

AK LEGISLATURE SPECIAL COMMITTEE FILES SCOMM 147 3174

48



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**Date:** Fri, 22 Feb 2008 10:39:28 -0900  
**From:** "Ryan, Kristin J (DEC)" <kristin.ryan@alaska.gov>  
**Subject:** RE: Follow up: Question on Nov 07 Regulation for Tender vessels  
**To:** mark\_stopha@yahoo.com  
**cc:** seafa@gci.net, "Klein, Ronald S (DEC)" <ron.klein@alaska.gov>, "Crome, Cora J (GOV)" <cora.crome@alaska.gov>

Are you available this afternoon?

-----Original Message-----

From: Mark Stopha [mailto:[mark\\_stopha@yahoo.com](mailto:mark_stopha@yahoo.com)]  
Sent: Thursday, February 21, 2008 5:14 PM  
To: Ryan, Kristin J (DEC)  
Cc: [seafa@gci.net](mailto:seafa@gci.net); Klein, Ronald S (DEC); Crome, Cora J (GOV)  
Subject: RE: Follow up: Question on Nov 07 Regulation for Tender vessels

In our recent letter, we did want to be able to dress fish on a tender. We thought doing it under the Direct Marketing specifications would be a middle ground with established guidelines, and not difficult because we would follow these anyway. We're always willing to meet with anyone.

Thanks  
Mark Stopha

--- "Ryan, Kristin J (DEC)"  
<[kristin.ryan@alaska.gov](mailto:kristin.ryan@alaska.gov)>  
wrote:

> For some reason this email got bounced back to me Mark so I am  
> attempting to re-send.  
>  
> -----Original Message-----  
> From: Ryan, Kristin J (DEC)  
> Sent: Thursday, February 21, 2008 2:07 PM  
> To: [mark\\_stopha@yahoo.com](mailto:mark_stopha@yahoo.com)  
> Cc: [seafa@gci.net](mailto:seafa@gci.net); Klein, Ronald S (DEC); Crome, Cora J (GOV)  
> Subject: RE: Follow up: Question on Nov 07 Regulation for Tender

> vessels  
>  
>  
> Mark -  
>  
> I'm currently working out of the Juneau office.  
> Would you be willing to  
> come in and talk to me about your current  
issues?  
> I've reviewed the  
> letter you sent to legislators asking for a  
statute change to address  
> your needs. I'd like to better understand  
exactly what your operation  
> is and why you feel a small processor permit  
would not work.  
>  
> You previously were requesting the ability to  
gill and gut salmon on  
> your tender using the exemption in the seafood  
regulations that allows  
  
> harvesters to do that. It now sounds like you  
are now requesting the  
> ability to gill and gut under the Direct market  
permit whlch includes  
> some minimum sanitation requirements but is  
also still restricted to  
> harvesters.  
>  
> To answer your question below - yes, the change  
to the seafood  
> processing regulations was to add a new permit  
for small processors so  
  
> that the permit would not be unreasonably  
expensive.  
>  
>  
> Kristin Ryan  
>  
>  
> -----Original Message-----  
> From: Mark Stopha  
[mailto:[mark\\_stopha@yahoo.com](mailto:mark_stopha@yahoo.com)]  
> Sent: Tuesday, February 19, 2008 7:46 PM  
> To: [mark\\_stopha@yahoo.com](mailto:mark_stopha@yahoo.com); Ryan, Kristin J  
(DEC)

> Cc: [seafa@gci.net](mailto:seafa@gci.net)  
 > Subject: Follow up: Question on Nov 07  
 Regulation for Tender vessels  
 >  
 > SORRY:  
 > Dear Ms. Ryan:  
 > I need to clarify my previous email. I should  
 have referred my  
 > question for "floating processor" not "catcher  
 processor".  
 > So my question is:  
 >  
 > As I understand the regulations, the regulation  
 you cite to Kathy as a  
  
 > new regulation of last November was for fees  
 only, correct? Tender  
 > vessels under this regulation would need to  
 meet all requirements of a  
  
 > floating processor, and not the requirements of  
 a direct marketing  
 > vessel - is this correct?  
 > Thank you.  
 > > Mark  
 > --- Mark Stopha <[mark\\_stopha@yahoo.com](mailto:mark_stopha@yahoo.com)> wrote:  
 >  
 > > Dear Ms. Ryan:  
 > > As I understand the regulations, the  
 regulation.  
 > you cite to Kathy as a  
 >  
 > > new regulation of last November was for fees  
 only,  
 > correct? Tender  
 > > vessels under this regulation would need to  
 meet  
 > all requirements of a  
 >  
 > > catcher processor, and not the requirements  
 of a  
 > direct marketing  
 > > vessel - is this correct?  
 > > Thank you.  
 > > Mark  
 > > --- Kathy Hansen <[seafa@gci.net](mailto:seafa@gci.net)> wrote:  
 > >  
 > > >

> > >  
> > >  
> > > Kathy Hansen  
> > >  
> > > SE AK Fishermen's Alliance  
> > >  
> > > 9369 North Douglas Hwy  
> > >  
> > > Juneau, AK 99801  
> > >  
> > > 907-586-6652 phone  
> > >  
> > > 907-523-1168 fax  
> > >  
> > > [seafa@gci.net](mailto:seafa@gci.net)  
> > >  
> > > <http://www.seafa.org>  
> > >  
> > > -----Original Message-----  
> > > From: Ryan, Kristin J (DEC)  
> > > [mailto:[kristin.ryan@alaska.gov](mailto:kristin.ryan@alaska.gov)]  
> > > Sent: Tuesday, February 19, 2008 11:14 AM  
> > > To: [seafa@gci.net](mailto:seafa@gci.net)  
> > > Cc: Klein, Ronald S (DEC)  
> > > Subject: FW: draft email for you to Hansen.

(not  
> > in  
> > > when I called)  
> > >  
> > > Kathy - I apologize for my delay.  
> > >  
> > > We produced minutes from that discussion  
and

> > posted  
> > > them on our website  
> > > at  
> > >  
> >  
>

<http://www.dec.state.ak.us/eh/fss/seafood/aspac.htm>.

> > > Our perspective  
> > > is that there was general support at the  
ASPAC  
> meeting for  
> > > developing guidelines for gilling and  
gutting  
> fish on fishing boats.  
> > > Our plan is to rely heavily on guidelines

> developed by others,  
> > > particularly ASMI, selecting parts that  
> specifically pertain to  
> > seafood  
> > > safety. We have  
> > > received and will be reviewing the ASMI  
> > guidelines.  
> > > If Southeast  
> > > Fishermen's Alliance has developed  
guidelines we  
> > are  
> > > interested in  
> > > reviewing them as well. This spring we will  
> > schedule  
> > > a follow-up call  
> > > and invite the November 8, 2007 meeting  
> > participants  
> > > and other  
> > > interested parties to go over the draft  
> guidelines and discuss  
> > > outreach approaches to ensure  
dissemination.  
> > >  
> > > We are not planning any regulation changes.  
We  
> received a couple of  
> > > comments after the meeting from fishermen  
who  
> have asked us to  
> > > broaden the gutting and gilling exemption  
to  
> apply to fishing  
> > > tenders in addition to harvesters. FDA  
considers  
> gutting and gilling  
>  
> > > occurring on tenders to be subject to the  
> federal rules which Alaska  
>  
> > > applies through the Seafood Processing and  
> Inspection Regulations.  
> > > This enables Alaska  
> > > to sell fish in interstate commerce under  
Alaska  
> rules. Gutting and  
> > > gilling can occur on tenders under current  
rules  
> > and

