shipping for final distribution to Kelowna, Penticton, and Osoyoos buyers. Market trials of Indian Candy Sockeye were processed at Ocean Masters. One hundred percent product traceability and temperature regulation from lake-to-plate was attained due to small lot sizes and batch processing techniques

used in 2010. Nearly half of the product was provided as samplers for market penetration, and the balance accounted in gross sales of over \$3,000 (2010).

It has been such a joy to promote and market Okanagan sockeye salmon to the surrounding Okanagan community, and educate the public about the eco-friendly salmon conservation initiatives that the ONA support. We discovered that chefs & customers in the high-end restaurants & resorts, grocery store retail managers, staff at local specialty food businesses, and owners & customers at the Okanagan winery bistros were pleasantly surprised to hear that the Okanagan has salmon in our own backyard! Customers & clients had the unique opportunity to taste fresh, frozen, and hot smoked Okanagan sockeye salmon in a variety of these settings, and told us wonderful comments about Okanagan sockeye salmon.

For the first time in many years, the Okanagan salmon fish stock counts reached up to 300,000 in the year 2010! The commitment of the ONA, Fisheries and Oceans Canada, and other groups to rebuild the sockeye, has been integral to this success. Furthermore, it was the combination of the visionary and creative goals of the ONA marketing team; with the mixture of a variety of marketing techniques & strategies; plus the intertwining of Okanagan Nation beliefs, traditional trade practices, and legends passed down; that contributed to the success of the pilot demo 2010 Okanagan Sockeye Fishery.

We discovered that in just seven short months, our ONA goals could be accomplished. In fact, we were happily surprised that this pilot demo 2010 Okanagan Sockeye Fishery became “larger than ourselves” and that people hearing about the initiative became enthusiastic about it! The more and more that the ONA team established friendly relationships in the community with: our eight member communities of the Okanagan Nation & the executive chief council; chefs at high end restaurants, winery bistros, & resorts; specialty food managers; retail grocery store managers; collaborators and funders; the more enthusiasm, creative ideas, wisdom, and future vision we obtained. The ONA has been making a difference in the important areas of what our vision statement represents: Tradition, Fish, and Water, for our people yesterday, today, and tomorrow.

BACKGROUND/OVERVIEW

PICFI Backgrounder

The Pacific Integrated Commercial Fisheries Initiative (PICFI) is a Canadian Federal Government run program directed at increasing First Nations participation in commercial fisheries within the Pacific region of Canada. This initiative secures \$175 million to be distributed over a span of 5 years to First Nations groups volunteering to become part of the program. Change was needed to develop a program for First Nations which revolved around the achievement of a sustainable fishery, legislated by a single set of regulations which worked to improve economic performance and relationships. Based on these suggestions the PICFI program was developed and put into place. The objectives of this program are to develop new seafood traceability programs and methods as well as to support enhanced fisheries monitoring, catch reporting and enforcement programs which are intended to be phased in over the next several years.

The ONA piloted its first demo fishery in 2008 by testing new harvest methods in the North Basin of Osoyoos Lake. During the 2008 season, harvest was attempted periodically between July and October. Fish were caught using both seine and gill netting methods and samples of these fish were deemed in good to excellent condition by the Siska Traditions Society. In 2009 another Demo Fishery was launched in Osoyoos Lake, but the harvest lasted only 4 days in early August and relied on two variations of seine netting. This report is a summary of lessons learned, and recommendations on future demonstration fishery projects in Osoyoos Lake.

ONA Pilot Demonstration Fishery Principles

The mission statement of the ONAFD is the following:

To conserve, protect, restore and enhance indigenous fisheries and aquatic resources within Okanagan territory.

The demonstration fishery marketing and sales was completed with the following overriding principles:

1. Fisheries will only be conducted with the support of the ONA Chiefs Executive Council (Support Letter already submitted).
2. Harvesting will only be conducted if; using the Wells Dam counts and FSC objectives for target stocks will not be constrained. (As of September, 2010, the Wells Counts were at about 291,000 (greater than the minimum escapement goal of 60,000), with a projection of 190,000 escapement.
3. Careful records of harvests will be recorded daily.

4. All harvests will be traceable from their point of harvest to their point of ownership transfer.
5. Non-target species will be released unharmed, and records of by-catch will be maintained.
6. All necessary regulatory agency conditions will be complied with relating to harvest, sorting, processing, waste management, transport and sale, including food and worker health and safety, and environmental regulations.
7. Complete accountability to the ONA communities will be achieved by the provision of summary reporting outlining all harvesting and by-catch statistics, the tracking of all fish harvested, and revenues generated through sales. This reporting will also be provided to DFO.

The proposed fishery was designed and managed to separate Food, Social and Ceremonial fish from commercial fish via reporting and locations. The bulk of the food fishery occurred at the base of Skaha Dam (Okanagan Falls) and McIntyre Dam. The majority of demo fishery occurred at Osoyoos Lake (Central-North Basin).

Objectives

Using a step-wise funding approach provided ONA the flexibility to optimize its production and marketing approach and funding required to assure project success.

Phase 1 (\$23,500):

The ONAFD proposed to augment their existing small-scale harvest of sockeye for economic purposes in 2010. The scope of economic activities between July and September 2010, focused on the following:

1. To identify suitable harvesting methods that will include purse seining and trolling.
2. To demonstrate a process that meets the practical and logistical requirements of a viable economic fishery.
3. To demonstrate production for a fresh product while meeting conservation and FSC needs, in the Okanagan.
4. To pilot a vendor quality assurance program by soliciting and documenting responses from south Okanagan food service agents, for local market 'benchmarks', including:
 - a. fish quality and safety characteristics
 - b. transportation and distribution mechanisms (fresh product)

Phase 2 (\$95,000):

Following on the success of capturing and processing salmon, a phase two was initiated. The ONAFD augmented its phase one deliverables with the following sales, marketing and product development initiatives:

1. Product Development: Demonstrate production for a variety of product forms (fresh, frozen, and smoked (with custom labeling) while meeting conservation needs;
2. Sales & Marketing:
 - a. Expand outside sales and increase the current client database (Okanagan marketing network) of valued customers willing-to-pay premium prices by selling the following concepts (but not limited to): socially-responsible (100-mile challenge), limited availability, unique origin, specialty flavor, Okanagan Grown, artisan fishery;
 - b. Product develop recipes for Ikura (salmon roe) using current food technologies
 - c. Research and recommend an eco-label for Okanagan sockeye.
3. Promotion and public education
 - a. Acquire tradeshow materials and attend special events to promote Okanagan salmon
 - b. Design a logo that is Okanagan
 - c. Design and print two types of rack cards that sell the Okanagan fishery, and provide insight into traditional fisheries methods, and fisheries management
 - d. Increase the social network and marketing of Okanagan sockeye using non-profit, Okanagan distribution channels (Nk'Mip Desert Cultural Centre, En'owkin Center)
 - e. Build an online, market presence using Blogs, and list server web sites to promote a valued, Okanagan fishery.
4. Okanagan member community reflection and visioning – a Syilx perspective
5. Acquisition of an industrial ice maker for improving product quality control, and
6. Training: First Nation fisheries personnel within its membership on the proper use and operation of various watercrafts within the ONA fleet and obtain small vessels operators proficiency and MED3 certification.

ONA Territory

Comprised of eight member communities the Okanagan Nation Territory covers a vast area of southern British Columbia and Northern Washington State. The eight member bands that make of the Okanagan Nation are: Okanagan Indian Band, Westbank First Nation, Penticton Indian Band, Osoyoos Indian Band, Lower and Upper Similkameen Indian bands, Upper Nicola Indian Band, and the Confederated Tribes of the Colville Reservations (WA, USA).



Figure 1. Okanagan Nation Territory

Above shows the boundaries and regions included within the Okanagan Nation Territory as well as giving a general sense of the total area and total groups included within the territory.

Fish Harvest Decision Process

For sockeye salmon traveling up the Columbia River through the United States and into Canada via the Okanagan River, fisheries are determined through analysis of fish passage numbers collected at Wells Dam in Washington State. Harvest of this stock is determined based on the number of fish passing Wells Dam throughout the summer months. As seen in Figure 2 and Figure 3 there was a large increase in the total number of sockeye passing Wells Dam over the 2010 season, and exceeded the habitat-based spawner escapement goals. This increase triggered the pilot demo fisher in Osoyoos Lake during the summer of 2010. This increase in numbers during the 2010 season also led to a recreational fishery being opened on Osoyoos Lake briefly during the summer of 2010. Generally when these numbers are below 10,000 no harvest occurs. When fish passage numbers between 10,000 and 60,000 are observed, then 5% of the sockeye having passed Wells Dam by July 1st are available for harvest. If greater than 60,000 are observed, then 10% of fish having past Wells Dam by July 1st are available for harvest. US-Canada agencies are engaged in developing a sockeye harvest management agreement for first nations, commercial and recreational fisheries.

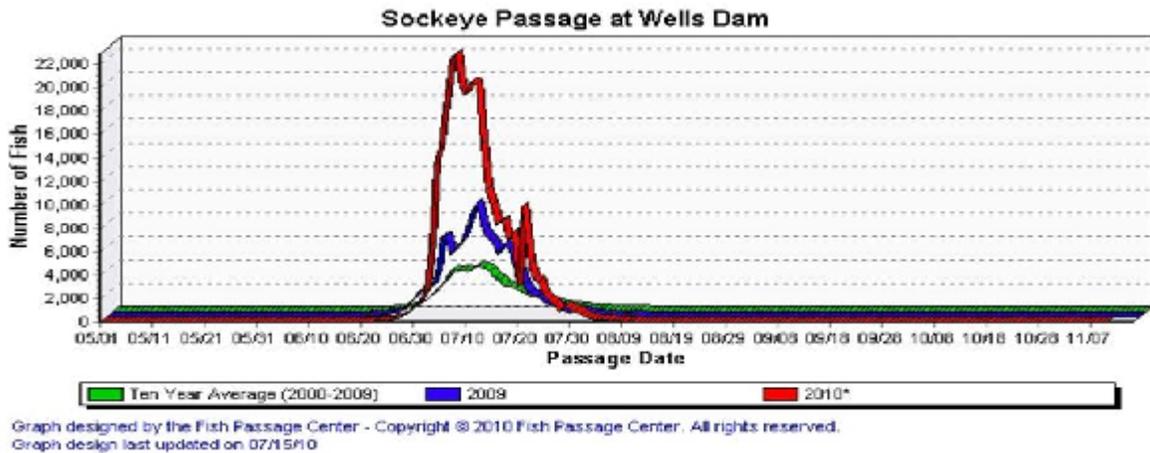


Figure 2: Graph by Fish Passage Centre at Wells Dam

The above graph depicts the massive increase seen in Wells Dam Sockeye passage during the 2010 summer when compared to previous years and previous averages. This graph was obtained through the Fish Passage Centre at Wells Dam.

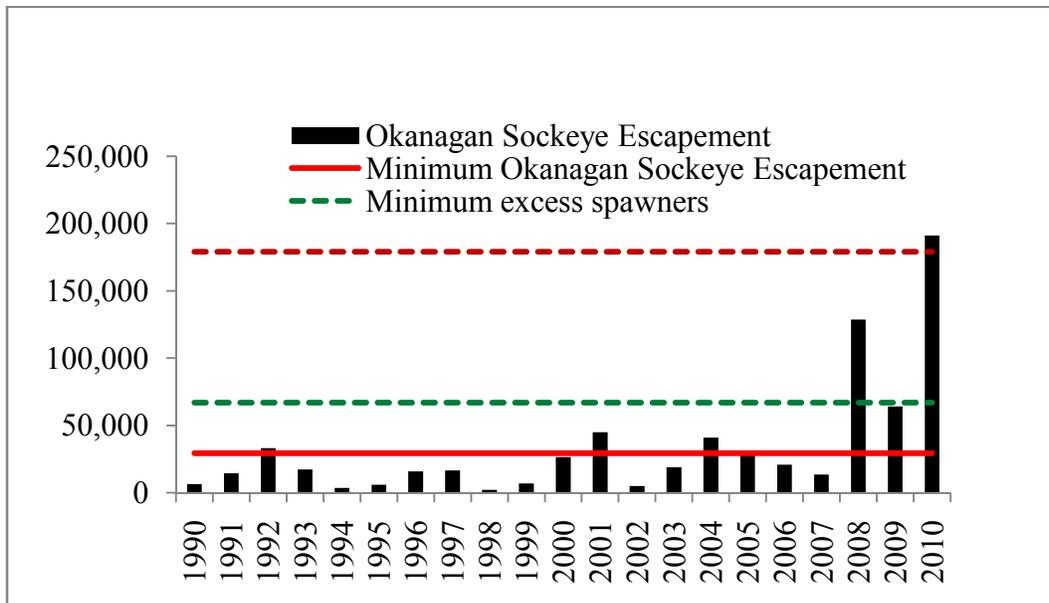


Figure 3: Graph of Sockeye escapement to Okanagan River

Above graph shows Sockeye escapement to Okanagan River exceeded stock conservation needs (red solid line), and habitat spawning capacity benchmarks (lower limit 60,000 green dotted line to upper limit 175,000, red dotted line).

Fishing Opportunities & Fish Behaviour

Once sockeye have reached Osoyoos Lake and the Canadian portion of the Okanagan River new questions arise about where the fish can be found throughout the summer months. To answer these questions fish were acoustically and thermally tracked throughout the summer of 2010, with this data showing distinct in-lake and in-river periods. Based on tagged sockeye, it is apparent that sockeye spend several days between Wells Dam and Osoyoos Lake in water exceeding 20°C. The North Basin of Osoyoos Lake is a thermal refuge for adult fish below when suitable environmental conditions are present. Figure 4 illustrates a thermal tagged sockeye that traveled from Wells Dam to Osoyoos Lake, and resided at 10°C water (y-axis, Temperature). The majority of acoustic-tagged sockeye (n=60) and tracked in Osoyoos Lake, demonstrated a depth preference ranging from 15 m to 25 m depth (Skyeler Folks, ONAFD fisheries biologist, pers. comm.).

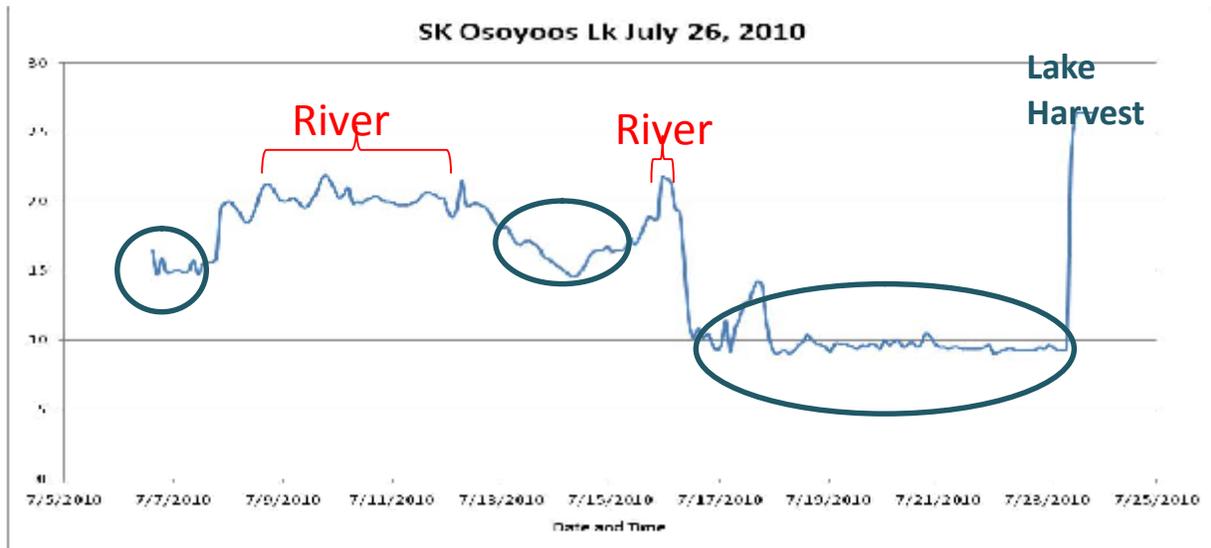


Figure 4: Thermal migratory pattern of Okanagan sockeye from Wells Dam pool, enroute Okanagan River

The above graph shows the thermal migratory pattern of Okanagan sockeye from Wells Dam pool, enroute Okanagan River, staging at the Similkameen confluence, then final approach, and residence at Osoyoos Lake before harvest 23 July, 2010. This graph and the information it holds was developed by ONAFD researchers.