> > > we have created a  
> > > new category permit which went into effect  
> > November  
> > > 27, 2007 enabling  
> > > vessels to process less than 5,000  
pounds/day of  
> fish at a reduced  
> > > fee of \$795.00 a year.  
> > >  
> > > I will be attending the UFA board meeting  
> tomorrow and will touch  
> > > base with you then as well.  
> > >  
> > > Thanks,  
> > > Kristin Ryan  
> > > Director  
> > > Division of Environmental Health  
> > > Department of Environmental Conservation  
> > > 555 Cordova St., Anchorage, Alaska 99501  
> > > 907.269.7644 phone 907.269.7654 fax  
> > >  
> > >  
> > > -----Original Message-----  
> > > From: Kathy Hansen [mailto:[seafa@gci.net](mailto:seafa@gci.net)]  
> > > Sent: Wed 2/6/2008 5:11 PM  
> > > To: Ryan, Kristin J (DEC)  
> > > Subject:  
> > >  
> > > Kristin, What is the current status of the  
> > onboard  
> > > seafood processing  
> > > regulations changes - I haven't heard  
anything  
> > since  
> > > the  
> > >  
> > > Nov. '07 ASPAC meeting?  
> > >  
> > >  
> > >  
> > > Kathy Hansen  
> > >  
> > > SE AK Fishermen's Alliance  
> > >  
> > > 9369 North Douglas Hwy  
> > >  
> > > Juneau, AK 99801  
> > >

## HAZARD ANALYSIS CRITICAL CONTROL POINTS

### 1.0 HACCP ANALYSIS (PRODUCT RELATED)

The following outlines the potential species hazards and the control mechanisms that are required onboard

| Potential Hazard       | Analysis                                                                                                                                                                                         | Control                                                                          | CCP |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----|
| Parasites              | All products are frozen colder than 0°F (-17.7 °C)                                                                                                                                               | Freezing onboard, labelling.                                                     | No  |
| Biogenic Amines        | Albacore may have the potential to produce histamine (scombrototoxin formation). However, rapid processing controls the hazard and freezing prevents the formations of high levels of histamine. | Time and Temperature Controls                                                    | No  |
| Preformed Toxins       | Toxin formation (other than histamine) in wetfish species is not likely.                                                                                                                         | Not considered significant enough to warrant any type of control measure         | No  |
| Pathogens              | No evidence available of any known pathogens (such as Clostridium, Type E and pathogenic Vibrio) harvested.                                                                                      | Not considered significant enough to warrant any type of control measure         | No  |
| Metal Stain            | Metal stain occurs primarily with fish that have been frozen in a freezing system that has exposed copper parts or sources of copper.                                                            | Check freezing system on board contains no copper or brass or bronze components. | No  |
| Chemical contamination | Chemical contamination from harvest area is not reasonably likely to occur. Hydraulic leaks or hose breakages may occur.                                                                         | Fish reception<br>Freezer Refrigeration Records                                  | No  |
| Fuel contamination     | Fuel contamination is not likely to occur.                                                                                                                                                       | Stop fishing immediately, do not take any fish on board if fishing.              | No  |
| Foreign matter         | Foreign material that is considered harmful to human health is not likely to present in the harvest area or in the product.                                                                      | Fish reception                                                                   | No  |
| Pathogen growth        | Pathogen growth (Listeria, Salmonella etc) are not likely due to time and temperature abuse during processing on board due to the nature of the operation and the intended use by the consumer.  | Storage and Unloading<br>Cleaning and sanitation                                 | No  |

**ON-BOARD FISH HANDLING PROCEDURES  
FOR WFOA VESSELS**

**VESSEL STANDARD OPERATING PROCEDURES**

**FISHING VESSEL**

---

*http://seafood.ucdavis.edu/sanitation/vessels.op.pdf*

**APRIL 2002**

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Fish Price

Fish Sales History

(1)

Fish Taxes or COAR

This message is not flagged. [Flag Message - Mark as Unread]

Printable View

Date: Mon, 25 Feb 2008 10:45:15 -0900

From: "McIntire, Orval D (DEC)" &lt;duane.mcintire@alaska.gov&gt; Add Mobile Alert

Subject: RE: Follow-up from Heather (Taku River Reds)

To: mark\_stopha@yahoo.com, "Soares, Manuel J (DEC)" &lt;manny.soares@alaska.gov&gt;

CC: "Klein, Ronald S (DEC)" &lt;ron.klein@alaska.gov&gt;, "Ryan, Kristin J (DEC)" &lt;kristin.ryan@alaska.gov&gt;

Manny, your thoughts?  
Duane

-----Original Message-----

From: Mark Stopha [mailto:mark\_stopha@yahoo.com]

Sent: Monday, February 25, 2008 10:36 AM

To: McIntire, Orval D (DEC)

Cc: Heather Hardcastle

Subject: Follow-up from Heather (Taku River Reds)

So you believe that a small vessel like the Taku  
Wind

can meet the floating processor requirements?

This  
vessel is similar in size to the one I have, to  
whichErnie Thomas indicated there was no way a vessel  
thissmall could meet the requirements of a floating  
processor. This is where I'm confused.

--- "McIntire, Orval D (DEC)"

&lt;duane.mcintire@alaska.gov&gt; wrote:

&gt; Date: Mon, 25 Feb 2008 10:11:24 -0900

&gt; From: "McIntire, Orval D (DEC)"

&gt; &lt;duane.mcintire@alaska.gov&gt;

(1)

**Harbor Fees (12)**

Legal

Letter to fishe...

**Licenses (4)**

Mark

Marketing Grant

PFD

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Pressure Bleeding

Processor Assoc

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Recovery Yield

**Resume (3)**

Scales

Sea Log

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Treaty

Weather

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Yahoo Info

**assembly (2)**

cc

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> Subject: RE: Follow-up from Heather (Taku River  
> Reds)  
> To: mark\_stopha@yahoo.com, "Soares, Manuel J  
(DEC)"  
> <manny.soares@alaska.gov>,  
> "Ryan, Kristin J (DEC)"  
<kristin.ryan@alaska.gov>,  
> "Klein, Ronald S (DEC)" <ron.klein@alaska.gov>  
> CC: Heather Hardcastle <salmongal@mac.com>  
>  
>  
> Mark, no changes to the requirements only the  
fee  
> for <5000#.  
>  
> Duane  
> -----Original message-----  
> From: Mark Stopha  
[mailto:mark\_stopha@yahoo.com]  
> Sent: Monday, February 25, 2008 10:07 AM  
> To: McIntire, Orval D (DEC)  
> Cc: Heather Hardcastle  
> Subject: Re: Follow-up from Heather (Taku River  
> Reds)  
>  
> Hi Duane:  
> Did the new class of processor license mean  
there  
> was  
> also a change to the floating processor  
regulations?  
>  
> I thought it was just a fee change.  
>  
> From my discussions with Ernie Thomas 2 years  
ago,  
> he  
> indicated that although a floater did not have  
to be  
> under 65 feet, it usually was at least that  
long to  
> get all the requirements of a floating  
processor in  
> place to meet regulations (separate rooms for  
roe.  
> advanced sewage systems, grinding of offal,  
etc).

> He  
> said there was one vessel under 60', and when I  
look  
> up the floating processors in the CFEC and DEC  
> databases, I didn't see any vessels under 60  
feet  
> (maybe there was one).  
>  
> So, am I missing something here?  
>  
> Thanks  
> Mark  
>  
>  
> --- Heather Hardcastle <[heather@takurr.net](mailto:heather@takurr.net)>  
wrote:  
>  
> > Hi Duane,  
> >  
> > Thanks for meeting with me last Thursday.  
Our  
> > conversation was very  
> > helpful for me and I appreciate your taking  
the  
> time  
> > to answer all of  
> > my questions. We will email you a final  
draft of  
> > our packaging labels  
> > for your approval in the next week. I'm glad  
you  
> > also had the chance  
> > to visit Dick and Jason at Alaska Seafood  
Company,  
> > and have a good  
> > idea how we and ASC plan to work together  
this  
> year.  
> >  
> > Duane, I downloaded a copy of the 2006  
Seafood  
> > Processors application  
> > after our talk. I do not see the new  
category of  
> > floating processor  
> > you and I discussed (<5,000 lbs./day,  
\$795/yr.).

> Is  
> > it possible the  
> > 2008 application doesn't yet reflect this  
> category?  
> > We would like to  
> > apply for this permit and properly prepare  
our  
> > tender vessel, Taku  
> > Wind, for the 2008 season.  
> >  
> > Per our conversation, I understand that, if  
> > permitted, we may gut and  
> > gill the fish we purchase from other  
fishermen  
> > aboard this tender  
> > vessel (?). I also understand that other  
members  
> of  
> > the department  
> > are currently discussing whether heading will  
also  
> > be allowed aboard  
> > properly permitted floating processors. Is  
this  
> > correct?  
> >  
> > As you know, we're very interested in being  
able  
> to  
> > butcher (gut, gill  
> > AND head) all fish that we purchase. Not  
only  
> does  
> > removing the head  
> > allow us to maintain the quality of the  
salmon  
> that  
> > has just been  
> > harvested [through our pressure-bleeding  
> > techniques]. We also reel  
> > that heading does not diminish public safety,  
if  
> all  
> > butchering is  
> > performed in a ADEC-approved facility (area  
> covered  
> > with hard roof,

> > washable walls, continuous chlorine-injection  
> > system, monthly water  
> > sampling, etc.).  
> >  
> > Finally, Duane, we understand that, as a  
currently  
> > permitted direct  
> > marketing vessel, F/V Heather Anne, we cannot  
gut,  
> > gill or head the  
> > fish we purchase from other fishermen. If we  
> wished  
> > to butcher the  
> > fish we purchase from other fishermen aboard  
> Heather  
> > Anne, we assume  
> > that we would need to apply for the new  
category  
> of  
> > floating processor  
> > for this vessel, as well, (including a  
continuous  
> > vs. a batch chlorine-  
> > injection system, etc.)?  
> >  
> > Thank you for all of your assistance!  
> >  
> > Best,  
> > Heather  
> >  
> > Heather Hardcastle  
> > TAKU RIVER REDS  
> > F/V Heather Anne & Tender Vessel Taku Wind  
> > [heather@takurr.net](mailto:heather@takurr.net)  
> > (907) 463-3863  
> >  
> >  
> >  
> >  
> >  
> >  
> >  
> -  
> Mark Stopha and Sara Hannan  
> Alaska Wild Salmon Company  
> Wild Salmon and Salmon Pet Treats  
> 4455 N. Douglas Hwy  
> Juneau, AK 99801

> 907-463-3115  
> www.GoodSalmon.com  
>

-

Mark Stopha and Sara Hannan  
Alaska Wild Salmon Company  
Wild Salmon and Salmon Pet Treats  
4455 N. Douglas Hwy  
Juneau, AK 99801  
907-463-3115  
www.GoodSalmon.com

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# STATE OF ALASKA

## **DEPT. OF ENVIRONMENTAL CONSERVATION DIVISION OF ENVIRONMENTAL HEALTH**

**SARAH PALIN, GOVERNOR**

555 Cordova St.  
Anchorage, Alaska 99501  
Phone: 907-269-7644  
Fax: 907-269-7654  
[www.dec.state.ak.us](http://www.dec.state.ak.us)

Mr. Stopha, Alaska Wild Salmon Company  
Mr. Peterson, Taku River Reds  
Mr. Hand, Alaska Seafood Company  
Mr. Merritt, Troller  
Mr. Heller and Ms. Spencer, Cross Sound Seafoods  
Mr. Lucey, Troller and Gillnetter  
Mr. Botz, Seiner  
Mr. Samuelson, Bristol Bay Gillnetter

Subject: Seafood Processing regulations

Mr. Stopha et al.

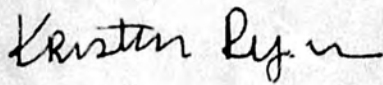
We have reviewed your letter dated January 29<sup>th</sup>, 2008 addressed to members of the legislature requesting a statute change so that the Alaska Department of Environmental Conservation (DEC) would allow you to gill and gut fish on your tender boat. I am hopeful with some clarification we can find a solution within our existing authorities.

It is the intent that our regulations are clear and grounded in our statutory obligation to ensure food processed in Alaska is safe for human consumption. After all, we want consumers to continue to trust in the safety of Alaskan seafood. We have created a variety of permit options to do just that including a new permit geared toward smaller vessel operations such as yours. I understand that you do not believe this new permit will work for you and would prefer to operate under an exemption or other permit option.

As we have discussed, with some technical assistance, I believe we can find a way for this new small seafood processor permit to work for you. The sanitation standards that must be met by all food handlers are similar, but how those standards are achieved varies greatly. Your facility only needs to be adequate to safely handle the amount of fish you will be processing. The minimum standards everyone has to comply with are access to clean water (all permits require the addition of chlorine to sea water), an area for processing that is pest and dust free, a method to contain domestic waste while processing, hand washing capacity, cleanable surfaces, adequate lighting, a cleaning plan, and a hazard analysis.

Every permitted facility or vessel is different and many operators find creative ways to comply. We are reviewing how other small vessel entrepreneurs have adapted their boats to meet the sanitation standards and will share those ideas with you. I, along with Division of Environmental Health seafood safety experts, are willing to work with you to find affordable ways to ensure you are handling Alaskan seafood in the safest way possible. We stand ready to assist you.

Sincerely,



Kristin Ryan  
Director  
Division of Environmental Health

Cc:

Honorable Senator Kim Elton  
Honorable Representative Beth Kertulla  
Honorable Representative Andrea Doll  
Honorable Senator Bert Stedman  
Honorable Representative Peggy Wilson  
Honorable Senator Lyman Hoffman  
Honorable Representative Bryce Edgmon  
Honorable Senator Gary Stevens  
Honorable Representative Gabielle LeDoux  
Honorable Representative Paul Seaton

Federal CFR  
Food Safety Processing

## § 110.19

## 21 CFR Ch. I (4-1-07 Edition)

(2) Maintaining adequate personal cleanliness.

(3) Washing hands thoroughly (and sanitizing if necessary to protect against contamination with undesirable microorganisms) in an adequate hand-washing facility before starting work, after each absence from the work station, and at any other time when the hands may have become soiled or contaminated.

(4) Removing all unsecured jewelry and other objects that might fall into food, equipment, or containers, and removing hand jewelry that cannot be adequately sanitized during periods in which food is manipulated by hand. If such hand jewelry cannot be removed, it may be covered by material which can be maintained in an intact, clean, and sanitary condition and which effectively protects against the contamination by these objects of the food, food-contact surfaces, or food-packaging materials.

(5) Maintaining gloves, if they are used in food handling, in an intact, clean, and sanitary condition. The gloves should be of an impermeable material.

(6) Wearing, where appropriate, in an effective manner, hair nets, headbands, caps, beard covers, or other effective hair restraints.

(7) Storing clothing or other personal belongings in areas other than where food is exposed or where equipment or utensils are washed.

(8) Confining the following to areas other than where food may be exposed or where equipment or utensils are washed: eating food, chewing gum, drinking beverages, or using tobacco.

(9) Taking any other necessary precautions to protect against contamination of food, food-contact surfaces, or food-packaging materials with microorganisms or foreign substances including, but not limited to, perspiration, hair, cosmetics, tobacco, chemicals, and medicines applied to the skin.

(c) *Education and training.* Personnel responsible for identifying sanitation failures or food contamination should have a background of education or experience, or a combination thereof, to provide a level of competency necessary for production of clean and safe food. Food handlers and supervisors

should receive appropriate training in proper food handling techniques and food-protection principles and should be informed of the danger of poor personal hygiene and insanitary practices.

(d) *Supervision.* Responsibility for assuring compliance by all personnel with all requirements of this part shall be clearly assigned to competent supervisory personnel.