The acoustic tagged sockeye provided information of run timing and lake distribution allowed ONA to schedule harvest in a timely manner, and focus effort of fishing at known locations of high adult sockeye presence.

Fishing Locations & Schedule

The 2010 ONA run Okanagan sockeye pilot demo fishery was carried out at several locations. In-lake locations were focused throughout the north basin of Osoyoos Lake while in-river harvest was carried out near the town of Okanagan Falls. Osoyoos Lake harvest was carried out using two methods, purse seine and trolling during daylight hours. Purse seining locations were divided, with two each in the north and central basins of Osoyoos Lake. The Osoyoos Lake purse seine fishery occurred between 9 and 13 August between 6:00 hr and 21:00 hr (training and vessels provided by DFO-Kamloops). The Osoyoos Lake troll fishery occurred between 6:00 hr and 13:00 hr on 25 August, 31 August, and 2 September (Vessel and gear provided by Rodney's Reel Outdoors (West Kelowna)). In-river gill net harvest was attempted once 8 September, proximate to the Skaha Dam tailrace, at Okanagan Falls.

Figure 5: The map of Osoyoos Lake shows locations of purse seine harvest in red and the location of trolling in blue.

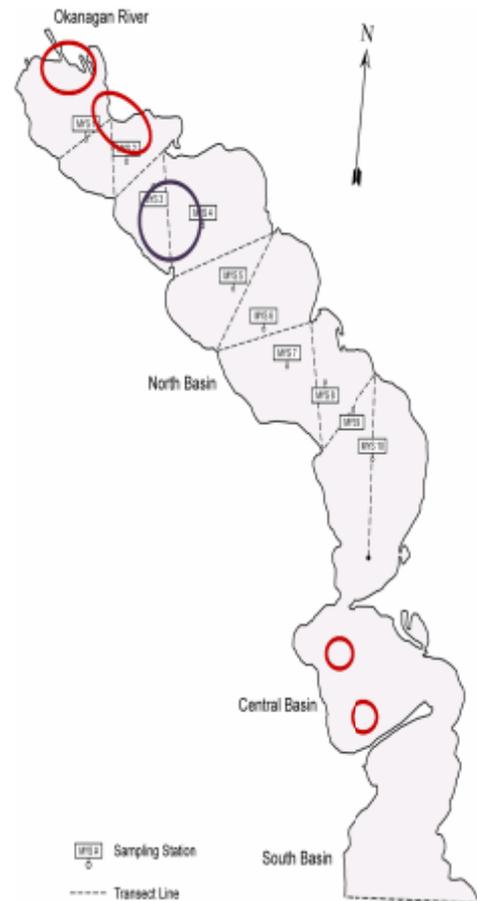


Figure 5: Map of Osoyoos Lake

PRODUCTION ASSESSMENT

Effort & Catch by Gear Type

A variety of methods were tested during the ONAFD 2010 pilot demo commercial fishery. Short, active sets rather than passive (stationary) fishing techniques were chosen to minimize by-catch and increase opportunity for grading, and selecting premium quality fish. A basic bioeconomic model was developed to determine optimal effort required at Osoyoos Lake. Tables 2, 3, and 4, summarize catches by gear type and location for the 2010 season.

Table 2: Daily purse seine catch summary at Osoyoos Lake, 2010

2010 DEMO COMMERCIAL FISHERY - ONA OSOYOOS LAKE PURSE SEINE															
DAILY CATCH SUMMARY FORM															
Date	No. of Sets	Sockeye Landed	Sockeye Landed [Cumul.]	Sockeye Landed [lbs]	Sockeye Landed [Cumul. [lbs]	Live Fish Releases					Fish Mortalities				
						SK	CH	KO	R&T	WF	SK	CH	KO	R&T	WF
9-Aug-10	3	0	0	0	0	0	0	5	0	1	0	0	0	0	0
10-Aug-10	20	45	45	59	99	0	0	28	5	0	0	0	0	0	0
11-Aug-10	23	236	283	524	623	0	0	3	2	4	0	0	0	0	0
12-Aug-10	20	67	350	147	770	0	0	4	1	2	0	0	0	0	0
13-Aug-10	10	300	686	739	1,500	0	0	0	0	0	0	0	0	0	0
TOTALS	76	686		1,509		0	0	38	8	7	0	0	0	0	0

Table 3: Daily troll catch summary at Osoyoos Lake, 2010

2010 DEMO COMMERCIAL FISHERY - ONA OSOYOOS TROLL															
DAILY CATCH SUMMARY FORM															
Date	No. of Troll hours	Sockeye Landed	Sockeye Landed [Cumul.]	Sockeye Landed [lbs]	Sockeye Landed [Cumul. [lbs]	Live Fish Releases (Drop Outs)					Fish Mortalities				
						SK	CH	KO	R&T	WF	SK	CH	KO	R&T	WF
25-Aug-10	24	18	18	40	40	10	1	1	1	0	0	0	0	0	0
31-Aug-10	24	0	28	22	62	5	0	0	0	0	0	0	0	0	0
2-Sep-10	42	34	62	75	136	12	0	2	1	0	0	0	0	0	0
TOTALS	90	62		136		27	1	3	2	0	0	0	0	0	0

Table 4: Daily gill net catch summary at Okanagan River, 2010

2010 DEMO COMMERCIAL FISHERY - ONA OKANAGAN RIVER GILLNET															
DAILY CATCH SUMMARY FORM															
Date	No. of Sets	Sockeye Landed	Sockeye Landed [Cumul.]	Sockeye Landed [lbs]	Sockeye Landed [Cumul. [lbs]	Live Fish Releases					Fish Mortalities				
						SK	CH	KO	R&T	WF	SK	CH	KO	R&T	WF
7-Sep-10	10	319	319	702	702	0	0	0	0	0	0	0	0	0	0
TOTALS	10	319		702		0	0	0	0	0	0	0	0	0	0

Of the total 1,067 sockeye harvested (2,347 lbs), 686 sockeye were landed in Osoyoos Lake using a purse seine (450' x 55', 1.5 inch mesh, Photo Plate 1). Fifteen percent of the seine catch were sold fresh, round to local food service vendors, and 85% were bled, iced, and transported to Ocean Master, Maple Ridge for raw processing, and flash freezing. A total 62 sockeye were landed by trolling in Osoyoos using flashers and pink hootchies between 55' and 75'; when landed, bled, iced and delivered within four hours to restaurants in the South Okanagan. An in-river gillnet (100 x 10', 3"



Figure 6: Osoyoos Lake Harvest

mesh) fishery was conducted to pilot test the feasibility of a smoked Okanagan sockeye product. The net was deployed along the eddy line at the tailrace of the Okanagan Dam, swept a 150m² area, within 1-minute. While other selective methods are preferred to gillnetting, site conditions, fish behavior, high sockeye densities, and low by-catch allowed us to test the utility of processing late run sockeye, and assess the intrinsic caloric value of the meat. Results of caloric testing by UBC are pending at the time of this report.

Figure 6 summarizes the availability of Okanagan River sockeye movement upstream enroute via a) Wells Dam (Columbia River), b) short term residency in Osoyoos Lake, and the c) spawning grounds in Okanagan River (downstream of Okanagan Falls Dam). Okanagan River sockeye migrate upstream of Wells Dam between late-May and mid-August, and peak in mid July. Okanagan sockeye arrive in Osoyoos in early July and migrate upstream in late September, with peak catch per unit effort (cpue) occurring in mid August, for both communal, sunken gillnets, and purse seining. In addition to timing of catch, quality of food (protein and fat content) is important when deciding whether to market the product form as fresh, frozen or smoked sockeye. Preliminary product evaluation and market interviews strongly suggest that premium fresh value is attained in the early run during July. Restricting the use of catches before the third week of August for fresh and frozen sockeye will meet and exceed the market expectations of blush sockeye. The sockeye collected in late August and early September showed signs of marbling and limits the use to a hot-smoked product.

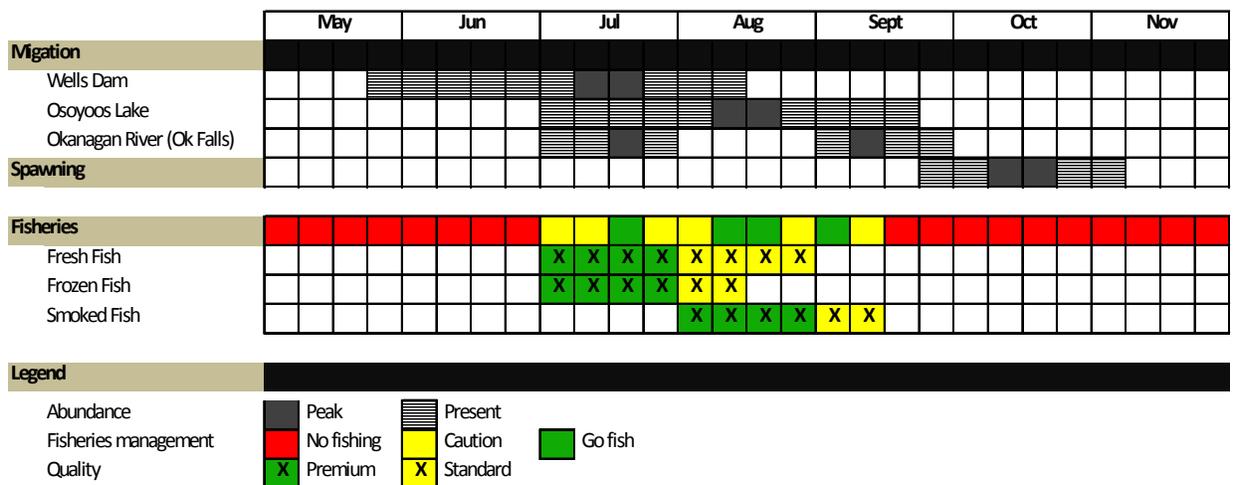


Figure 7: Fish calendar

The top table depicts the number of fish per region divided by the month during the 2010 season. The top row of the bottom table shows information on when to fish, to fish with caution and not to fish. The second, third and fourth rows show when to obtain premium or standard quality product, by product type.

Infrastructure Development

Limited cold storage, lack of flaked ice supply in the Okanagan Region, and the high costs of refrigerated logistics made it a high priority for ONA to secure an ice-making system for temperature control, and seafood safety compliance. Commercial food grade totes with lids, and continuous thermal loggers were purchased for handling, and monitoring distribution of fish from the lake to a receiving station at Willow Park (Northeast end of Osoyoos Lake), then on to the processing plant. The ONA purchased a North Star Flake Ice Maker, Model 10 (5 ton) (www.northstarice.com). The industrial ice maker is planned to be located at a future raw receiving plant in the Oliver Industrial Park (OIB Band); this will improve product quality control and reduce our ice cost. The purchase included the ice making machine, only. ONA plans to purchase air cooled condensers, a compressor, the steel enclosure to house the ice maker, and store ice, in addition to budgeting services to install, train staff to operate and troubleshoot, and check refrigeration/electrical connection. Equipment specifications are attached in (Appendix 1).

The need for a small scale ice making machine is based on recommendations from last year's DFO BC Interior PICFI report and from the ONA 2009 PICFI report identifying a reliable source for flaked ice. In addition, the most viable source is 4 hours in Steveston in the Lower Mainland. Lastly, bulk ice transport is not suitable for a small scale high valued fishery due to timelines and availability of sockeye. For example, the 2010 fishery in July to September was limited by availability of ice where on a Friday, catches ended due to amount of ice. Another example was the use of cubed ice to deliver fresh product to high end restaurants which causes dimpling in the product and does not fit in the professional manner for the Okanagan in delivery of product to high end restaurants.

Traceability

In order to improve traceability, ONA maintained extensive records of daily fishing activities including:

1. Harvesting site information,
2. Numbers of by-captured species released (and their condition),
3. Numbers of sockeye captured (harvested and released),
4. End-recipients of fish, including any sales records (by weight),
5. Revenues received.

In order to maintain product integrity and traceability, ONA adopted a simple chain of custody process (River Transport Manifest provided by Mike Mclean, Siska Fish Processing Plant) (Figure 7). A standardized process was achieved quickly, based on the simplicity of the ONA fishery using a single vessel, and small, numbered totes with pack sizes of 25 or 100 fish to control product tracking. To monitor these fish for product safety and integrity, hobo[®] tidbit

temperature loggers were placed into randomly pulled fish from each batch. These loggers kept a record of temperature within the fish every 15 minutes throughout shipping and processing. Data obtained via these loggers showed that initial on lake processing and shipping was adequate with temperature of fish, once packed for shipping, being maintained below 0°C (Figure 8).

Riverfresh Transport Manifest					Manifest #	Okanagan-10- (sales slip)		
From:					Date:			
To:					Shipper:			
Tote #	Species	Product Description	Wt (lbs)	Temp (°C)	Ice Left?	Odor?	Comments	Received in Good Order
	SK	fresh/frozen, whole/gutted, head on / off			Y N	Y N		Y N
	SK	fresh/frozen, whole/gutted, head on / off			Y N	Y N		Y N
	SK	fresh/frozen, whole/gutted, head on / off			Y N	Y N		Y N
	SK	fresh/frozen, whole/gutted, head on / off			Y N	Y N		Y N
	SK	fresh/frozen, whole/gutted, head on / off			Y N	Y N		Y N
	SK	fresh/frozen, whole/gutted, head on / off			Y N	Y N		Y N
	SK	fresh/frozen, whole/gutted, head on / off			Y N	Y N		Y N
	SK	fresh/frozen, whole/gutted, head on / off			Y N	Y N		Y N
	SK	fresh/frozen, whole/gutted, head on / off			Y N	Y N		Y N
Total Wt								
Comments:								
Shipper (signature):				Receiver (signature):				

Figure 8: River Transport Manifest

Above shows River transport manifest used from lake-to-plate. Manifest number is the invoice number billed to the end user.

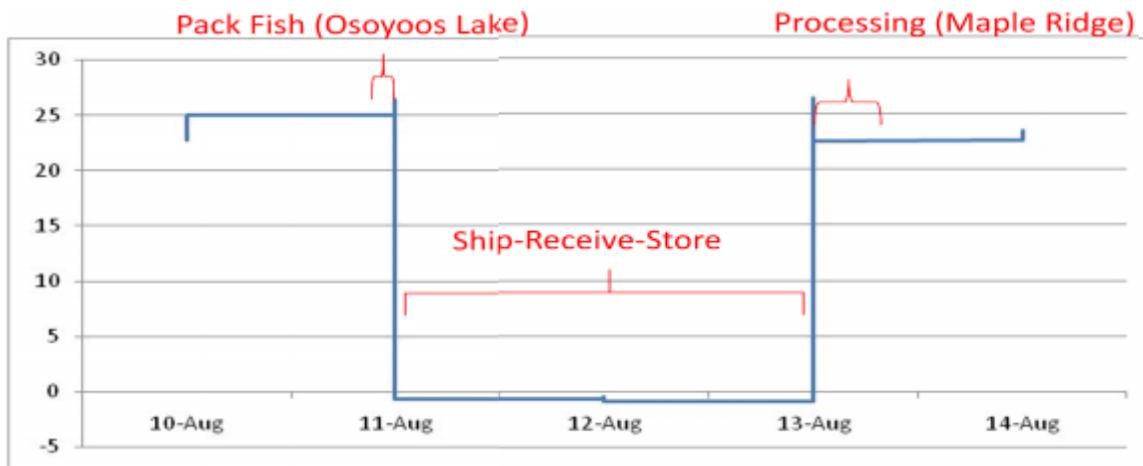


Figure 9: Thermal Tracked Sockeye

Above shows Thermal tracked sockeye from Osoyoos Lake to Ocean Masters, Maple Ridge, 11-14 August, 2010 (y-axis: temperature; x-axis: date).

Temperature controls during the shipping and distribution of Okanagan sockeye to Vancouver for processing and return to Kelowna to market showed temperatures were maintained close to zero Celsius within the coolers. Brief periods (less than 1 hour) when fish were transferred and handled at Osoyoos Lake or at the processing plant showed ambient temperatures greater than 25°C. The capacity of receiving and handling fish at Ocean Masters was far exceeded due to the surplus of Fraser River sockeye. Based on an ONA site audit, we would recommend fans or water shower curtain be installed at the receiving station at Ocean Masters to maintain ambient temperatures less than 10° C to minimize spoilage. Versacold Storage was used for temporary storage and distribution of fish from Maple Ridge to Kelowna.



Figure 10: Sockeye packed with ice

The chain of custody process was shown to be efficient for low harvest rates (less than 300 fish per day), using a single fishing vessel, and single landing site. Alternative chain of custody systems is being reviewed by ONA to plan for larger catches and multiple fishers/fishing platforms. One recommendation is to develop point of landing systems using palm pilot technology, with pre-validated data entry fields, with drop down menus. The rationale of this system will minimize data entry error, rapid documentation processing, and securing traceability of independent lots (25 fish pack sizes) from late-to-plate (Photo Plate 2 and 3).



Figure 11: Handling sockeye at Ocean Masters

Photo Plate 2. Troll, Okanagan sockeye salmon caught, bled, head-on, eviscerated, 25 August, 2010.

Photo Plate 3. Processing sockeye salmon fillet from the lower Fraser River, at Ocean Masters, 12 August, 2010.

Adopting quality management principles and food safety protocols is essential for developing future markets in the Okanagan. Product was regularly inspected and random audits were completed in 2010. The only defective process was the heat sealing of hot smoked sockeye. Of a total 920 packages of smoked sockeye (230 g/unit), 6% was deemed poor quality seals. The defective product was immediately repacked, resealed, and distributed within a 2 week period as taste test samplers (to minimize spoilage/loss concerns). All feedback from potential clients praised the taste and quality of these samples. Ocean Masters was notified of this immediately, in addition to rectifying an aesthetic issue with high prevalence of oils on the exterior of final packaging.

Production Appraisal 2010 - Less is More

ONA Demo Fishery Successes

- ↳ Suitable selective harvesting method: purse seining and trolling
- ↳ Artisanal fishery, met 2010 conservation and FSC needs (sustainable, wild fisheries)
- ↳ Developing vendor quality assurance program (chain of custody, lake to plate, same day delivery)
- ↳ Increased temperature control infrastructure (ice maker, totes)
- ↳ Trained 4 ONA on purse seine & 3 ONA on troll techniques
- ↳ Re-engineered deeper purse seine (55' fishing depth)
- ↳ In-season transfer of knowledge to PICFI group (processing, marketing)
- ↳ Maintained good DFO relations

ONA Demo Fishery Challenges

- ↳ A process that meets the practical and logistical requirements of a viable economic fishery (scale of economy and efficiencies needed to optimize production)
- ↳ High winds in the afternoon limit fishing opportunities in lake
- ↳ Landing site infrastructure required
- ↳ Ice supply (costly, to Vancouver)
- ↳ Cold storage (limiting factor: Okanagan)
- ↳ Siska plant not ready to receive fish in early August
- ↳ Siska freezing – operational constraints
- ↳ Ocean Master Foods – small scale fish plant (15 employees), too small to meet demand, sub-par administration, customer service
- ↳ Political protest in lieu of recreational fishery and perceived lack of consultation.
- ↳ Demo Fishery MOU signed in mid-July
- ↳ Overcoming grass-roots resistance within community (perception to “commercialization” vs. stock in re-building)

Break Even Analysis ²⁰¹⁰

Selective fishing practices is one of the key branding tools for gaining market share among well informed consumers, which allowed us to secure premium market value. Seining and trolling are more acceptable than gillnetting provided that harvest rates of non-target species is relatively low, and post-release mortality is minimal. While gillnetting proved to be the most efficient method, the extrinsic quality features (i.e., net marks, bruising) resulted in a marginal quality

product and would only be considered for smoked product forms of sockeye, in special case scenarios (i.e., communal harvest). Table 4 outlines the projected losses that would have incurred, by gear type, in 2010 if PICFI funding was not available. The key to optimization is managing risks, securing volume and scale of economy (local fishers or inter-tribal distribution), increasing net worth (via capital acquisition), and retaining-increasing intellectual capital (via training of crew). ONA is committed to building on these learning outcomes.

The largest expenses incurred in 2010 included sales, marketing and distribution. ONA is confident that we will be able to build on our customer list and observe cost savings related to retaining customers rather than seeking new clients. Based on 2010 market conditions and production costs, ONA break even points for minimum catches, by gear type are summarized, as follows:

- ☞ Seine Lake = 2,300 sockeye (fresh (30%), smoked (70%) sales)
- ☞ Troll Lake = 1,500 sockeye (100% fresh sales)
- ☞ Gill Net River = 800 sockeye (100% smoked sales)
- ☞ Gill Net Lake = 1,000 sockeye (100% smoked sales)

ONA will continue to improve on production costs. Sales and marketing skills, knowledge, and business models developed in 2010, will continue to be improved on and made readily transferable to other coastal and inland fisher groups seeking to trade products and services. Our business model is being refined to novel, emerging fish and seafood services with respect to sales, marketing, customer education, distribution, and product-process development.

Table 5: Proforma income statement of Okanagan Sockeye Pilot Demo Sales in 2010

	Pilot Demo Fishery 2010 (Observed)			Communal (Opportunity)
	Seine - Osoyoos	Troll - Osoyoos	Gill Net - River	Gill Net - Osoyoos
Input				
Fresh-whole, hd-on, gutted (\$/lbs)	\$ 3.50	\$ 3.50	.	\$ 3.50
Fresh-frozen, hd-off, gutted (\$/lbs)	\$ 4.72	.	.	\$ 4.72
Cold smoked (\$ per whole side)	\$ 20.00	.	\$ 20.00	\$ 20.00
Volume (lbs)	1,970	180	960	3,220
Sales (\$)	\$ 10,863	\$ 629	\$ 13,400	\$ 11,259
Cost of Goods Sold (\$)	\$ 27,018	\$ 9,477	\$ 13,717	\$ 20,172
Labour	11.2%	20.6%	5.8%	11.2%
Vessel Rate	9.8%	16.6%	0.0%	9.8%
Fishing Equipment	0.8%	0.1%	0.3%	0.8%
Fish Handling Equipment	5.6%	1.8%	3.0%	5.6%
Safety & Communication	0.1%	1.8%	0.1%	0.1%
Licensing & Professional Fees	0.8%	0.2%	0.2%	0.8%
Distribution	17.0%	5.9%	21.8%	17.0%
Processing	3.2%	0.4%	22.0%	3.2%
Direct Sales	16.0%	4.6%	8.5%	16.0%
Admin (~ 22% of Direct Operating Cost)	35.7%	48.0%	38.1%	35.7%
Gross Margin (\$)	\$ (16,156)	\$ (8,848)	\$ (317)	\$ (8,914)

Until a raw receiving and processing facility is operated in the Okanagan, future fisheries will need to rely on shipping raw product to Vancouver or Siska for semi-processing and finished processing. Improvements to the handling and shipping could include the following action steps:

Table 6: Proposed daily harvest and handling schedule

What the ONA sockeye salmon handling and raw shipping should look like...		
Day	Objective	Personnel
1	Harvest	
	Fish are harvested, bled, and stored in slurry (am, delivered to receiving plant before 11 am)	3 fish handlers
	Fish totes received in slurry allowed to chill for 8-12 hours, stored in covered area outside on sealed surface (control dust)	1 forklift operator 1 plant manager
	Individual fish are re-packed in insulated totes, with layer ice in the evening from 5 pm-10 pm	1 forklift operator 2 fish handlers
2	Transport	
	Totes of raw, bled salmon transported at 5 am to Siska Plant (to be received by 8 am), truck to provide ice, raw fish, and return with semi-processed raw fish and packaging items by noon.	1 driver
3	Delivery	
	Deliver fresh, gutted to end users + roe, semi-process roe product, semi-process fillets for salted cure brine.	delivery personnel (dependent on amount ordered)
4	Repeat Fish Harvest	

MARKETING RESEARCH

Several sources of information were reviewed, and compiled for our research. The included:

- Data on Okanagan River run size, catch and escapements was obtained through ONA records and Bonneville Power Administration Fish Passage Center website.
- Financial data was derived from interviews with industry participants.
- Market information was derived from industry interviews.
- Fishery and seafood information was derived through scientific and technical publications from: Department of Fisheries and Oceans (DFO), Trade papers within the seafood industry, Interviews with sockeye fishery stakeholders, Reports on the seafood business in BC and in other jurisdictions.
- Industry knowledge and experience of the authors.

Valuable learning outcomes and tangible marketing tools were generated from the research of ONA. This information was readily transferred to other BC Interior Fraser River PICFI groups via email, workshops, and meetings.

Direct Marketing & Outside Sales

Direct marketing and outside sales to restaurants and specialty food service agents was expanded. The list of customers increased from two (2008, 2009) to fifteen, repeat clients (2010), as follows: Mission Hill Family Estate, Summerhill, Burrowing Owl, Hillside Estate, Quails Gate, Summerland Pyramid Winery, Kekuli, Nk'mip Cellars, Passa Tempo, Lost Moose Lodge, Desert Canyon Golf, Hood Merganser, Salty's, Black Iron Grill

A step wise approach to direct marketing was used.

Step 1.A marketing script was used as a highly effective cold call technique to gauge awareness and interest for Okanagan Sockeye salmon. The following script was used as a standard greeting to new clients:

“Hi! My name is _____ and I’m calling on behalf of Okanagan Nation Alliance –Fisheries Department. I was hoping that I may please talk with your restaurant manager or supervisor.

We are product testing and researching local market needs for fresh, locally caught Okanagan sockeye salmon, and promoting awareness of a healthy, sustainable wild fishery, right here in the Okanagan.

Over 140,000 sockeye are expected to return to the Okanagan River year. ONA (a non-profit agency), Fisheries & Oceans Canada, and other groups have made a commitment to rebuild the sockeye run. From 10,000 to over 140,000 in ten years is an achievement we are celebrating. Due to this success of the salmon returning to the Okanagan lakes, the ONA is hoping local food services will participate in this ‘grassroots’ project:

- To help us develop this market while promoting your business, and
- To communicate to the public that there is indeed a choice for local salmon here in the Okanagan!

We currently have commitment from Passa Tempo & Spirit Ridge Resort (Osoyoos), and hope that we could add you to our network and help grow your business.

Would this be of interest to you?

Who should I speak about getting involved?

What we're asking is:

- 1) For restaurants and food service agents in the Okanagan community to complete a 3-4 minute questionnaire to help us meet local market needs for high end uses. As a special thank you for taking the time to help us with the survey, we will send you a small gift of appreciation in the mail.
- 2) Pending your interest and commitment, we would like to conduct a taste panel by providing one or two fresh Okanagan salmon for you to product test, and provide your professional opinion about the fish and your service needs.
- 3) We also welcome the opportunity to provide you additional fresh Okanagan salmon to test as an entrée, and add it to your menu as a daily special. In return, we hope you would be willing to purchase the additional fish for \$10 per salmon fish (round, head on, gutted, on ice). These proceeds will be invested in future monitoring programs of ONA's local fish resources. Receipts will be provided. This morning, our fishermen have caught 200 Okanagan salmon, and we can deliver as many salmon that you would like to your restaurant this afternoon!

Would you be willing to complete the questionnaire? (If not now, when should I call back?)

Would you be willing to conduct a taste test? (If yes) I can take down you contact information, Would you be willing to accept fresh locally caught Okanagan salmon, and serve it as an entrée, to give your professional feedback about our product and service? (If yes) I can take down the number of salmon that you would like for us to deliver this afternoon, and any special instructions we should know about where to deliver. We can also schedule an appropriate date for follow-up.

Step 2. Deliver a marketing questionnaire to evaluate the 4Ps of marketing fresh and frozen salmon product.

**Okanagan Sockeye Salmon Restaurant (Food Service) Questionnaire –
ONA 2010 Marketing Research**

Question 1a. What do you look for in fresh salmon?

Question 1b. Were you previously aware of the availability of fresh Okanagan salmon?

Yes ____ (a) No ____ (b)

Question 2. Were you previously aware of the availability of frozen Okanagan salmon?

Yes ____ (a) No ____ (b)

Question 3. Are you currently offering

(3a) fresh salmon as an entrée ?

Yes ____ (a) No ____ (b)

(3 b) frozen salmon as an entrée?

Yes ____ (c) No ____ (d)

(If no to both, go to question # 10)

Question 4. What volume would best describe your buyer's demand for any type of salmon?

(4a) In the summer:

High (> 100 lbs of fish per week) ____ (a)

Medium (between 25 and 100 lbs of fish per week) ____ (b)

Low (less than 25 lbs of fish per week) ____ (c)

(4b) In the winter:

High (> 100 lbs of fish per week) ____ (d)

Medium (between 25 and 100 lbs of fish per week) ____ (e)

Low (less than 25 lbs of fish per week) ____ (f)

Question 5. Where do you usually purchase salmon for your business?