[51 FR 24475, June 19, 1986, as amended at 54 FR 24892, June 12, 1989]

### § 110.19 Exclusions.

(a) The following operations are not subject to this part: Establishments engaged solely in the harvesting, storage, or distribution of one or more "raw agricultural commodities," as defined in section 201(r) of the act, which are ordinarily cleaned, prepared, treated, or otherwise processed before being marketed to the consuming public.

(b) FDA, however, will issue special regulations if it is necessary to cover these excluded operations.

## Subpart B—Buildings and Facilities

### § 110.20 Plant and grounds.

(a) *Grounds.* The grounds about a food plant under the control of the operator shall be kept in a condition that will protect against the contamination of food. The methods for adequate maintenance of grounds include, but are not limited to:

(1) Properly storing equipment, removing litter and waste, and cutting weeds or grass within the immediate vicinity of the plant buildings or structures that may constitute an attractant, breeding place, or harborage for pests.

(2) Maintaining roads, yards, and parking lots so that they do not constitute a source of contamination in areas where food is exposed.

(3) Adequately draining areas that may contribute contamination to food by seepage, foot-borne filth, or providing a breeding place for pests.

(4) Operating systems for waste treatment and disposal in an adequate manner so that they do not constitute a source of contamination in areas where food is exposed.

If the plant grounds are bordered by grounds not under the operator's control and not maintained in the manner described in paragraph (a) (1) through (3) of this section, care shall be exercised in the plant by inspection, extermination, or other means to exclude pests, dirt, and filth that may be a source of food contamination.

(b) *Plant construction and design.* Plant buildings and structures shall be suitable in size, construction, and design to facilitate maintenance and sanitary operations for food-manufacturing purposes. The plant and facilities shall:

(1) Provide sufficient space for such placement of equipment and storage of materials as is necessary for the maintenance of sanitary operations and the production of safe food.

(2) Permit the taking of proper precautions to reduce the potential for contamination of food, food-contact surfaces, or food-packaging materials with microorganisms, chemicals, filth, or other extraneous material. The potential for contamination may be reduced by adequate food safety controls and operating practices or effective design, including the separation of operations in which contamination is likely to occur, by one or more of the following means: location, time, partition, air flow, enclosed systems, or other effective means.

(3) Permit the taking of proper precautions to protect food in outdoor bulk fermentation vessels by any effective means, including:

(i) Using protective coverings.

(ii) Controlling areas over and around the vessels to eliminate harborages for pests.

(iii) Checking on a regular basis for pests and pest infestation.

(iv) Skimming the fermentation vessels, as necessary.

(4) Be constructed in such a manner that floors, walls, and ceilings may be adequately cleaned and kept clean and kept in good repair; that drip or condensate from fixtures, ducts and pipes does not contaminate food, food-contact surfaces, or food-packaging materials; and that aisles or working spaces are provided between equipment and walls and are adequately unobstructed and of adequate width to permit employees to perform their duties and to

protect against contaminating food or food-contact surfaces with clothing or personal contact.

(5) Provide adequate lighting in hand-washing areas, dressing and locker rooms, and toilet rooms and in all areas where food is examined, processed, or stored and where equipment or utensils are cleaned; and provide safety-type light bulbs, fixtures, skylights, or other glass suspended over exposed food in any step of preparation or otherwise protect against food contamination in case of glass breakage.

(6) Provide adequate ventilation or control equipment to minimize odors and vapors (including steam and noxious fumes) in areas where they may contaminate food; and locate and operate fans and other air-blowing equipment in a manner that minimizes the potential for contaminating food, food-packaging materials, and food-contact surfaces.

(7) Provide, where necessary, adequate screening or other protection against pests.

#### § 110.35 Sanitary operations.

(a) *General maintenance.* Buildings, fixtures, and other physical facilities of the plant shall be maintained in a sanitary condition and shall be kept in repair sufficient to prevent food from becoming adulterated within the meaning of the act. Cleaning and sanitizing of utensils and equipment shall be conducted in a manner that protects against contamination of food, food-contact surfaces, or food-packaging materials.

(b) *Substances used in cleaning and sanitizing; storage of toxic materials.* (1) Cleaning compounds and sanitizing agents used in cleaning and sanitizing procedures shall be free from undesirable microorganisms and shall be safe and adequate under the conditions of use. Compliance with this requirement may be verified by any effective means including purchase of these substances under a supplier's guarantee or certification, or examination of these substances for contamination. Only the following toxic materials may be used or stored in a plant where food is processed or exposed:

# STATE OF ALASKA

## **DEPT. OF ENVIRONMENTAL CONSERVATION DIVISION OF ENVIRONMENTAL HEALTH**

**SARAH PALIN, GOVERNOR**

555 Cordova St.  
Anchorage, Alaska 99501  
Phone: 907-269-7644  
Fax: 907-269-7654  
[www.dec.state.ak.us](http://www.dec.state.ak.us)

Mr. Stopha, Alaska Wild Salmon Company  
Mr. Peterson, Taku River Reds  
Mr. Hand, Alaska Seafood Company  
Mr. Merritt, Troller  
Mr. Heller and Ms. Spencer, Cross Sound Seafoods  
Mr. Lucey, Troller and Gillnetter  
Mr. Botz, Seiner  
Mr. Samuelson, Bristol Bay Gillnetter

Subject: Seafood Processing regulations

Mr. Stopha et al.

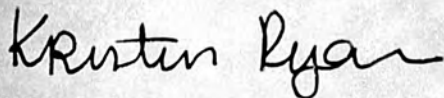
We have reviewed your letter dated January 29<sup>th</sup>, 2008 addressed to members of the legislature requesting a statute change so that the Alaska Department of Environmental Conservation (DEC) would allow you to gill and gut fish on your tender boat. I am hopeful with some clarification we can find a solution within our existing authorities.

It is the intent that our regulations are clear and grounded in our statutory obligation to ensure food processed in Alaska is safe for human consumption. After all, we want consumers to continue to trust in the safety of Alaskan seafood. We have created a variety of permit options to do just that including a new permit geared toward smaller vessel operations such as yours. I understand that you do not believe this new permit will work for you and would prefer to operate under an exemption or other permit option.

As we have discussed, with some technical assistance, I believe we can find a way for this new small seafood processor permit to work for you. The sanitation standards that must be met by all food handlers are similar, but how those standards are achieved varies greatly. Your facility only needs to be adequate to safely handle the amount of fish you will be processing. The minimum standards everyone has to comply with are access to clean water (all permits require the addition of chlorine to sea water), an area for processing that is pest and dust free, a method to contain domestic waste while processing, hand washing capacity, cleanable surfaces, adequate lighting, a cleaning plan, and a hazard analysis.

Every permitted facility or vessel is different and many operators find creative ways to comply. We are reviewing how other small vessel entrepreneurs have adapted their boats to meet the sanitation standards and will share those ideas with you. I, along with Division of Environmental Health seafood safety experts, are willing to work with you to find affordable ways to ensure you are handling Alaskan seafood in the safest way possible. We stand ready to assist you.

Sincerely,

A handwritten signature in cursive script that reads "Kristin Ryan". The signature is fluid and written in dark ink.

Kristin Ryan  
Director  
Division of Environmental Health

Cc:

Honorable Senator Kim Elton  
Honorable Representative Beth Kertulla  
Honorable Representative Andrea Doll  
Honorable Senator Bert Stedman  
Honorable Representative Peggy Wilson  
Honorable Senator Lyman Hoffman  
Honorable Representative Bryce Edgmon  
Honorable Senator Gary Stevens  
Honorable Representative Gabrielle LeDoux  
Honorable Representative Paul Seaton ✓

*restrict the Quantity*

Mr. Stopha -

Duane asked you for that information to help us figure out all the aspects of the issue as part of our fact finding efforts to work on a regulation change. It should be evidence to you of our due diligence to address the issue.

We have been clear to you, as well as everyone else, you will have to comply with our existing regulations and obtain a small seafood processor's permit this season if you choose to process purchased fish.