Question 6. – Have you experienced any problems with salmon within the last year **with short shelf life?**

Yes ____ (a) No ____ (b) Not sure ____ (c)

Question 7. –Have you experienced any problems with salmon within the last year with **appearance?**

Yes____ (a) No____ (b) Not sure____(c)

Question 8 – Have you experienced any problems with salmon within the last year with **food born illness?**

Yes____ (a) No____ (b) Not sure____(c)

Question 9 – Have you experienced any problems with salmon within the last year with something that we did not list above? Any others? (If yes, explain)

Yes____ (a) No____ (b) Not sure____(c)

Question 10 – If you do not currently offer salmon in your product line, please indicate the reasons from the list below (check all that apply (Yes)):

- a. Not sure where to get them_____
- b. Profit margin too low_____
- c. Unaware of proper handling and storage methods_____
- d. Priced to high_____
- e. Not familiar with the market_____
- f. Presence of food born illness (bacteria/virus)_____
- g. Previous problems with product availability_____
- h. No customer requests_____
- i. Other (please list)_____

Question 11 – If you were to currently sell Okanagan salmon that has been locally caught and delivered the same day or next day, and is labeled and promoted as such; what do you estimate your increase in sales would be, as compared to only offering salmon that is not locally caught and having same day or next day delivery?

- a. No increase in sales_____
- b. 10% increase in sales_____
- c. 30% increase in sales_____
- d. 50% increase in sales_____
- e. 100% increase in sales_____

Question 12 – What form of fresh Okanagan sockeye salmon, caught same day and delivered would you prefer to receive? Pick your top three choices (1-first choice, 2 – second choice, and 3-third choice).

- a. Whole _____
- b. Princess-cut (Gutted, head on, gills out)_____
- c. Fillet _____
- d. Butterfly (2-fillets with back attached) _____
- e. Steak _____
- f. Other _____

Question 13 – What would you be willing to pay for fresh, locally caught Okanagan salmon, based on your Number One choice in the previous question?

- 1) More than \$ 6/lb (>\$13 /kg)? Yes____(a) No____(b)
- 2) \$ 6/lb (\$13 /kg)? Yes____(c) No____(d)
- 3) \$ 5/ lb (\$11 /kg)? Yes____(e) No____(f)
- 4) \$ 4/lb (\$ 9 /kg)? Yes____(g) No____(h)
- 5) Less than \$ 4/lb (< \$9 /kg)? Yes____(i) No____(j)

Question 14 - Would you be willing to purchase frozen salmon from ONA?

Yes____ (a) No____ (b) (If no, go to question # 16)

Comment _____

Question 15 – For what reason would you purchase frozen salmon?

- a. Seasonal availability_____
- b. Storage_____
- c. Shelf life_____
- d. Other (please specify)_____

Question 16. There is a new product called fresh-frozen fish which uses a new method of double glazing, and flash freezing salmon that has the taste, texture, and appearance of fresh salmon up to a year.

a) Do you believe these statements? Yes____(a) No____(b)

b) How would you describe your interest in such a product:

No interest____(a) Somewhat interested____(b) Very interested____(c)

(If no, then go to question #18)

Comment _____

Question 17 – How many fresh-frozen, locally caught Okanagan salmon per delivery would you prefer? _____

Storage and Packaging

Question 18 - What freezer capacity do you currently have for storing frozen salmon?

Question 19 – How would you like your fresh-frozen Okanagan salmon to be packaged?

Shrink wrapped trays in solid cardboard box. ____ (a)

Shrink wrapped trays in cardboard box with window ____ (b)

Vacuum package placed in solid cardboard box ____ (c)

Vacuum package placed in cardboard box with a window ____ (d)

Other _____ (e)

Question 20 - How would you prefer your fresh- frozen Okanagan salmon? Pick your top three (1-first choice, 2 – second choice, and 3-third choice)

a. Princess-cut (Gutted, head on, gills out) _____

b. Fillet _____

c. Butterfly (2-fillets with back attached) _____

d. Steak _____

e. Other _____

Question 21 - What size package would you prefer for fresh-frozen Okanagan salmon? Please number in order of preference.

1. Greater than 10/box _____

2. Less than 5/box _____

3. 10/box _____

Promotion

Question 22 - What materials can ONA provide you with to help you promote local Okanagan salmon, and customize it to your business?

For example, it could be something such as a little recipe card including collaborators (such as yourself), a key chain in the shape of a sockeye salmon, etc...with our web site for customers to learn more about Okanagan salmon.

Which promotional items would your business be interested in?

1. Recipe card with Okanagan salmon story_____
2. Key chain_____
3. Others_____

Corporate

Thank you for your interest and taking the time to help us with this survey. Okanagan Nation Alliance would like to send you a small gift in the mail for our appreciation.

Contact Information

Your name_____

Company_____

Address_____

City / Province / Area Code _____

Phone_____

Email_____

If you are interested in additional information on locally caught fresh Okanagan salmon or locally caught glazed / flash frozen Okanagan salmon, or would like the results of this survey; please feel free to call us or email us at any time.

I would like to receive: Product Information_____ Survey Results_____

Okanagan Nation Alliance
Contact: Howie Wright or Richard Bussanich

3255C Shannon Lake Road
Westbank, BC. V4T 1V4
www.syilx.org

Phone: 250.707.0095
Toll Free: 1.866.662.9609
Fax: 250.707.0166

Additional Comments or Orders for Salmon

Step 3. Increase willingness to buy via taste testing panels, and integrate feedback from leading experts (executive chefs) with regard to customizing and enhancing a “ unique product, and shared-process” between supplier and customer.

Executive chefs willing to participate in taste panels were introduced to fresh, fresh-frozen, and smoked (Indian candy) sockeye product concepts. ONA provided background information, and supplied free of charge, product that was prepared by their kitchen, and evaluated by their culinary staff. The background info and sampling design included the following:

Background Introduction to Chef

Salmon is a very popular seafood item in Canada, and nutritious entrée. Consumers prefer fresh seafood, and guaranteed safe product to eat. To meet the market demands, farm-raised salmon provides consumers a ‘fresh’ fish choice, year round. Fresh salmon caught from wild fisheries are available seasonally (June to August), and sometimes in limited supply depending on the how healthy the stocks are doing, and whether the industry has the capacity to process, store, and transport a high quality, fresh salmon to market.

Fresh-frozen fish

Fresh is considered by the market more valuable than frozen. For a fisheries venture it is almost always preferable to keep product fresh (on ice). To minimize spoilage, fish are kept as cold as possible without letting them freeze. Even a light ice crust at the surface can lead to undesirable textural changes.

Unbeknownst to the consumer, high quality fish, and quickly frozen can be superior to fresh fish. Proper freezing and storage (less than -20 °C with minimal temperature fluctuations during storage) preserve the quality and makes the product convenient for the consumer. Unfortunately too often poor quality fish are frozen and cold storage is not properly regulated so further damage occurs. This mistreatment occurs frequently enough that consumers have had bad experiences and are rightfully reluctant to purchase frozen fish. With improvements to the process and consumer education, frozen product will gain in popularity, but in the meantime, the premium remains fresh fish.

Sockeye salmon caught in Osoyoos Lake

Sockeye salmon were harvested from Osoyoos Lake, bled immediately, placed in an ice slurry for 1-2 hours, then packed into an insulated tote and layer iced for transport. They were transported to a processing plant (3 hour travel time). Product were received and stored in refrigeration at 4°C until processed. The fish were processed as follows:

1. Gills, and internal organs removed, kidney and backbone cleaned;
2. Internal cavity washed;
3. Individually frozen whole with head-on in a carbon dioxide tunnel
4. After freezing they were glazed, packed and stored at -10°C for a minimum of 21 days.

The fresh salmon used in comparison with the frozen salmon was farm raised, in BC.

Both samples of fresh and frozen salmon were properly labeled, and were delivered to Okanagan Nation Alliance Fisheries Department by refrigerated storage. Both samples were stored overnight at refrigerated temperature (5°C). The previously frozen fish thawed overnight were placed in ice in pre-labeled containers.

Consumer Discrimination Test

The product comparison procedure was based on triangle testing where food service experts were asked to distinguish the odd or different sample among the three samples. The two similar samples were either the previously frozen salmon or the fresh salmon. All different variable combinations were presented approximately the same number of times in random order through the taste testing. All salmon samples were served at the same temperature (°C). The data was recorded as the number of correctly judged.

To determine if a significant difference existed, the number of correct responses was compared to a chart of the number of correct responses needed to be significant at a level of 0.05 (Sensory Evaluation Techniques, 3rd edition, M. Meilgaard, G.V. Civille, and B.T. Carr, CRC Press, 1999, Washington, DC).

Triangle Test-ONA Salmon Taste Panel

2010 _____

Participant: _____

Two of these samples are identical and one is different.

1. Taste samples in the order indicated below and identify the odd sample based on an overall difference. If you are not sure, take a guess.

Check the odd sample:

1. _____
2. _____
3. _____

2. Please check the appropriate blank to indicate the degree of difference between the samples

Slight: _____

Moderate: _____

Large: _____

3. Please describe the difference(s) you detected as per the following:

- a. Appearance (Very Slight) 1 2 3 4 5 6 7 8 9 10 (Very Large)
- b. Aroma (Very Slight) 1 2 3 4 5 6 7 8 9 10 (Very Large)
- c. Flavor (Very Slight) 1 2 3 4 5 6 7 8 9 10 (Very Large)
- d. Texture (Very Slight) 1 2 3 4 5 6 7 8 9 10 (Very Large)

4. Acceptability. Please check only one.

Odd sample is more acceptable _____ Duplicate samples are more acceptable _____

5. Other comments:

TRIANGLE TEST WORK SHEET

Product Codes: A = Fresh B = Frozen

Order of presentation: goal = 6 panels of 3 persons

1. ABB
2. BAA
3. AAB
4. BBA
5. ABA
6. BAB

Instructions:

Product Temperature:

Lighting:

Other Comments

Testimonials From Taste Panel

Taste panel testing and individual taste samples of fresh, fresh-frozen and Indian candy provided excellent feedback. Testimonials included:

Leanne Manuel, Upper Nicola Band, Merritt, BC. “The (hot smoked candied) salmon tasted very close to my grandmothers traditional recipe. I’m really impressed.”

Employees at Matterhorn Bakery, Westbank, BC. “We gave your taste test sample of (hot smoked candied) salmon to the owner, and she ate the whole package right in front of us! She liked the salmon so much, that she didn’t get a chance to give us a taste! Yes, she wants to buy your salmon for our bakery!”

Executive Sous Chef, Jonathan Thauberger, Sonora Room Restaurant, Burrowing Hill Winery, commented that the frozen Okanagan sockeye salmon is, “Very delicious!”

Executive Chef, Chris Remington, Hooded Merganser, Penticton Lakeside Resort, commented that the frozen Okanagan sockeye salmon tasted, “Awesome! He is very happy with the way the (Okanagan fresh and frozen) salmon taste, and that his customers are enjoying it!”

Executive Chef, The Black Iron Grill and Steakhouse, Penticton, BC, commented that “We really liked the taste of the fresh Okanagan salmon! When can we order some more for our restaurant?”

Executive Chef Davin, Two Eagles Golf - 19 Restaurant, Westbank, BC, commented that “They enjoyed serving the hot smoked salmon in two recipes. One of the recipes had the smoked salmon served with red pepper, seasoning, and garnishes. The other recipe had the smoked salmon mixed in a pate on fresh brushetta bread. His favourite is the (Okanagan salmon) pate served on brushetta bread!”

Cam Tucker – Meat Department Manager, Choices Markets, Kelowna, BC. “I served the (hot smoked) salmon to three of our managers in the store. We all liked the taste, and want to sell your Okanagan salmon in our retail store!”

Chef Jeff Peterson, Salty’s Beachouse, Penticton, BC, commented that “He liked the taste of the fresh (Okanagan) salmon, and would like to serve it again. It tasted great!”

Executive Chef Micheal Lyon, Hotel Eldorado, Lakeside Dining Room, Kelowna, BC commented that “liked the taste test, and very interested in purchasing the salmon. We serve high volumes of salmon in restaurant and banquets! We will contact you in the New Year after their busy Christmas season.” He thanked us for offering him both frozen and hot smoked salmon to taste test!”

Camille Rivard-Sirois, ONA Fisheries Biologist, Penticton, BC. “For your info I shared the salmon with several friends and family and I had amazing comments from everyone on both frozen and fresh products. Everyone enjoyed. Thanks and have a beautiful day.”

Jamie Pepper, ONA Fisheries Biologist, Westbank, BC. “We barbecued the (frozen whole Okanagan) salmon. The flavour was light and nice! We quite enjoyed it!”

What we learned from the market questionnaire and taste panels:

- ↳ Majority of respondents did not know that the Okanagan River supported salmon or sockeye salmon,
- ↳ Chefs generally purchase 10-25 salmon per week, during June through October, closed during the winter season,
- ↳ Freshness was highest quality attribute,
- ↳ Respondents perceived that local caught fish would increase sales by 10% to 30%,
- ↳ Restaurants and retailers preferred fillets, pin bone product with open window, recyclable containers (kraft fiber rather than Styrofoam),
- ↳ Restaurants are willing to pay \$5-\$6 per lb fresh, gutted versus food service wholesalers willing to pay \$3.50 per lb fresh gutted,
- ↳ Majority of restaurants have limited freezer capacity and required 2 deliveries per week,
- ↳ Keywords in order of importance for promoting Okanagan sockeye: 1. 'Wild' salmon story, 2. Freshness, consistency, high quality, at reasonable cost 3. Local caught (meet 100-mile challenge), 4. Safe/clean product, and 5. Cultural revitalization
- ↳ Outreach material (ie. Rack card and taste demos) needed to overcome the misperception of 'blush, lake caught sockeye', using testimonials from executive chefs, and include preparation techniques for cooking convenience. As noted by chefs, when frozen, the meat of the freshwater lake Okanagan salmon will be softer or tender, as compared to an ocean caught sockeye salmon, and this is all good, when prepared properly!
- ↳ In terms of product form, customers prefer: fresh to fresh frozen when fish is in-season, and will readily switch to fresh frozen, fillets, pin-boned products, pending seasonal supply,
- ↳ Chefs observed a softening of the flesh, and preferred the firm, texture of fish caught in July and early August compared to later August or early September caught sockeye,
- ↳ Chefs preferred the 2-4 lb, pan-size of Okanagan sockeye for portion serving, compared to food retail outlets which preferred 4-6 lb graded sockeye,
- ↳ All respondents preferred skin-on-sockeye fillets versus skinless,
- ↳ The majority of chefs preferred to do their own custom smoking versus receiving a finished product supplied by ONA,
- ↳ Agents prefer pack sizes of 5 and 10 fish per container.

Product Recipes for Sockeye Salmon Roe (Ikura)

A literature search for the potential of salmon roe curing and presentation (known as 'Ikura') was insightful. With the Osoyoos Lake Sockeye harvest practices developing, and looking to continue into future years; the development of industry to make use of all parts of the fish is

essential. In the case of the salmon harvest, the development of a salmon roe industry surrounding the local harvest would make use of the roe which is currently being discarded or given away with the whole fish.

This innovative method of reducing waste and developing additional business will add a new level to the harvest marketing and sales. Salmon roe was historically a very common fall food choice in Japan and with the current globalization of what was once seen as a large planet this recipe has spread. There are two distinct but similar methods for serving salmon roe, these are Ikura and Sujiko. The difference between these two lies in the removal of the skein or egg sac. Ikura is served as loose eggs while Sujiko is served as a contained item with eggs remaining within the skein. Generally Sujiko is sought after by caviar connoisseurs while Ikura tends to be a more generally enjoyed dish. These products gain top dollar in the market and there is little to no development within the BC interior for Sockeye products, including but not limited to Caviar.