Kristin Ryan  
Director

-----Original Message-----

From: Mark Stopha [mailto:mark\_stopha@yahoo.com]

Sent: Mon 4/7/2008 2:41 PM

To: Ryan, Kristin J (DEC); Len Peterson; McIntire, Orval D (DEC); Edgmon, Bryce E (LAA); Johnson, Craig W (LAA); Ledoux, Gabrielle R (LAA); Seaton, Paul (LAA); Wilson, Peggy A (LAA)  
Cc: Soares, Manuel J (DEC); Klein, Ronald S (DEC); Renee Weber; Heather Hardcastle; Peterson, Sheila (LAA); Chris McDowell; ufa2@ufa-fish.org; Cadiente, Paula J (LAA); Len Peterson; McCarty, Hannah (LAA); Barry, Timothy M (DFG); Boario, Maridon A (LAA); njbotz@gci.net; Doll, Andrea (LAA); Elton, Kim S (LAA); Fleming, Laura L (ASMI); Kerttula, Beth (LAA); yakutat\_salmon\_board@yahoo.com; meritime@aptalaska.net; sockeye1@nushtel.net; dspencerak@yahoo.com; Flora, Louie (LAA); alaskaseafoodco@wildak.net; mark\_stopha@yahoo.com; Carlson-Vandort, Marit K (DEC)  
Subject: Purchasing and dressing fish on board a direct-market vessel

Dear Ms. Ryan:

The email below was sent to me by you on Oct 27, 2006.  
(Yes, 2006). The one you sent today, April 7, 2008,  
is a virtual cut and paste.

Your "commitment to working with us" has gone on a long time. Unfortunately, it's simply untrue. We've requested time and again regulation changes to address our issue, yet DEC has never brought them forward in any manner in any regulatory forum. We've commented on regulations, but DEC has neither brought them forward nor given them any due consideration.

Duane asked us specifically in his April 3 email:  
Quote: "The question has been asked on how you would be setting up your vessel to comply with a direct market vessel requirements that would include an approved Marine Sanitation Device, overhead protection, hand wash sink, area to safely store cleaning supplies, area to clean the fish properly and keep separate from the raw fish and any of the

requirements list in 18 ACC 34 - Seafood Processing and Inspections Regulation?"

This CLEARLY requests plans for DIRECT MARKETING requirements, does it not? Yet you state in the email to us today the request was for the small floating processor permit. Again, like your testimony in front of the House Fisheries Committee, you are being intentionally deceptive and misleading in your comments to legislators. You say one thing to them, and another to us.

Only when we got legislative interest have you actually talked to us about real changes, but this will soon cease when any pressure you've felt from the legislature goes away at legislative adjournment next week.

Our only recourse has been through the legislature, since neither you nor the administration have any real intent to address this matter. You're saying almost verbatim the same thing in 2008 as you did in 2006, and that "commitment" you state has resulted in absolutely no action by your department.

Mark Stopha

-----  
Email from Kristin Ryan, Oct 27, 2006

Subject: RE: FW: Direct Market Processing Inquiry  
Date: Fri, 27 Oct 2006 11:14:36 -0800  
From: "Ryan, Kristin J."  
<Kristin\_Ryan@dec.state.ak.us> Add to Address Book  
Add Mobile Alert  
To: mark@goodsalmon.com  
CC: "Klein, Ron" <Ron\_Klein@dec.state.ak.us>, "Soares, Manny" <Manny\_Soares@dec.state.ak.us>

Mr. Stopha

2006-10-10

You're correct. We cannot permit you under existing regulations. Title 17.20.005 gives the commissioner the authority to adopt regulations that would ensure food offered to the public is handled in a sanitary manner. As with all Statutes, departments then create regulations to outline the manner in which those State law will be implemented. 18 AAC 34 are the regulations that implement title 17.20 for seafood explicitly. There are other regulations pertaining to other food industries that implement title 17.20 as well.

Many parties have a vested interest in the permitting requirements for seafood processing. The regulations are drafted attempting to fairly stipulate requirements to all groups while ensuring safe food. The change you propose would have significant implications to those other groups. That is one reason why the public process that is part of regulation changes is particularly important. A contentious issues such as this would require workshops and public hearings to facilitate the public debate that would ensue and take significant time, effort and money.

While we support entrepreneurs, we cannot by-pass the process required by law to change regulations nor can we harness resources now committed to other important efforts. In the mean time, you have options available

to you such as paying a processor to strip the  
roe or purchasing the  
roe stripped by permitted fishermen.

I apologize we cannot be of more assistance at  
this time.

Kristin

--- "Ryan, Kristin J (DEC)" <kristin.ryan@alaska.gov>  
wrote:

> Len and Mark-  
>  
> Changes to any regulations and these in particular,  
> impact more than just small fishermen. Every  
> processor who has to comply with high standards is  
> concerned about the safety of Alaska's seafood and  
> fairness. If we don't thoroughly work through all  
> the different scenarios, unintended consequences are  
> a guarantee. For example, as I understand it, just  
> allowing fishermen with a Direct Market Permit to  
> buy fish won't solve Mark's issue because he wants  
> to be a tender and process fish.  
>  
> We are committed to finding a solution and are  
> working on it but even if we knew what was the best  
> approach right now, the regs wouldn't get through  
> the legally mandated process by this fishing season.  
> I realize you are both frustrated with the process  
> and angry DEC hasn't taken a closer look sooner. But  
> we are now and I am committed to finding a solution.  
> We are working with Dept of Law now to determine the  
> best way to proceed with some sort of pre-regulation  
> public process to garner as much input as possible  
> before proposing a regulation change. This is not a  
> delay tactic but a necessary public process.  
>  
> As we have said all along, if you want to process  
> purchased fish this year, you will need to comply  
> with the small processor's permit. Duane was asking  
> for plans expecting an application for that permit.  
> From what little I know about your boat Len, I still  
> believe that is possible.  
>  
> Kristin Ryan  
> Director  
> Environmental Health  
>  
>  
> -----Original Message-----

> From: Mark Stopha [[mailto:mark\\_stopha@yahoo.com](mailto:mark_stopha@yahoo.com)]  
> Sent: Mon 4/7/2008 11:03 AM  
> To: Len Peterson; McIntire, Orval D (DEC); Edgmon,  
> Bryce E (LAA); Johnson, Craig W (LAA); Ledoux,  
> Gabrielle R (LAA); Seaton, Paul (LAA); Wilson, Peggy  
> A (LAA)  
> Cc: Soares, Manuel J (DEC); Klein, Ronald S (DEC);  
> Ryan, Kristin J (DEC); Renee Weber; Heather  
> Hardcastle; Peterson, Sheila (LAA); Chris McDowell;  
> ufa2@ufa-fish.org; Cadiente, Paula J (LAA); Len  
> Peterson; McCarty, Hannah (LAA); Barry, Timothy M  
> (DFG); Boario, Maridon A (LAA); njbotz@gci.net;  
> Cadiente, Paula J (LAA); Doll, Andrea (LAA); Elton,  
> Kim S (LAA); Fleming, Laura L (ASMI); Kerttula, Beth  
> (LAA); yakutat\_salmon\_board@yahoo.com;  
> meritime@aptalaska.net; sockeye1@nushtel.net;  
> dspencerak@yahoo.com; Flora, Louie (LAA);  
> alaskaseafoodco@wildak.net; mark\_stopha@yahoo.com  
> Subject: Re: Purchasing and dressing fish on board a  
> direct-market vessel

> Duane:

> Len and I both asked for this very issue to be  
> addressed in this year's regulations in letters sent  
> to Ron Klein of DEC last October. Our proposal for  
> regulation change was rejected out of hand, with no  
> public discussion or consideration by DEC.

> Last week, you requested plans from us for dressing  
> fish on a tender under the direct marketing  
> requirements. We did not ask to submit them. You  
> asked for them, under the guise that DEC was going  
> to  
> address our issue for the upcoming fishing season,  
> as  
> stated by Paula Cadiente.