Preparation of *Ikura no shio-zuke* (Salted Ikura):

Recipe One

1. In a large mixing bowl pour 3 liters of boiling (100°C) water and 1 cup of kosher salt and mix until salt has dissolved.
2. Rinse the Sujiko (roe in skein) to remove blood and any other material and then gently submerge it into the brine mixture for about 30 minutes to cure. During this stage you should observe the skein turning from clear reddish orange to a cloudy orange color.
3. After 30 minutes have passed remove sack from the brine mixture and rinse under warm water. Be sure to keep brine solution for later steps.
4. The next step is the removal of the skein which should be done in a large strainer that is set in another large mixing bowl. This step can be quite tedious as there is not only the surface membrane but also multiple membranes throughout the sack, all of which must be removed.
5. Rinse the eggs repeatedly to insure there is no membrane or other material left behind.
6. The now clean cloudy orange eggs can be poured back into the original brine mixture and observe them transform into a beautiful clear orange coloration signifying a now finished product.
7. Pour the *Ikura no shio-zuke* into clean glass jars and immediately place in the refrigerator. The Ikura has a refrigerated shelf life of 7-14 days; however they are better served fresh (within day 1 or day 2).

Recipe Two

1. In a large bowl filled with hot water (45°C to 65°C) gently place a single Sujiko to soak for a few minutes. This step will allow the eggs to toughen slightly as well as turn from a reddish orange to a cloudy orange coloration.
2. Now take the Sujiko and remove the skein membrane gently with your hands, this step can be quite a long process but it is very important to not rush things or the Ikura could be impure and or full of crushed eggs!

3. With the clean eggs at the bottom of the bowl and the membrane pieces floating at the surface you can now pour out the water leaving nothing but the eggs.
4. This step calls for the addition of a scant teaspoon of non-iodized sea salt to the roe where it can be gently mixed together by hand. A color change should be observed immediately which indicates a 30 minute refrigeration time.
5. After refrigeration add 1 more teaspoon of salt and once again gently mix it with your hands.
6. Pour the salted roe into a sieve and place the sieve back into the bowl and into the refrigerator for 1 hour. This step will drain any remaining liquid, allow roe to become “plump” and reveal an immaculately clear orange batch of Ikura.
7. To insure the right flavor taste an egg and if too salty briefly rinse with cool water and drain for 15 minutes in fridge.
8. Pour the Ikura into a glass jar for refrigeration and store for up to two days.

Preparation of *Ikura no shouyu-zuke* (Ikura in soy sauce and sake):

1. See steps 1 through 4 of recipe 2
2. In a saucepan bring 6 parts soy sauce and 4 parts sake to a boil and remove from heat to cool.
3. In a container containing the Ikura pour just enough soy/sake mixture to cover the roe and place in a refrigerator to let marinate for 2 hours to half a day.

An Evaluation of Eco-Labels & Green Marketing by ONA

As part of the socially-responsible marketing approach, ONAFD completed a global search of eco-labels and qualified a short list for ONA to consider (<http://foodceo.com/articles/2010/09/eco-label-quiz-how-many-do-you-recognize/>). The goal is select and use an eco-labels on packages, boxes, and on menus as a form of transparency by proxy of best practices (how harvest, prepared, processed) and meet certain food quality and safety criteria.

The eco-label that is of most recognized by the food service industry throughout the Okanagan is Oceanwise. Ocean Wise works directly with restaurants and markets, ensuring that they have the most current scientific information regarding seafood and helping them make ocean-friendly buying decisions. The Ocean Wise symbol appears on menus and display cases, making it easier for consumers to make environmentally friendly seafood choices. Other eco-labels that have less marketing appeal to the foodservice industry include Fishwise, and Salmon Safe. Among retailers we interviewed, the eco-label promoted by the Marine Stewardship Council is the most widely accepted.

With the recent boom of going green gnawing at the heels of industry the question of marketing and in this case green marketing comes to mind. With marketing currently revolving around the development of strategies to target the consumer, we now see green marketing developing in the same sense. Green marketing is generally, the development of strategies to target the green or environmental consumer (McDaniel, 1993). Within each general consumer the company encounters there may be a green consumer waiting to be tempted to the surface. In looking at all consumers as potential environmental consumers companies face the task of convincing them to test and in turn develop a preference for the green product. This step is where many companies run astray, by over emphasizing environmental attributes over functional attributes.

J.A. Ottman (2006) suggests that this over emphasis can be described as “green marketing myopia”. With companies often placing all marketing emphasis on green attributes these products regularly fail when faced with competition from traditional products. Also leading to this downfall, many companies going through a greening process fail to allow the green concept to filter through all aspects of the organization (Polonsky, 2001). When consumers are faced with the inconvenience or potential inconvenience of this change many choose to stay with what they know. Unfortunately this leaves the environment losing in a battle between attributes and greenness. In order to avoid this green marketing myopia companies must develop strategies which distinctly fit their needs. The solution here is often found through increasing emphasis on the non-green attributes which can sometimes lead to complete disregard of the green factor as seen from a marketing angle. This strategy must target the needs of the consumer by displaying the product as comparable if not better than the non-green option.

In order for green marketing to be successful it must fulfill two objectives. The first marketing objective is to show an increase in environmental quality as a result of the change in product and the second is simply consumer satisfaction. These objectives allow companies to develop an outline of what the consumer wants versus what the green product offers, thus providing the balance which is lost through myopic marketing design. Another successful strategy in avoiding green marketing myopia is in the use and maintenance of the Three C’s of consumer value positioning, calibration of consumer knowledge and credibility of product claims (Ottman, 2006).

Consumer value positioning assures that the strategy showcases the consumer based value of the product by emphasizing its benefits. Five commonly referenced benefits are efficiency and cost effectiveness; health and safety; performance; symbolism and status; and convenience (Ottman, 2006). From these benefits consumer based value can be determined for the product(s). In the case of “calibration of consumer knowledge” educational marketing is used as a means of attracting consumers to the product. In this way the consumer will be told to connect the green benefit with desirable qualities. By educating the consumer they lose the uncertainty which may have initially discouraged the purchase. Lastly “credibility of product claims” is very important. The lack of credibility in green product claims historically has led to a generally negative disposition towards green innovation (Ottman, 2006). For companies to claim the product is green they must embrace greening throughout the manufacturing process as well as maintain the ability to prove that not only is the product better for the environment but the process with which it is created is not lacking in environmental consideration. Through consistently acknowledging the Three C’s green marketing can result in triumphs often without the consumer connecting the product they are using with environmental benefit (Ottman, 2006).

With marketing myopia out of the picture there is still the issue of lack of sales for environmentally friendly products. This can unfortunately be connected to the lack of acknowledgement of the Three C's during the initial years of green marketing. With products being produced and marketed as green but companies not showing environmental benefit or product integrity during these beginning stages a negative view was developed. A view of green products as having lower quality often at a higher price to the consumer rose from these controversial initial stages. This negative view has managed to stick, causing a new challenge for green products (Ginsberg, 2004). The good news is the stigma associated with green products has slowly been diminishing over time. With new views proving not to be a passing fad and environmental awareness on the rise these views are often easily over taken (McDaniel, 1993). There are multiple ways to conquer these historic beliefs with two methods standing out above the rest. These methods lay in successful marketing with use of the Three C's and eco-labeling.

By making use of the Three C's to show consumers that the product will not only benefit the environment but also benefit them personally, as well as proving the product maintains the quality they expect, success of the product is much more likely. In the case of eco-labeling the idea of adding something to the product to show that a trusted organization has tested and agrees that the product is eco-friendly can show benefit to the company (Ottman, 2006). Generally eco-labeling allows a company to gain marketing exposure with an already known company. This exposure and connection between the new product and the environmentally minded company allows the product to leap directly into the known status, without fighting through the challenge of overcoming the negative views itself. In accomplishing this progression, the product not only shows a direct benefit in sales but also develops a support group within the eco-label.

When this information is connected to the current Sockeye salmon marketing program being developed by the ONA, this good news conservation story is worth sharing. This marketing endeavor is directed primarily at the "green chic" attitude, connecting grassroots programs and local products with the status held by award winning wineries and world renowned chefs. In producing this connection and distributing free samples, the ONA marketing team has been able to determine requirements, comments and even complaints about the product and have been able to determine accurate customer value positioning analysis. Calibration of consumer knowledge has been satisfied through the distribution of educational pamphlets which discuss local issues and status as well as traditional beliefs and the upcoming challenges of this delicate fishery. To satisfy credibility of product claims previously mentioned free samples have been distributed to those interested in this new green product. This initiative to showcase the product as well as prove to the consumer that cost effectiveness; health and safety; performance; status; and convenience are all met is producing excellent data to base future marketing endeavors on (Ottman, 2006).

Citations:

Ottman, J.A., E.R. Stafford and C.L. Hartman. 2006. Green Marketing Myopia. *Environment: Science Policy for Sustainable Development* 48: 22-36.

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McDaniel, S.W., and D.H. Rylander. 1993. Strategic Green Marketing. *Consumer Marketing* 10: 4-10.

Polonsky, M.J., and P.J. Rosenberger III. 2001. Reevaluating Green Marketing: A Strategic Approach. *Business Horizons* 44: 21-30.

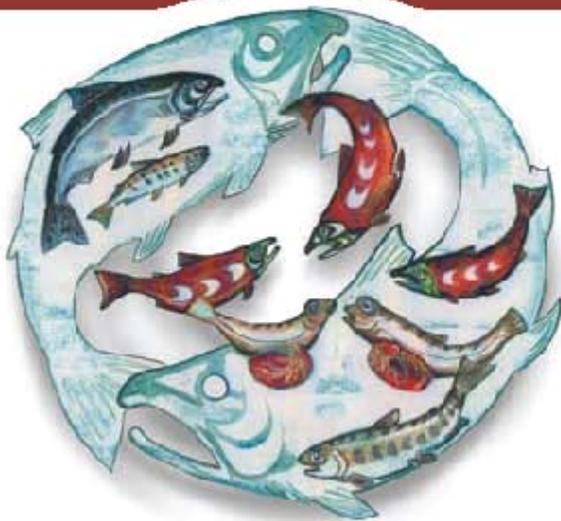
Promotional Tool Kit

Rack Cards

ONA brand imaging was a key marketing activity. An Okanagan Sockeye Salmon rack card was designed and made camera ready for 2010. Over one thousand rack cards have been circulated to restaurants, food agents, and special interest groups at various fund raising and special events. The rack cards (8" x 3"), printed in colour, tell our story and help people connect with what Syilx people consider - a limited edition salmon! Okanagan salmon always has been and still is an integral part of the culture of the Okanagan Nation. Knowledge is passed down through Chaptikwl. Okanagan Nation Alliance enjoys combining the two knowledge forms of western science and traditional educational knowledge to build a clearer and more complete picture of the environment for its proper care.

As printed on the ONA Okanagan Sockeye rack card that we gave to our customers and clients, it comments that "The Okanagan Nation is working on an initiative to re-establish a sustainable population of sockeye salmon in Skaha Lake and Okanagan Lake, part of their historic habitat. Although the Okanagan Nation salmon fishery has been greatly reduced, the Syilx people still celebrate the Salmon Feast. This feast, held at one of the Okanagan Nation fishery camps at Okanagan Falls, honours the salmon and the sacredness of the river. It celebrates the culture and history of the site and promotes awareness of the efforts being made to increase the numbers of sockeye in the Okanagan River." Revenue generate from the 2010 fishery was re-invested for future endeavors to revitalize traditional fisheries protocols and fish and fish habitat conservation.

OKANAGAN SOCKEYE



OKANAGAN SOCKEYE SALMON TODAY

The Okanagan River is the largest of three remaining sockeye runs in the Columbia Basin.

- of the total sockeye return, over 80% are Okanagan stock
- since the 90s, the Okanagan sockeye has fluctuated between 5,000 and 130,000
- sockeye, chinook and steelhead are the only remaining anadromous salmonid populations in the Okanagan Riversystem
- sockeye spawn primarily in the unchannelized or natural portion of Okanagan River, just south of Waiytle Bluff

The Okanagan Nation is working on an initiative to re-establish a sustainable population of sockeye salmon in Skaha Lake and Okanagan Lake, part of their historic habitat. Although the Okanagan Nation salmon fishery has been greatly reduced, the Syilx people still celebrate the First Salmon Feast. This feast, held at one of the Okanagan Nation fishing camps at Okanagan Falls, honours the salmon and the sacredness of the river. It celebrates the culture and history of the site and promotes awareness of the efforts being made to increase the numbers of sockeye in the Okanagan River.

Kt cp'alk' stini
A Syilx word meaning "cause to come back".

captikw'it

From the beginning of time, the Syilx people fished, hunted and gathered plant foods throughout this valley and other parts of the territory. Okanagan legends tell us that in the beginning, *son'ik'ip* (Coyote) brought the sockeye salmon up the Columbia River. First, he offered the salmon, in exchange for a wife, to the Okanagan people who live on the Similkameen River. They refused, and no salmon swam into their river. Because the Syilx people who live along the Okanagan River did give Coyote a wife, the sockeye salmon have been swimming up the Okanagan River ever since.



MEMBER COMMUNITIES OF THE OKANAGAN NATION

- Osoyoos Indian Band
- Pertuison Indian Band
- Upper Nicola Band
- Lower Similkameen Indian Band
- Westbank First Nation
- Upper Similkameen Indian Band
- Okanagan Indian Band
- Colville Confederated Tribes

FOR MORE INFORMATION CALL

Okanagan Nation Alliance Fisheries Department:

..... 250.707.0095

Toll Free 1.866.652.9609

Fisheries and Oceans Canada 253.851.4950

TO REPORT FISHERIES AND WILDLIFE VIOLATIONS

..... 1.800.451.4326

Ministry of Environment 253.490.8200

www.okanagannation.com



Figure 12: ONA rack cards

In addition, the ONA is proud to present a logo designed by June Paul, a member of the Penticton Indian Band, fisheries technician, and renowned artist which will be used for our 'Responsible, Fair Trade' campaign. Similar to the fair trade concept, our goal is to revitalize traditional trade practices among First Nations communities and develop respectful, commercial ventures among like-minded, small producers.

Promotion and public education-outreach for an ONA led initiative is a large component of this project. Conventional promotional methods such as *news print, television (CHBC news), community bulletins, chief and council meetings, and catch monitors (word of mouth)* was tested in 2010.

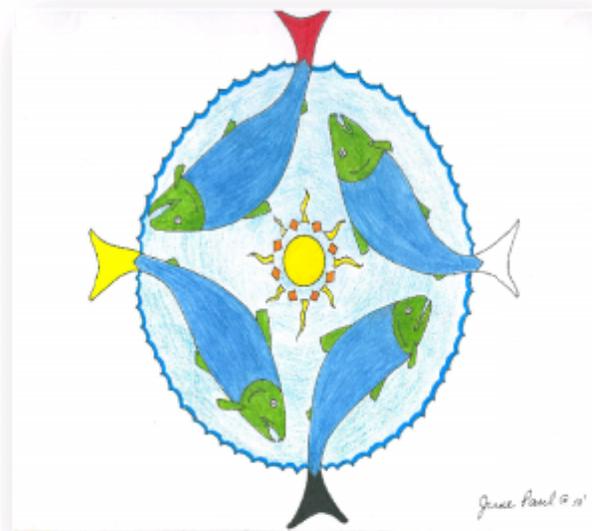


Figure 13: Logo design by June Paul, ONA Fisheries Tech

Emerging social marketing trends and mass appeal of on-line presence using interactive media (blogs) is anticipated to produce dividends for any small producer wishing to make a 'big-impression'. ONA enlisted experts, implemented trials and designed the concept plan for exploring blogging and list servers.