> Why would you request these plans and then send this  
> response, knowing all the time you were not going to  
> address the matter, which DEC clearly has the  
> authority to do. DEC is again stalling in this  
> process until the legislature adjourns, at which  
> time  
> we'll have no recourse until next session. I cannot  
> understand why you would waste our time drawing up

> plans, only to tell us the same thing DEC has told  
> us  
> for going on two years now.

>

> **Mark Stopha**

> --- Len Peterson <petersol@mac.com> wrote:

>

>> Good Morning Duane,  
>> Your response is disappointing as Senator Elton  
>> office indicated the  
>> following in an April 2, 2008 email;  
>>  
>> "Sen. Elton and I met with the governor's office  
>> yesterday afternoon.  
>> They (and we) understand your frustration. We are  
>> working with them to  
>> see that something happens before fishing season."

>>

>>

>> Your response does not show any possibility of a  
>> solution prior to the  
>> fishing season. There appears to be a disconnect  
>> between the  
>> expectations of the legislative branch and DEC  
>> regulations regarding  
>> micro operations. Perhaps Senator Elton was  
> confused  
>> and thought such  
>> a issue could be addressed faster than DEC  
> intends.

>>

>> What other stakeholders are involved in the issue?  
>> Why do they have a  
>> stake for so small poundages handled with outmost  
>> care for niche  
>> markets?

>>

>> In my case, I can already dress fish on my vessel,  
>> it would seem  
>> reasonable that I could buy fish and dress  
> purchased  
>> fish in the same  
>> area as I catch/dress fish. In particular this  
> seems  
>> reasonable since  
>> I am willing to only purchase/dress 1,000 pounds  
> or  
>> less per day.

>>

>> I cannot see how I can meet the requirements for a  
>> floating tender  
>> using my 31 foot bowpicker tender unless those  
>> requirements were the  
>> same as I already meet with my direct-market

> vessel.  
>> The five-sided  
>> solid enclosure would mean by little tender could  
>> not move from  
>> grounds to dock even if I could afford the expense  
>> of such an  
>> enclosure for so small a volume.  
>>  
>> Thank you for the prompt response, though I cannot  
>> agree with DEC's  
>> position.  
>>  
>> Len Peterson  
>> Taku River Reds  
>>  
>>  
>> On Apr 7, 2008, at 9:55 AM, McIntire, Orval D  
> (DEC)  
>> wrote:  
>>  
>>> Good morning Len,  
>>> Under the current regulations your proposed  
>> activity of purchasing  
>>> and processing salmon on board your tender  
> vessel  
>> would be covered  
>>> under the vessel processing requirements. A  
> direct  
>> market vessel is  
>>> only allowed to process your own harvest. The  
>> department has been  
>>> discussing with you and one other individual  
>> possible changes to the  
>>> regulations. Before proposing these changes to  
> the  
>> regulations, we  
>>> will need to discuss them with other  
> stakeholders  
>> and make a  
>>> determination on the appropriateness of such  
>> action. If the  
>>> determination is to make those changes, it would  
>> not be done in time  
>>> for the upcoming salmon season. If you want to  
>> pursue the small  
>>> floating processor permit, the department would  
> be  
>> happy to review  
>>> any application and drawings you submit, and  
> work  
>> with you on ways  
>>> to meet the requirements.  
>>>  
>>> Best Regards,  
>>> Duane McIntire  
>>>

>>> -----Original Message-----  
>>> From: Len Peterson [mailto:[petersol@mac.com](mailto:petersol@mac.com)]  
>>> Sent: Friday, April 04, 2008 3:20 PM  
>>> To: McIntire, Orval D (DEC); Ryan, Kristin J  
>> (DEC); Robin Samuelson  
>>> Cc: Peterson, Sheila (LAA); Jerry McCune UFA;  
>> Cadiente, Paula J  
>>> (LAA); Heather Hardcastle  
>>> Subject: Purchasing and dressing fish on board a  
>> direct-market vessel  
>>>  
>>> Hi Duane,  
>>> I know you are considering a licensing class of  
>> vessels to purchase  
>>> and dress salmon on a small tender vessel. Of  
>> course, we would be  
>>> interested in pursuing such a permit for our  
> small  
>> tender vessel using  
>>> direct-market vessel requirement. We will be  
>> getting you drawings for  
>>> consideration by early next week. Please look  
> for  
>> those drawings.  
>>>  
>>> You have also asked about the amount of fish to  
> be  
>> processed on such a  
>>> vessel. We certainly do not need to consider  
> more  
>> than 2,000 pounds  
>>> per day on our small tender.  
>>>  
>>> On another matter, I already have a direct  
> market  
>> processing permit  
>>> for my gillnet boat. I would love to buy up to  
>> 1000 pounds per day of  
>>> whole fish from boats that are not DEC-certified  
>> as direct marketers  
>>> and dress those as we do our other fish. I know  
> a  
>> few fishermen that  
>>> fish by themselves that cannot take time to  
> dress  
>> and head their fish.  
>>> Further, they do NOT want to file DEC and DOR  
>> paperwork for licensing.  
>>> I would love to take a few fish from these boats  
>> when my crew is not  
>>> busy dressing our own catch.  
>>>  
>>> Can you clarify whether you will be allowing  
> this  
>> activity?  
>>>

>>> As I stated, 1000 pounds per day is sufficient  
> for  
>> my purchase and  
>>> dress needs. All requirements that I presently  
>> meet as a direct-market  
>>> vessel vessel will be adhered whether the fish  
> are  
>> my catch or  
>>> purchased from others. I would probably consider  
>> moving to an  
>>> injection-chlorine system rather than a batch  
>> system presently  
>>> employed for disinfecting. Of course, we would  
>> continue to keep  
>>> records and monitor the disinfectant  
>> concentration.  
>>>  
>>> Total processed volume would be less than 2000  
>> pounds per day as I  
>>> don't have room for crew to handle more volume  
> and  
>> continue to fish.  
>>>  
>>> Thank you for your consideration,  
>>> Len Peterson  
>>> F/V Heather Anne  
>>> Taku River Reds  
>>>  
>>  
>> Len Peterson  
>> Peterson Ed Services  
>> Taku River Reds "Wild Alaska Salmon"  
>> petersol@mac.com  
>>  
>>  
>>  
>>  
>>  
>  
>  
> -  
> Mark Stopha and Sara Hannan  
> Alaska Wild Salmon Company  
> Wild Salmon and Salmon Pet Treats  
> 4455 N. Douglas Hwy  
> Juneau, AK 99801  
> 907-463-3115  
> www.GoodSalmon.com  
>  
>  
>  
>

--- "Ryan, Kristin J (DEC)" <kristin.ryan@alaska.gov>  
wrote:

> Len and Mark-

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> processor who has to comply with high standards is  
> concerned about the safety of Alaska's seafood and  
> fairness. If we don't thoroughly work through all  
> the different scenarios, unintended consequences are  
> a guarantee. For example, as I understand it, just  
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> buy fish won't solve Mark's issue because he wants  
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> working on it but even if we knew what was the best  
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> From what little I know about your boat Len, I still  
> believe that is possible.

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> Kristin Ryan  
> Director  
> Environmental Health

>

>

> -----Original Message-----

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> Sent: Mon 4/7/2008 11:03 AM

> To: Len Peterson; McIntire, Orval D (DEC); Edgmon,  
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> A (LAA)

> Cc: Soares, Manuel J (DEC); Klein, Ronald S (DEC);  
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>>> only allowed to process your own harvest. The  
>> department has been  
>>> discussing with you and one other individual  
>> possible changes to the  
>>> regulations. Before proposing these changes to  
> the  
>> regulations, we  
>>> will need to discuss them with other  
> stakeholders  
>> and make a  
>>> determination on the appropriateness of such  
>> action. If the  
>>> determination is to make those changes, it would  
>> not be done in time  
>>> for the upcoming salmon season. If you want to  
>> pursue the small  
>>> floating processor permit, the department would  
> be  
>> happy to review  
>>> any application and drawings you submit, and  
> work  
>> with you on ways  
>>> to meet the requirements.

>>>

>>> Best Regards,  
>>> Duane McIntire

>>>

>>> -----Original Message-----

>>> From: Len Peterson [<mailto:petersol@mac.com>]

>>> Sent: Friday, April 04, 2008 3:20 PM

>>> To: McIntire, Orval D (DEC); Ryan, Kristin J  
>> (DEC); Robin Samuelson

>>> Cc: Peterson, Sheila (LAA); Jerry McCune UFA;  
>> Cadiente, Paula J

>>> (LAA); Heather Hardcastle

>>> Subject: Purchasing and dressing fish on board a  
>> direct-market vessel

>>>

>>> Hi Duane,

>>> I know you are considering a licensing class of  
>> vessels to purchase

>>> and dress salmon on a small tender vessel. Of  
>> course, we would be

>>> interested in pursuing such a permit for our  
>> small

>> tender vessel using

>>> direct-market vessel requirement. We will be

>> getting you drawings for

>>> consideration by early next week. Please look  
> for

>> those drawings.

>>>

>>> You have also asked about the amount of fish to  
> be

>> processed on such a

>>> vessel. We certainly do not need to consider

> more  
>> than 2,000 pounds  
>>> per day on our small tender.  
>>>  
>>> On another matter, I already have a direct  
> market  
>> processing permit  
>>> for my gillnet boat. I would love to buy up to  
>> 1000 pounds per day of  
>>> whole fish from boats that are not DEC-certified  
>> as direct marketers  
>>> and dress those as we do our other fish. I know  
> a  
>> few fishermen that  
>>> fish by themselves that cannot take time to  
> dress  
>> and head their fish.  
>>> Further, they do NOT want to file DEC and DOR  
>> paperwork for licensing.  
>>> I would love to take a few fish from these boats  
>> when my crew is not  
>>> busy dressing our own catch.  
>>>  
>>> Can you clarify whether you will be allowing  
> this  
>> activity?  
>>>  
>>> As I stated, 1000 pounds per day is sufficient  
> for  
>> my purchase and  
>>> dress needs. All requirements that I presently  
>> meet as a direct-market  
>>> vessel vessel will be adhered whether the fish  
> are  
>> my catch or  
>>> purchased from others. I would probably consider  
>> moving to an  
>>> injection-chlorine system rather than a batch  
>> system presently  
>>> employed for disinfecting. Of course, we would  
>> continue to keep  
>>> records and monitor the disinfectant  
>> concentration.  
>>>  
>>> Total processed volume would be less than 2000  
>> pounds per day as I  
>>> don't have room for crew to handle more volume  
> and  
>> continue to fish.  
>>>  
>>> Thank you for your consideration,  
>>> Len Peterson  
>>> F/V Heather Anne  
>>> Taku River Reds  
>>>  
>>

>> Len Peterson  
>> Peterson Ed Services  
>> Taku River Reds "Wild Alaska Salmon"  
>> petersol@mac.com

>>

>>

>>

>>

>>

>

>

> -

> Mark Stopha and Sara Hannan  
> Alaska Wild Salmon Company  
> Wild Salmon and Salmon Pet Treats  
> 4455 N. Douglas Hwy  
> Juneau, AK 99801  
> 907-463-3115  
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# ***Economic Impacts of the Prince William Sound Aquaculture Corporation: 2006 Update***

*Prepared for:*  
**Prince William Sound  
Aquaculture Corporation**



Research-Based Consulting

Juneau  
Anchorage  
Kodiak

**May 2007**

# ***Economic Impact of the Prince William Sound Aquaculture Corporation: 2006 Update***

***Prepared for:  
Prince William Sound  
Aquaculture Corporation***



**Juneau • Anchorage • Kodiak**

**May 2007**

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## EXECUTIVE SUMMARY

This study analyzes the impacts of the Prince William Sound Aquaculture Corporation (PWSAC) on regional and statewide economies. This is the third update to a report issued originally in 2001. The current report reflects data through 2006; earlier reports addressed data through 2000, 2002 and 2004. The report examines the impact of PWSAC activities on commercial, sport, personal use and subsistence harvests. It also examines the market conditions for those salmon species that currently are most important to PWSAC's production. Key findings from the analysis are noted below.

### Summary of Economic Impacts

- In 2006, processors, commercial fishermen, and sport fishing service businesses earned an estimated \$82 million from PWSAC salmon. The estimated economic impacts from these earnings, plus the activities of the PWSAC organization itself, were \$135 million in total economic output, including \$42 million in labor income and 750 jobs.<sup>1</sup> Impacts for each sector (commercial fishing, seafood processing, sport, personal use and subsistence harvests, and PWSAC operations) are summarized below.

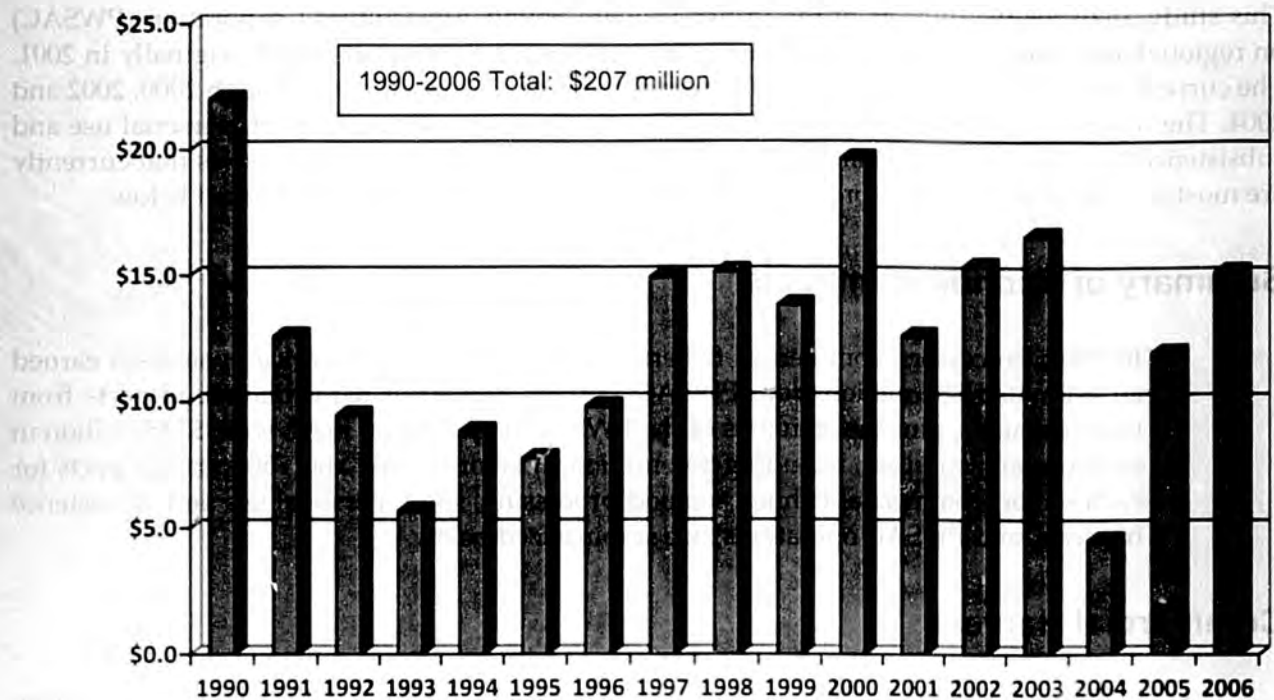
### Commercial Harvest

- In 2006, 34 million pounds of PWSAC salmon were commercially harvested in Prince William Sound, with an ex-vessel value of \$15 million to commercial fishermen. Though the harvest volume was about 40 percent lower than the five-year average, the value of the harvest was 20 percent higher, due to a favorable species mix and strong prices for key species.
- From 1990 to 2006, commercial fishermen harvested 848 million pounds of PWSAC salmon in common property fisheries with a total ex-vessel value of \$207 million.<sup>2</sup>
- From 1990 to 2006, commercial fishermen contributed \$12 million in enhancement taxes in support of PWSAC. The \$207 million ex-vessel value of PWSAC salmon harvested during the same time period returned fishermen more than \$17 for every \$1 of tax paid.
- From 1990 to 2006, PWSAC salmon accounted for an average of 35 percent of ex-vessel value and 49 percent of total volume of the Prince William Sound commercial fishery.