Blogging: similar to that of a website however; a blog has an interactive twist to it. In a blog the writer, ONA marketer, and the reader, possible consumers, can have interactive conversations based off of the discussion posted by the writer. As well the readers on blogger.com can also discuss with and invite other readers to join in. Blogs can be a great place to start your market researching due to the fact that any reader could be a potential consumer. An ONA blog could prove to be a valuable tool in our marketing research, whether we use it to simply probe the public for ideas, advertise our products and research or perhaps even redirect them to an online store. A key success in any blow out there is "generating opinion", without opinion or feedback it is hard to gauge the success of anything. Blogging opens up a host of new ways of getting our name out there and if we do it in a "green" manner then we are there!

The blog rationale - we need to be on the cutting edge of social media, this can be linked to twitter, facebook, etc. It will allow us to reach that certain percentile of the market that live and breathe online shopping. If we could reach them we could not only generate a new audience but also learn from the comments they leave. With links to our website, office phone number and future exploits it has the possibility of generating capital at a low cost. These free and low cost blogging domains also leave openings for monetization and advertising.

Measuring Success: You can track the hits on the blog as well by the volume of followers. Using polls and questionnaires, that can be used on our blogger.com site; we have the ability to measure our audience. A blog can go "Viral", that is to say it can generate an audience by having

reader, who like the material, send the blog to their friends, family, etc. twitter or facebook it, or simply post a comment that furthers the discussion on the topic.

Next steps: The ONA blog, Okanagan Sockeye Reel's on blogger.com <http://okanagansockeyereels.blogspot.com>, is at this time more of a framework lacking substance in the form of original pictures and graphics, information concerning our organization and a real "lake to plate" feel for marketing purposes. As well the blog is only viewable by the author, but upon review can easily be launched and made accessible to all blogger.com subscribers (see appendix for username and password). One of the best parts of blogging is that it is of minimal cost and can even be a platform for advertising however the audience can essentially only come from the blogger.com directory.

For 10 dollars a year we can drop the okanagansockeyereels.blogspot.com search and buy okanagansockeyereels.com which allows for direct browser searches/hits. In making this purchase we could generate infinite times more traffic for our cause every time online surfer's type; Okanagan, sockeye, etc. There is also the possibility of using other free of charge blogging domains, like wordpress.com, to reach their subscribers.

Web List Servers – e-networking on a variety of industry list servers. With the ONA being on the verge of delivering Okanagan sockeye products to a bigger market we need to find out if we can generate any business from online sources. *List Servers*, or online business directories, will enable us to see who is interested in our products and from that information make an intuitive decision to either bring our story to their door or allow the consumer to make the next move. A list server can be quite an effective tool for reaching customer/companies at mass levels via the online market.

What is a list server? A list server was designed for online use where clients/patrons subscribe to an online business directory (the list server) to gain access to a multitude of applicable companies that may possess what they are looking for. List servers in general have a basic business directory that subscribers can search through but they can also send out messages, newsletters and alerts to these subscribers. At times it can be hard to measure how effective marketing is online as traffic can be overwhelming, a list server solves this issue by discerning between potential customers from pseudo-traffic.

Which List Server is Right for the ONA? There are vast numbers of list servers out there that provide information on companies that solicit any given product, for the ONA that product is our Okanagan sockeye salmon. For this reason we have taken the liberty to "short-list" some appropriate seafood list servers that may better serve this organization.

Sites like BC Seafood not only provide space for online advertising but also promote the eco-certification of Marine Stewardship Council (MSC) which is applicable to five BC species of fish, including the sockeye salmon. The MSC is the only fisheries eco-certification that is on par with the United Nations' Food and Agriculture organization (FAO). Registration with a site like BC Seafood is free; however it is possible that unless we are fully certified as a sustainable fishery we may be rejected. Other sites like Sea-Ex, Aquafind, FIS and World Seafood Directory all offer similar benefits at variable costs. Each one of these list servers have thousands of

subscribers and daily hits that show potential for gaining an audience for the ONA. Although there are those free options out there they do not provide the coverage that paid services do. With paid subscriptions we can sell our image much more effectively, by branding our products and fully telling our story.

To date, ONA has registered with two list servers, as follows:

1. <http://www.fis.com/> (No username or password required)



Description
Categories

The Okanagan Nation Alliance Fisheries Department (formerly the Okanagan Nation Fisheries Commission, or ONFC) was established in 1975 under the direction of the Okanagan Nation Alliance and member communities to take a role in the management of fisheries and aquatic resources. The principal mandate of the ONAFC is the conservation, production, restoration, and management of indigenous fisheries (anadromous and resident) and aquatic resources within Okanagan Nation Territory. On a watershed level, the Okanagan Nation Territory includes the Okanagan Basin, the Similkameen Basin, and the Kettle Basin, as well as parts of the Columbia Basin (Columbia River and Arrow Lakes) and Lemaho Basin (Shuswap River and Nassau River). The ONAFC works to provide technical fisheries assistance for the Nation and its seven member Bands and acts as a liaison with federal and provincial fisheries agencies.

Address: 20550 Silamou Lake Road,
City: Westbank
State: British Columbia (V1T 1M4)
Telephone: 41 (250) 217-0195
Fax: 41 (250) 217-0166
Homepage: [Link to Homepage](#)

Location:

Key people & contacts:

Mr. Rawlin Wright
 Phone: 41 (250) 707-0097
 Direct/Fax: Ext: 104
rwright@sylix.com

To update or add a personal profile please send an email to contactus@fis.com

[Share This](#)
 Print

Figure 14: ONA Fisheries listed on server www.fis.com/

2. <http://aquafind.com/index.php> (Username: Okanagan Nation Password: sylixsockeye)

Other Options:

There are also List servers out there that provide free and charged services that enable businesses to enter all of their existing clientele into software that can then relay any advertising/product information via email. ListServ is list serving software that is available for free, assuming client list is less than 500, and has free anti-virus scanning ensuring that all messages that go out aren't thrown into people junk folders. These are just a few advertising options for the ONA to consider.

Links: ONA Blog with Username & Password

<http://okanagansockeyereels.blogspot.com>

Username: Okanagan_nation@hotmail.com

Password: syilxsockeye

Links: Seafood List Servers

Aquafind <http://aquafind.com/>

BC Seafood <http://www.bcseafood.ca/index.php>

Sea-Ex <http://www.sea-ex.com/>

FIS <http://www.fis.com/>

World Seafood Directory <http://www.worldseafooddirectory.com/>

Links: List Servers

LISTSERV <http://www.lsoft.com/products/listserv.asp>

Lyris <http://www.lyris.com/>

Table 7: List Server Pricing

FIS	Bronze Package	Silver Package	Gold Package
Monthly	\$65.00	\$120.00	\$185.00
Yearly	\$785.00	\$1425.00	\$2220.00
Sea-Ex	Bronze Package	Silver Package	Gold Package
Yearly	\$200.00	\$465.00	\$660.00
Aquafind	Logo	Banner	Featured product
Monthly	\$20 - \$100	\$100 - \$150	\$100.00
Yearly	\$240- \$1200	\$1200 - \$1800	N/A

MARKETING PLAN

The term *marketing mix* refers to the primary elements that must be attended to in order to properly plan and launch a product. Also known as *The 4 Ps of Marketing* (Product (Services), Price, Place (Distribution Channel) and Promotion).

How we differentiate our product or service from that of our competitors and then determine which market niche to fill is defined as positioning. Positioning helps establish our product's or service's identity within the eyes of the purchaser. A company's positioning strategy is affected by a number of variables related to customers' motivations and requirements, as well as by its competitors' actions. Before we position our product or service, we needed to answer the following strategic questions about our market and our products or services:

What's our customer really buying from us?

How's our product or service different from those of our competitors?

What makes our product or service unique?

Positioning:

Our intent is to be recognized in the Okanagan for building relationships among our customers and suppliers, developing resilience by serving local and distant market using eco-friendly practices & technologies, and making a conscious effort to share the wealth among our community known as responsible, 'fair' trade.

We aim to create and adapt fisheries business clusters that will add social, economic, and environmental benefits for today and tomorrow. Co-operative ventures involving joint research and product development, joint purchasing agreements, cluster related marketing efforts, and demand led skills and training will be pursued by ONA fisheries in alliance with other first nations fisheries organizations and any organization that shares and demonstrates our principles.

In addition to creating strategic alliances, new robust models of fisheries are being explored which integrate commercial fishing and fish tours.

Our **short term fisheries and trade distribution goals** is to be recognized by **select** high end restaurants, bistros, specialty delis, caterers, conference centers and health food retailers, for the following:

- ↳ Supplier and direct marketer of value added fish products including wild, fresh (lake-to-plate), safe, custom processed salmon branded with the RiverWise Eco-Label, and Responsible Trade certification;
- ↳ Creating synergy and distributing 'Green, Fair Trade' foods and beverages in alliance with rural communities and small producer groups;
- ↳ Promoting and fund raising for the conservation, protection and enhancement of fisheries, habitat and cultural values in the Okanagan Region;
- ↳ Building a 'virtual' store front which relies on drop-shipping services to and from anywhere in Canada.

Our **long term fisheries goal** is to align with other sectoral clusters of agri-tourism in the Okanagan territory. Fish tourism is built on the concept of instilling the appreciation and enjoyment of the natural environment in all of its many forms, along with any associated cultural features that come attached to it. Fish Tourism may vary in its activities but generally will be found to involve the following: the embarkation of persons (who are not members of the crew) on fishing vessels for recreational-tourism purposes,

- The accommodation, catering and general provision of special tourism services associated to fishing, fisheries enhancement, related customs and traditions.

An integrated approach to Fish Tourism, the focal point of its activities is to promote the fishing tradition and traditional fisheries culture through the following form:

- The conduct of boat excursions along the lake
- Watching the professionals perform sustainable fishing activity
- Introduction to the eco-friendly traditional and classical fishing gear
- The provision of freshly caught lunch on board or at shore
- Game fishing
- The dissemination of information about the freshwater environment, landscape, and the biodiversity.

Our Customers and Market (Relationships)

Our target market are customers (retail and food service) that are willing to pay premium prices for a high quality, safe, customized product that supports social entrepreneurship, and biological and cultural conservation. Rather than sell a commodity, we are sharing a story. Customers appreciate that salmon are selectively harvested, with attention to the welfare of the fish, and processed using the highest health and wellness standards, plus just-in-time delivery. Fish destined to the food markets within the Okanagan territory include the following sectors, schedule, and existing clientele:

Table 8: List of existing clientele and schedule

Sector	Schedule	Pack Size (range)	Firm (marriages)
Winery Bistro	May-December (peak July-Sept)	5-10 per week	Mission Hill Family Estate, Summerhill, Burrowing Owl, Hillside Estate, Quails Gate, Summerland Pyramid Winery
Resorts/conference Center	All Year Long (peak holidays)	20-30 per week	Nk'mip Cellars, Passa Tempo, Lost Moose Lodge, Nk'mip Desert Canyon Golf,
Specialty Foods Retail	All Year Long (peaks holidays)	50-100 per week per store	Kekuli
Restaurants (Executive Chefs)	All year(peak holidays)	10-20 per week	Hood Merganser, Salty's, Black Iron Grill

Potential clients include:

Ricardo's Mediterranean Kitchen, Gasthaus on the Lake, Old Vines Restaurant, Amante Bistro, Zias Stone House Restaurant, Victoria Road, Deli & Bistro, Sage and Vines Bistro, Bogners of Penticton, Cabana Bar & Grill, Theos Restaurant, Fishermen Direct Seafood, Buy the Sea Seafood Market, Cozy Bay Seafood Café, Tbones, Choices Markets, and Natures Foods.

New ventures involving Spirit Ridge, and the En'owkin Centre provide opportunity to develop fish tours. Cross selling at Spirit Ridge will provide guests the opportunity to explore Osoyoos Lake, learn about the landscape, the lake, and the life of fishers from traditional interpreters and ONAs fisheries technicians. Knowledge keepers and language interpreters at the En'owkin Centre can add value by sharing stories of the Land, and media that expresses traditional and modern Native art to engage the hundreds of thousands of tourists that travel through the Okanagan. Fishing camps, 'Gaffing' platforms, and a communal dry rack, smoking shed, are but a few of the possibilities that tourists could enjoy when they enjoy to the Okanagan.

Market trends suggest, per capita salmon consumption is estimated at 1 kg/year, falling prices expected to continue given the competition from farmed salmon, however, emphasis on value added product should attract further market segmentation.

Competitive Companies

Main sources of fish and seafood to the Okanagan Region include the following: Sysco (Kelowna, conglomerate of Neptune Foods, GFA Associates), Cod Father (Kelowna), Ocean Food (Vancouver), Costco (Kelowna).

Sysco is the leading distributor of seafood products to the food service industry in the Okanagan (>50%). Sysco is the global leader in selling, marketing and distributing food products to restaurants, healthcare and educational facilities, lodging establishments and other customers who prepare meals away from home. Its family of products also includes equipment and supplies for the foodservice and hospitality industries. The company operates 180 distribution facilities serving approximately 400,000 customers. For fiscal 2010, Sysco reported sales of \$37.2 billion and net earnings of \$1.2 billion. While the business environment in fiscal 2010 was challenging, Sysco associates performed at a high level with a strong focus on growing cases, reducing costs and improving productivity. As a result, fiscal 2010 net earnings represented Sysco's most profitable year in its history. Additionally,

- Operating income for the year was \$2.0 billion;
- Diluted EPS was \$1.99;
- Cash flow from operations was \$885 million; and
- Return on invested capital was 19%.

Sysco Kelowna Ltd. distributes food and related products to the foodservice market. It carries a range of produce, dairy, dry groceries, meat, seafood, and frozen foods, as well as paper goods and cleaning supplies; and beverage dispensing systems and dishwashing systems. Sysco

Kelowna Ltd. was formerly known as Sysco HRI Supply and changed its name to Sysco Kelowna Ltd. in January 2006. The company was founded in 1978 and is based in Kelowna, Canada. Sysco Kelowna Ltd. operates as a subsidiary of Sysco Corporation.

Sysco Kelowna Ltd. services British Columbia in the Thompson - Okanagan, as far north as Prince George, west to Merritt and Lillooet, and east to Revelstoke and Castlegar. Their warehouse receives bulk shipments from major manufacturers and packers and loads route vehicles for delivery to our customers. The warehouse is in operation seven days a week. Route and telephone sales personnel contact customers directly for their orders.

Cod Fathers Seafood Market is the second largest distributor of seafood in the Okanagan with an estimated market share of 30% of the market share in the Okanagan food service (<http://www.codfathers.ca/home/>). The firm is located in a business cluster of specialty food outlets, and sublets a small restaurant on site to prepare seafood dishes. Discount pricing, specialty cuts, cooking classes, and free use of equipment add value to their clientele, in addition to door-to-door delivery, and catering services. The store employs 15 staff, and reports sales between 1-5 million per annum (<http://www.profilecanada.com/>)

Product Mix

The following products and services are rated for opportunity of growth and market share in the short term.

1. High opportunity for growth and market share
 - ↳ Seasoned, custom labeled smoked salmon, fresh or frozen based on market research in 2010 and customer feedback;
 - ↳ Fresh salmon, value added fillet bones out, seasoned based on market research in 2010 and customer feedback;
 - ↳ Fishing platform for Osoyoos Lake and fish tours based on available equipment and emerging fishery;
 - ↳ Workshops for training/auditing new fisheries entrants on best practices based on over 10 years fisheries experience using all types of selective gears.
2. Low opportunity for growth but a strong current market position
 - ↳ Seasoned Ikura (roe) based on expert opinion
 - ↳ Flaked ice for produce and meat storage based on available equipment and interviews with Sysco protein representative (Jim Sinclair).
3. High opportunity but a lack of capacity
 - ↳ Use of waste by-products (i.e., backbones, heads, tail for nutraceutical and feedstuffs in the form of gelatin) based on market analysis reports from Alaska Seafood Marketing Institute (<http://www.alaskaseafood.org/>)
4. Low opportunity and a weak market position
 - ↳ Custom labeled canned salmon.

Product diversification is a key to surviving this highly competitive, low margin food industry. To add value, various services will be explored in the future which may include:

- ↳ Open source, virtual store allowing our suppliers to control inventory, and traceability of product while providing custom labeled, drop shipping services to anywhere in Western Canada.
- ↳ Fishing camps and interpretive platforms for observing traditional fisheries practices, and sharing in cultural events, language, and stories.
- ↳ By-catch processing of bass, carp (live fish), white fish for ethnic food markets based on expert opinion, needs to be market tested.

Target Market

- ↳ ***Okanagan Region***
- ↳ ***Fresh sales, consistency, high quality, freshness at reasonable cost***
- ↳ ***Market segment red and white muscle protein***
- ↳ ***Firm flesh texture, blush skin colour, and high oil/fat content***

Consistent trend over the last decade consumer are increasingly concerned with eating healthy. The low level of fat and content of healthy fats confers benefits against cardiovascular disease. Consumers lack self confidence to determine acceptable quality of displayed products and thus opt for alternatives. Fish purchase and preparation has also been discouraged by its associated smells thus discouraging fish consumption of households where children are present. This factor tends towards older consumers and may tend to lower fish in priority meal rankings of subsequent generations.

ONA Market Solutions

- Variety, seafood based ready-made meals in sauces,
- Cookery programs that help teach traditional and new ways to cook fish and seafood,
- Demonstrate improved manufacturing processes, packaging, hygiene, distribution, and storage to help improve product quality and safety at point of sale,
- Incorporate fully prepared dishes served with complementary ingredients
- Extending the shelf life using modified atmosphere packaging, and vacuum skin packs,
- Promote fish from pollution free waters, traceable from lake-to-plate,
- Smoked, dried, pickled, salted fish second fastest growing market highest growth segment among European and Asian consumers,
- Cross merchandising with seaweed and algae highest growth segment among Asian consumers.

ONA Competitive Advantage

- Access to only local, wild, resource, limited stock (ONA Model)
- Stock pre-dominantly age-4, optimal size and consistent size fish for restaurant trade, less fishy taste attractive to market wanting seafood, but not fishy.
- Branding image of quality harvest and handling ethics, funds allocated to conservation, and premium quality “lake-to-plate” in less than 1 day
- Shaping consumer perception of “blush” sockeye
- Create awareness of Okanagan sockeye, where none existed
- Direct marketing (ONA takes on broker function, which is key influencer with pricing schedules)
- Developing a cooperative venture with Fraser groups (tribal trade boundaries)
- Predictable harvest management – designated locations (standard, terminal fishery, no-mixed stock to receive ocean wise labeling), market driven fishery with predictable harvest schedule every 2-3 days, maintain handling practices of selective fishery-holding to maintain freshness.
- Improving the live haul and handling of fish
- Fine tuning daily harvests based on market requirements
- Synergy with other local Okanagan business build a strong network
- Established organization doing business over 10 years:
- High probability of securing grants for transfer technology and knowledge to local community
- Staff with HACCP training and seafood industry experience (> 10 years processing salmon)
- Strategic collaboration with executive chefs on how to prepare fish, and product development (cuts/recipes)
- Service Industry driving demand (Okanagan a destination for tourists, with high disposable incomes)
- Cross-merchandising with wineries (that buy into business principles)

Product and Pricing (Based on 2010 Okanagan Food Service Questionnaire)

Based on the intrinsic quality of Okanagan sockeye and local market behavior, the following product mix is recommended for product launches over the next three years.

Premium pricing, high quality (wholesale price):

- Fresh, head on, whole: \$3.30 to \$5.00 per lb
- Fresh, head on, gutted: \$5.00 to \$6.65 per lb
- Cold smoked, sliced: \$15.00 per 230 gram package or \$8.00 per 85 gram
- Hot smoked, belly pieces: \$2.40 to \$4.90 per 100 gram product

Promotion, Packaging and Distribution Channels (Place)

In-lake sockeye salmon stand out from the usual ocean sockeye generally marketed in their colour, texture and size. In the case of Okanagan Sockeye the average size once processed is approximately 1.3 kg (2.5 lbs). These fish have a slightly redder complexion meaning that they are not yet at their red-green spawning coloration but they have developed from the silver ocean coloration. This variation in color is termed “blush” and can be correlated with specific traits or qualities of the product. At this blush stage the flesh is slightly softer and lighter colored than that of ocean sockeye. This variation of sockeye has been compared to Pink Salmon in the texture and flesh coloration. Through marketing research it has been determined that this blush status sockeye is very flavorful and easy to manipulate once properly thawed. With multiple local chefs providing positive feedback of this product we are looking forward to the challenge of educating the general public on this local commodity and its individual characteristics.

How do we change consumer perception of blush sockeye? Answer: The Three C’s.

One must understand and communicate:

1. Consumer value position,
2. Calibration of consumer knowledge, and
3. Credibility of product claim.

“Consumer value positioning” assures that the strategy showcases the consumer based value of the product by emphasizing its benefits. Five commonly referenced benefits are efficiency and cost effectiveness; health and safety; performance; symbolism and status; and convenience. From these benefits consumer based value can be determined for the product(s).

In the case of “calibration of consumer knowledge”, educational marketing is used as a means of attracting consumers to the product. In this way the consumer will be told to connect the benefit with desirable qualities. By educating the consumer they lose the uncertainty which may have initially discouraged the purchase.

Lastly, “credibility of product claims” is very important. The lack of credibility could lead to a generally negative disposition towards river caught salmon. We must claim the product more sustainable, and for consumers to embrace this eco-friendly product, and we as a company must maintain the ability to prove that not only is the product better for the environment but the process with which it is created is not lacking in environmental consideration.

Customer Relations

A strong emphasize was placed on building client relations using three pillars of the Consumer Value Triangle. We understand that a customer makes a purchase according to what they value within the three pillars of the consumer value triangle

1. **The Product,**
2. **The Customer Service**
3. **The Company or Organization**

For this reason, we set up the ONA Okanagan sockeye salmon marketing and fish sales program to incorporate all three pillars of the consumer value triangle, so that our clients and customers will perceive value in all three areas. By targeting value in all three values, it is almost guaranteed that customers will purchase Okanagan sockeye salmon!

Pillar # 1: The product – We realize that when customers value the product, the product’s benefits, and value what sets the product apart from other similar products; then they are more likely to buy the product. We wanted to be clear about the benefits. What will the customer gain personally by buying our product or service? Will it save them time/make them money/improve their status? In what ways is it different from/better than our competitors’ products?

This was a great opportunity to incorporate the ONA’s value statement and mission statement into our Okanagan salmon marketing campaign. Our vision statement speaks of: “tradition, fish, and water for our people yesterday, today, and tomorrow”. Our mission statement speaks to: “conserve, protect, restore and enhance indigenous fisheries and aquatic resources within Okanagan territory”. In our value statements we show accountability where we are answerable to the communities, future generations, and partners.

For the ONA, we realized that it was important for our marketing campaign to reflect our vision, mission, and values by using **green marketing techniques**. We incorporated: lake to plate traceability; Okanagan Sockeye rack cards; pursuing our own “Riverwise” brand image synonymous with “Oceanwise” with Vancouver Aquarium; promoting responsible ‘Fair Trade’ label to pilot Traditional Trade Protocol and Ethics; and promoting at special events such as the Canadian Chefs’ Congress 2010 : Oceans for Tomorrow held in Duncan, BC.

We promoted Okanagan sockeye salmon as a wonderful product for the ONA to sell because of the following benefits:

- ↳ To ensure the long term health and stability of Okanagan sockeye salmon knowing that the ONA uses “best sustainable fishing practices”.
- ↳ To participate in the eco-friendly “100 Mile Challenge” reducing environmental impact.
- ↳ To support the ONA in its efforts to create local employment and develop Traditional Fair Trade Certification for local First Nations.
- ↳ Okanagan sockeye salmon is a healthy food choice containing omega 3 fatty acids, vitamin D, vitamin B3, vitamin B12, vitamin B6, and high quality protein.
- ↳ Traceability – Lake to plate.

Pillar # 2: The Customer Service – We realize that when customers value the friendly, knowledgeable, excellence in customer service agents; then they are more likely to buy the product.

At the ONA, we take extra care to:

- ↳ Go above and beyond any of our customer’s expectations.
- ↳ Engage our customers in comfortable conversation, with a light positive tone.

- ↳ Use research and observational skills for assessing and adapting to a customer's philosophy, vision, shopping profile, mood, tempo and motivation.
- ↳ Develop trust and identify hidden opportunities to add on to close more sales and build more profit.
- ↳ Watch for non-verbal clues that signal how the sales cycle is progressing.

It was important that we be successful right from the start, so we conducted a market survey for our chefs at high end restaurants. We delivered complimentary goodwill fresh, frozen, and hot smoked salmon to the chefs, asked the chefs to conduct a taste test, and give us feedback. The chefs had an opportunity to purchase the salmon and serve it on their menu if they desired.

Our chefs gave us valuable comments, and the ONA team was able to come up with real time innovative solutions! Their comments were as 'good as gold', allowing us to overcome their customer concerns and objections, and adjust our marketing techniques accordingly. Through our discussions, we could build rapport, spot when the chef uses buying signals that say, "I'm ready", and master the art of closing the sale.

"Rapport is one of the most important components of unconscious human interaction. It can be thought of as, being in "sync" or being on the same wavelength as the person you are talking to. Rapport simply means making the other person feel comfortable with you. As you know, selling is based mainly on two concepts. Those concepts are trust and liking someone. When you are building rapport, you are doing both. Remember the first words your customer hears from you will likely set the tone for the remainder of the sales presentation. Take a few moments to make your customer feel at ease. It will pay big dividends in your career." (John Robertson is currently the Training Manager for a major wireless carrier and has over 30 years training and training management experience; <http://www.TinkerJohn.com>)

Pillar # 3: The Company – We realize that when customers value what the company organization represents or has to offer; then they are more likely to buy the product. Our Okanagan rack card provided a snapshot of the ONA's unique company history and initiatives that gave value to our customers, and gave our customers a reason why to buy Okanagan sockeye salmon from our organization.

At the ONA we value respect, teamwork, and professionalism. To promote these values, we used a selling technique called, "Building Personal Trade." Building personal trade is the long-lost art of customer appreciation and building loyal, life-long customers. Systems for providing outstanding, unexpected follow-up and follow-through were designed and used. This in turn created a shopping "adventure" that builds personal trade and increased referrals to our company!

One of the selling techniques we used was called, "**Confirmations & Invitations: Sending them off with a smile**". This marketing & sales technique includes the following:

Cementing the sale: how and when to thank our customer - Our team would follow up with our customers with personal one-on-one visits, courtesy phone calls, and emails. We would often inform our customers of the exciting new Okanagan salmon products that we were developing for the month ahead!

Using simple techniques for reducing returns - For example, if one of our chefs thought that the Okanagan sockeye were too small to use, we would happily give an extra larger salmon. This in turn developed trust and friendly customer relationships.

How to invite our customers back again, and really get them to come back - With our market survey, we asked our chefs, “What materials can the ONA provide you with to help you promote local Okanagan salmon, and customize it to your business?” This pleased our chefs that our company values collaboration with the community. The chefs and local businesses loved the fact that they were included in the creative process! We also built value into our company by introducing our customers and clients to key staff members to show them that we value open, transparent communication that shows we work as a team.

Word of Mouth – Executive Chefs our Best Strategic Alliance

Through testimonials from chefs directly and indirectly working with the program, insight into the product has been gained from a firsthand perspective. This distinct and detailed information has allowed us to determine the qualities that our Okanagan salmon product contains, allowing us to further develop and market the product for the unique salmon that it is!

General opinion on the Okanagan Sockeye stems from its distinctive taste and color when compared to ocean caught Sockeye. The realization that a salmon fishery exists within the Okanagan valley comes as a happy shock and surprise to many people. In addition, the fact that this fishery is sustainable creates a new level of interest in our sockeye salmon products!

Chefs and various other customers have been able to hear about the celebration success story of the Okanagan sockeye salmon; be informed on the salmon conservation initiatives and projects that the ONA supports; and taste for themselves a variety of salmon products.

Executive Chef Chris VanHooydonk: The Sonora Room Restaurant at The Burrowing Owl Estate Winery in Oliver, BC.



Figure 16: Executive Chef Chris VanHooydonk



Figure 15: Pan Roasted Okanagan Sockeye Salmon

Executive Sous Chef Jonathan Thauberger: The Sonora Room Restaurant at The Burrowing Owl Estate Winery in Oliver, BC.



Figure 18: Executive Sous Chef Jonathan Thauberger



Figure 17: BC Wild Okanagan Sockeye Salmon Lox on Baguette

Executive Chef Chris VanHooydonk, and Executive Sous Chef, Jonathan Thauberger, are proud to serve both fresh (when in season) and frozen Okanagan sockeye salmon from the ONA, on their summer and fall menu at The Sonora Room Restaurant at the Burrowing Owl Estate Winery in Oliver, BC. They have a passion to support the 100 Mile Challenge, and educate customers on the celebration success story of the sockeye salmon as supported by the ONA salmon conservation initiatives.

In the upcoming seasons, at Burrowing Owl Estate Winery, Chris plans to continue his progression in the culinary field. His food philosophy stresses the importance of supporting local growers, and offering a seasonal, organic when possible, ever changing menu throughout the year. Chris commented to us that, ***“Ideally it’s a lot less impact on the environment (to purchase locally caught wild Okanagan sockeye salmon from the ONA)”***.

As a chef Member of the Okanagan Chef’s Association, Chris feels it is equally important to share the knowledge he has gained in the last 14 years in his career. By mentoring and training the up and coming talent, he hopes to play a small role in the continuing progression of the industry.

This is one of the reasons why Chef Chris enjoyed attending and being a delegate at the 2010 Chefs’ Congress: “Oceans for Tomorrow” in Duncan, BC. (See below for more information.) Chris felt that it was important to educate the chefs across Canada that we now have an option for a wild sustainable sockeye salmon in the Okanagan, thanks to the efforts of the ONA and other partners.

On the Fall menu at The Sonora Room Restaurant, Chris and Jonathan serve ONA’s fresh-frozen wild Okanagan sockeye salmon which uses a new method of double glazing, and flash freezing salmon that has the taste, texture, and appearance of fresh salmon up to a year.

On their menu they serve:

Pan Roasted Okanagan Sockeye Salmon \$27

Hand Rolled Pasta, “Candied” Golden Beets, Bell Pepper-Tomato Emulsion

Wine Suggestion: Burrowing Owl Estate Winery Pinot Gris 2009.

When asked how Chef Chris prefers to cook the Okanagan sockeye, Chris proudly comments, *"Prepared in a frying pan. Very easily seasoned. A high heat frying pan. Skin on. Skin side down. Cook it about half the way through on the skin side to make it nice and crispy. Serve it with a little butter in the pan. Shut the heat off, and that's it. Keep it nice and medium rare. Nothing more than that. That's it. Very simple. Also, you don't want to hide the flavour of the fish."*

Chef Chris further emphasizes that, *"People really enjoy eating the fish this way. It's a delicacy, with a textural difference. The skin may be a little crispy and it includes the texture of soft."*

For more information on The Sonora Room Restaurant at The Burrowing Owl Estate Winery in Oliver, BC, please check out the website at: http://www.bovwine.ca/the_restaurant.html.

2010 Chefs Congress: “Oceans for Tomorrow”



Figure 19: Canadian Chef's Congress

On **September 11, 2010**, chefs, cooks, apprentices and culinary students from across Canada converged on [Providence Farm](#) in the heart of the beautiful Cowichan Valley for two days of conversation and deliberation on the state of our water ways, our effect on marine life and what constructive steps that our industry can build to help improve the health of our oceans.

Delegates had the opportunity to sample Canadian inspired dishes from leading provincial and territorial chefs from across the country as well as enjoy the bounty of British Columbia as chefs from around the province present the very best that we have to offer.

Throughout this two-day conference, the chefs had the opportunity to learn about our oceans and how we can effect change. A series of seminars and workshops on numerous food and ocean related topics gave the opportunity for the delegates to engage one on one with a variety of speakers on the topics of their particular expertise.

Representatives from a wide variety of sustainable fisheries were on hand to help the chefs learn how to get high quality sustainably harvested seafood onto their menus, what to look for, and the questions they should be asking.

The conference had a variety of local suppliers, producers, and farmers displaying unique product and demonstrating responsible stewardship of valuable renewable resources. The ONA was honoured to have Executive Chef Chris VanHooydonk, from The Sonora Room Restaurant at The Burrowing Owl Estate Winery in Oliver, BC, promote our wild sustainable Okanagan sockeye salmon to the Canadian chefs at this conference.

Chef Chris handed out the Okanagan Sockeye rack cards, and offered taste tests of the Okanagan sockeye salmon that he presented and served in the forms of: grilled, smoked, cured, lox, and roe.

Chef Chris was excited to tell us about the wonderful response he received from the chefs across Canada. Chris exclaimed, “The chefs were excited about four things about the Okanagan salmon and the Okanagan Nation Alliance. The first thing that catches their eye is the colour” (of the Okanagan salmon). There was “A lot of disbelief about where it came from, obviously I had the appropriate literature (rack cards provided by ONA; appendix 3) to explain to them where it was coming from. The chefs thought that Okanagan salmon tasted delicious, and really liked the fresh clean taste of the salmon roe.”

“The (second) more exciting part for them (the chef congress members) is the initiative taken by ONA to build a small industry here to allow for employment and keeping resources in this area especially for any members of the Okanagan Nation”.

The third point that Chris shared with us was that, “The chefs at the 2010 Chef’s Congress were excited to hear that we actually have fish in the Okanagan, and that there is now a sustainable salmon that has rebounded in numbers. This tied right in with the theme of our Conference (Oceans for Tomorrow).

(It is so interesting to add that some of our wonderful sponsors and funders, from the Pacific Integrated Commercial Fisheries Initiative or PICFI, attended the Chefs’ Congress and had a chance to taste some of our Okanagan salmon and were handed out our Okanagan Sockeye rack cards! Thank you so much, sponsors!

Chef Chris further added, “The fourth point that piqued the interest of the chefs is that the ONA is a First Nations organization that is prominent in importance to the local (Okanagan) community. The chefs were impressed that the ONA organization is reaching out to the community to share its local fish and resources! They were so pleased to hear this news!”

Executive Chef Bernard Casavant: The Wild Apple Restaurant and Lounge at the Manteo Resort Waterfront Hotel and Villas

From the 2010 Chefs' Congress held in Duncan, BC, word of mouth started to spread quickly from the promotion and taste tests of the Okanagan sockeye salmon! Soon afterwards, Executive Chef Bernard Casavant, from The Wild Apple Restaurant and Lounge at The Manteo Resort Waterfront Hotel and Villas in Kelowna, BC, contacted our ONA team.

Networking and Word of Mouth - Chef Bernard mentioned that, "He had a chance to taste our wild Okanagan sockeye salmon at the 2010 Chefs' Congress in Duncan, BC. He liked the flavour and taste of the local salmon, he has a commitment to purchase foods locally, and he believes in the ONA's salmon conservation project and initiatives!

Chef Bernard told me a similar story to that of his bio information on The Wild Apple Restaurant and Lounge website. *"His grandmother instilled a strong work ethic in him as a young chef, along with "the passion for respecting the food and the people who produce it". Among his culinary achievements, Chef Bernard is a founding board member of Exclusively BC, and charter member of Farm Folk, City Folk, further demonstrating his commitment to eating local and working with the area farmers and producers to present simple honest food."*

Although Chef Bernard has cooked for prime ministers and movie stars, a prince and princess, celebrities and business tycoons he feels strongly about mentoring young talent and inspiring young chefs to fulfill their dreams. He shares his love of fresh, locally rooted cuisine and takes great pride in seeing his protégés thrive under his leadership." (Taken from the www.wildapplerestaurant.com)

Chef Bernard felt that it was important to support the ONA by serving our locally caught sustainable Okanagan sockeye salmon at his special gala event for the SPCA that they were hosting in November 2010. Chef Bernard ordered from the ONA approx. 40 whole frozen Okanagan salmon to serve on his main menu that featured the following:

Pan Seared Okanagan Wild Sockeye Salmon Fillet; Okanagan's Finest Shredded Beef Galette; Truffled Organic Potato Crisps; Heirloom Carrots; Festers Micro Greens

Stacatto Cherry Red Wine Sauce

This will be served with the Sandhill Merlot

The SPCA gala event fundraiser held at this premier and world ranked resort was a big hit! Chef Bernard proudly told us that, ***"the people (at the gala event) thought his Okanagan salmon main dish was very tasty and delicious! It went over well!"***



Figure 20: Executive Chef Bernard Casavant

ONA Marketing Strategies, Tools, & Techniques 2010 and Onwards

ONA used several marketing techniques and tools to produce excitement for the sales of Okanagan sockeye salmon, while developing a 'road map' of this future process. The following are the most effective sales and marketing techniques for Okanagan Sockeye:

- 1. The Retail Selling Systems and Techniques from “Project Gold Star: Professional Retail Selling Course” used by Fortune 500 Canadian firms (e.g., Ashley Furniture)**
- 2. Friendly Retailer Relationships** - we are developing two-way, respectful links throughout the supply chain, and view all suppliers as valuable, and for the long term
- 3. Product Launches** - continually re-inventing the product, customized recipes
- 4. Product Feature and Benefit Education** - emphasize and re-emphasize value added, quality.
- 5. Product Theatre** - The fine art of presenting merchandise with eloquence, emotion, and single power-packed statements that cause customers to purchase now.
- 6. Promotional Advertising & Sales Incentive Programs** - Community Fundraiser Event.
- 7. Experiential Marketing** - get the product into the hands of our consumers and have them become our sales agents (i.e., pull strategy), market all the senses (feel, taste, smell, etc)
- 8. Brand Imaging & Brand Marketing** – Branding is key. Branding options include: branding the Okanagan Sockeye, branding the Okanagan River, branding a Riverwise eco-label (sustainable fishing practices, and quality managed system), and branding Responsible-Fair Trade.
- 9. Email Direct Marketing** – the most cost effective method for mass marketing, and gauging awareness.
- 10. Tele-marketing** – generally follows email direct marketing, and efficient method to measure interest.
- 11. Door-to-Door Delivery, Taste Tests, and Taste Panels** – the most costly method, but the most effective; ONA demonstrated 1 in 2 customers closing a sale with direct sales approach, and 100% repeat customer sales.
- 12. Rack Cards** – Okanagan Sockeye rack card that promotes the salmon conservation initiative of the ONA, shares a traditional salmon legend, and shows the eight member communities of the Okanagan Nation.
- 13. Green Marketing** - Matching our product, taste test demonstration, and rack cards to our customer's eco- friendly lifestyle.

14. **Special Events** – Our chefs promoted Okanagan sockeye salmon at the 2010 Chef’s Congress in Duncan, BC – testimonials
15. **Direct Sales** – With experienced food-wholesale staff.
16. **Media Advertising** - News print, television, community bulletins, CEC meetings, catch monitors, and word of mouth advertising.
17. **Internet** – Blog, social media, work-in-progress.
18. **Web List Servers** – work-in-progress.

PICFI Training 2010-2011

The professional development of our staff, training and education opportunities provided by PICFI funding is much appreciated. Deliverables and learning outcomes included:

- ↳ Certified 10 members from several interior First Nations in the following classifications, each of which are now required for those who operate any of the ONA’s motorize water vessels: MED A3 certification, SVOP certification, VHF Radio Operator certification, general powerboat instruction.
- ↳ Five ONA fisheries technicians received over 40 hours, each, in gear operation and troubleshooting as per seining and trolling.
- ↳ Four ONA fisheries technicians reviewed food safety and hazard analysis critical control point guidelines without pay (estimated 40 hours study time), participated in a one-hour power point presentation via BCIT food technology information, and wrote a food safety exam, administered by ONA biologists.
- ↳ One ONA technician designed blog site framework.
- ↳ Two ONA technicians learned the product labeling process and bar coding for future retail sales.
- ↳ Learning how to develop taste panel experiments, train taste panel, and evaluate results,
- ↳ Four ONA technicians participated in a conflict resolution workshop entitled. “peacekeeping in fisheries”, held in Sumas, January and February, 2011.
- ↳ Four ONA technicians learned how to interview fishers, collect and interpret relevant harvest data, and data entry information.

APPENDIX 1

FLAKE ICE MAKER

North Star
**MODEL 10 FLAKE ICE MAKER
SPECIFICATION SHEET**



STANDARD FEATURES

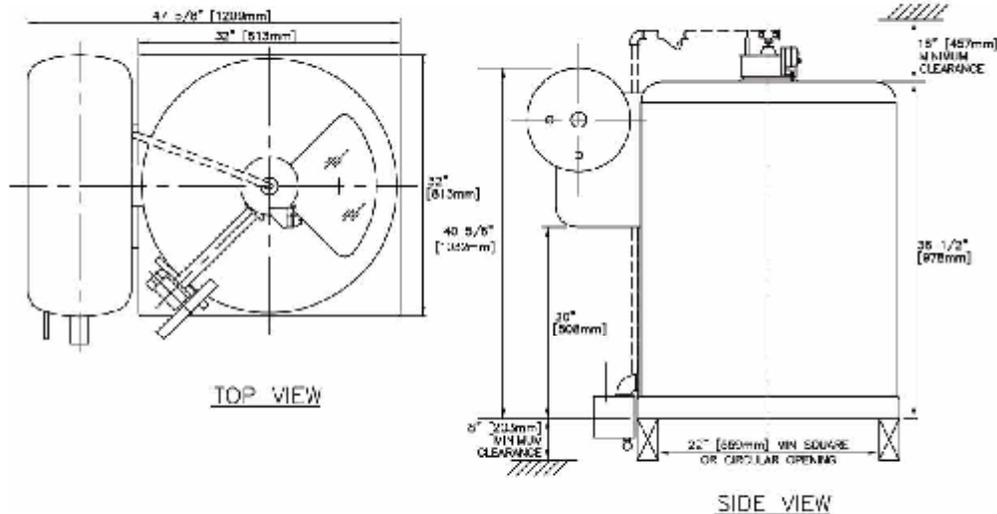
- Durable welded, stationary evaporator. No refrigerant seals to leak.
- Available with either a solid carbon or stainless steel freezing surface.
- Protection and safety features include: mechanical load limit switch, emergency stop switch, stop switch, inspection hatch, safety switch and a drive belt guard.
- Machine available for shipboard installation to produce seawater ice.
- Polyurethane insulation enclosed in molded fiberglass covers.
- Attached accumulator for complete gas-liquid refrigerant separation. (Flooded operation)
- Patented drip shield to insure complete water-ice separation.
- Stainless steel water make-up tank and ice removal tools are standard. Other stainless steel options are available.
- Economical, compact, simple to install and operate with minimal maintenance.
- **LIFETIME WARRANTY** on North Star evaporators and **PERFORMANCE GUARANTEE**.

North Star Ice Equipment Corporation • P.O. Box 9922 • Seattle, WA 98108, USA • (206) 463-7301 • 1-800-321-1301
Fax: (206) 763-7323 • E-mail: info@northstarice.com • Web Site: www.northstarice.com

Figure 21: North Star Flake Ice Maker

North Star

North Star Model 10 Operating Data



Refrigerant Control: Sporlan Leve master

WEIGHT: 1,350 lbs - 612 kg
VOLUME: 7.0 cu ft - 1.9 cu mtr
DRIVE MOTOR: C.33 IIF
PUMP MOTOR: C.05 I P
SUCTION LINE: 1 1/2" Sch 80
LIQUID LINE: 3/4" Sch 80

OIL DRAIN LINE: 1/2" MPT
WATER LINE:
Tank Inlet: 1/2" FPT
Tank Drain: 3/4" FPT
Pump Outlet: 1/4" FPT
Flow Control Valve Inlet: 1/2" FPT

REFRIGERANT CAPACITY (Volume .68 Cubic Feet - .32 Cubic Meters)				REFRIGERATION REQUIREMENT (Tons of Refrigeration Per Ton of Ice)					
Freon R-134a:	36 lbs (15 kg)	Freon R-404a:	53 lbs (24 kg)	Water Temperature °F	40	50	60	70	80
Freon R-22:	51 lbs (23 kg)	Ammonia R-717	26 lbs (12 kg)	Tons of Refrigeration	1.20	1.25	1.30	1.40	1.50

ICE MAKING CAPACITY RANGE GUIDELINE

Evaporator Temperature (°F)	+5	0	-5	-10	-15	-20	-25	-30
Stainless Steel Model	1.9 2.6	2.3 3.0	2.7 3.5	3.2 3.9	3.6 4.3	3.6 4.5	4.0 4.7	4.2 4.6
Carbon Steel Model	2.1 3.0	2.7 3.5	3.2 4.0	3.6 4.6	4.4 5.0	4.7 5.6	5.0 6.0	5.0 6.2

*Capacity based on ton (2,000 pounds) per 24 hours, 1.5 to 2.0mm ice thickness, 53°F make up water, and oil free ammonia refrigerant. For other operating conditions and specific capacities, refer to our capacity curves or visit the Ice Maker Selection Tool on our website at www.northstarice.com. Capacities in charts are 2.0mm ice thickness.

WATER REQUIREMENT: 0.167 GPM PER TON OF ICE PER 24 HOURS

THERE'S ONLY ONE NORTH STAR

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Figure 22: North Star Flake Ice Maker Operating Data