<sup>1</sup> Total output refers to all spending activity generated throughout the regional economy. An economic model, IMPLAN, was used to estimate total output. One dollar of input often results in more than one dollar of output because the dollar may circulate through many sectors in the economy.

<sup>2</sup> Ex-vessel value is the gross value paid to commercial fishermen for their salmon harvest.

**Ex-Vessel Value of Common Property Commercial Harvest  
of PWSAC Salmon, 1990-2006**  
(millions of dollars)



Source: Alaska Department of Fish and Game and McDowell Group estimates.

- Resident ex-vessel earnings from PWSAC salmon harvested in 2006 were \$11.7 million. This resulted in an estimated \$22.8 million in total economic output, including \$18.7 million in labor income and 345 jobs.
- Alaska resident permit holders see most of the economic benefits of PWSAC production. In 2006, Alaska resident permit holders earned an estimated 77 percent of the total PWSAC ex-vessel value.
- From 2004 to 2006, Cordova resident permit holders earned a total of \$10.2 million from PWSAC fish. Homer residents were the next highest earners, followed by Valdez and Anchorage.

**Ex-Vessel Value of PWSAC Commercial Harvest by Permit Holders'  
Area of Residence, Top Seven Communities  
2004 to 2006**

|           | 2004        | 2005        | 2006        |
|-----------|-------------|-------------|-------------|
| Cordova   | \$2,391,000 | \$5,121,000 | \$5,694,000 |
| Homer     | 641,000     | 1,990,000   | 2,213,000   |
| Valdez    | 178,000     | 945,000     | 1,051,000   |
| Anchorage | 283,000     | 666,000     | 741,000     |
| Girdwood  | 88,000      | 506,000     | 563,000     |
| Wasilla   | 88,000      | 231,000     | 257,000     |
| Kasilof   | \$48,000    | \$207,000   | \$230,000   |

Source: Commercial Fisheries Entry Commission and McDowell Group estimates.

- Regional economic impacts include an estimated 120 jobs and \$8 million in payroll in the Valdez-Cordova area, 90 jobs and \$3 million in payroll in the Kenai Peninsula area, and 60 jobs and \$2 million in payroll in the Anchorage area.

#### **Estimated Economic Output from Commercial Ex-Vessel Value of PWSAC Salmon, 2006**

| Census Area     | 2006 Ex-Vessel<br>Income | Economic<br>Output | Jobs | Payroll      |
|-----------------|--------------------------|--------------------|------|--------------|
| Valdez-Cordova  | \$6,789,000              | \$9,946,000        | 120  | \$8,195,000  |
| Kenai Peninsula | \$2,913,000              | \$4,897,000        | 90   | \$3,472,000  |
| Anchorage       | \$1,475,000              | \$2,621,000        | 60   | \$2,105,000  |
| Statewide       | \$11,716,000             | \$22,846,000       | 345  | \$18,734,000 |

Source: CFEC and McDowell Group estimates.

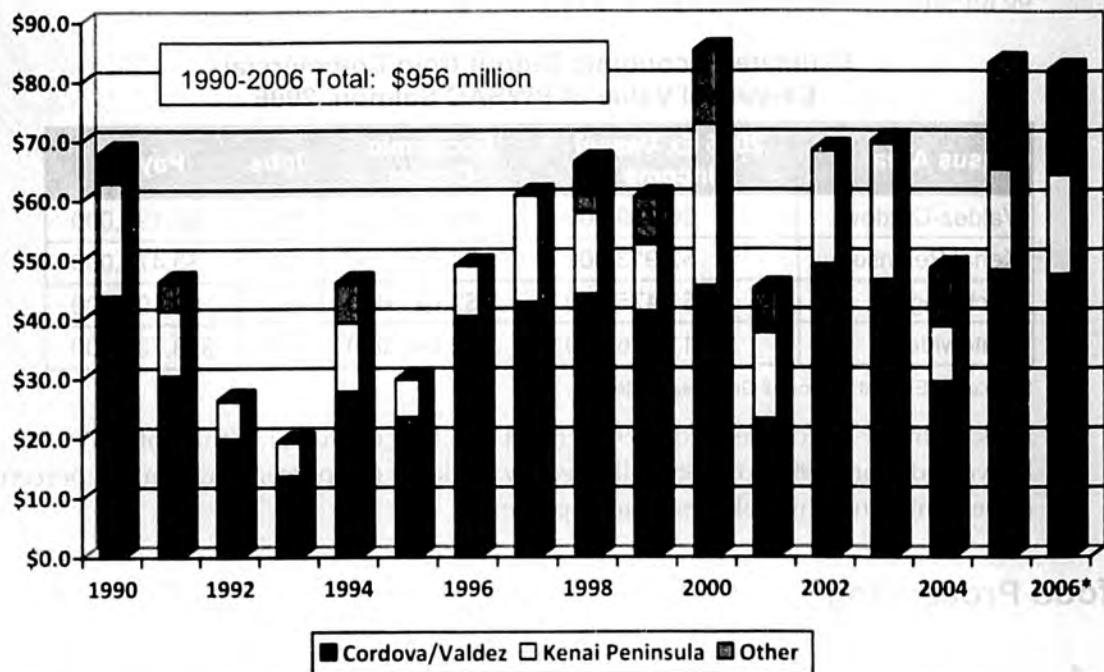
- Pink salmon accounted for 39 percent of the ex-vessel value of PWSAC salmon harvested from 1990 to 2006, followed by sockeye (38 percent), chum (20 percent), coho (2 percent), and chinook (less than 1 percent).

## **Seafood Processing**

- The first wholesale value of processed PWSAC salmon in 2006 was an estimated \$81 million. This is comparable to the 2005 total of \$83 million. Lower harvests in 2006 were offset by higher prices and a species mix that favored high-value species.
- Between 1990 and 2006, the total first wholesale value of commercial and cost recovery harvest of PWSAC salmon was \$956 million, with an annual average value of \$56 million.<sup>3</sup>
- PWSAC salmon are processed by as many as 17 different Alaska processors. In terms of wholesale value, most PWSAC salmon are processed in the Cordova/Valdez area and on the Kenai Peninsula.
- From 1990 to 2006, first wholesale value for Cordova/Valdez area processors was about \$618 million, followed by \$237 million to Kenai Peninsula processors, and \$83 million to processors elsewhere in the state.
- Processing of PWSAC fish generated an estimated \$97 million in total output in 2006, including \$17 million in labor income and 305 jobs.

<sup>3</sup> First wholesale value is the first sale of fish from a processor to a buyer outside of the processor's affiliate network.

**First Wholesale Value of PWSAC Salmon and Roe  
by Processor Region, 1990 to 2006**  
(millions of dollars)



Source: ADF&G and McDowell Group estimates. 2004 data is preliminary.

- By species (including roe), pink salmon contributed the largest share of wholesale value (61 percent), followed by chum (21 percent) and sockeye (16 percent). Coho accounted for 1 percent of value and chinook was less than 1 percent.

## Sport Harvest

- PWSAC-origin salmon are harvested in sport fisheries over a wide area, including the Copper River Basin and Prince William Sound.
- In 2006, sport harvests of PWSAC salmon totaled 49,000 fish, the vast majority of which were pink salmon. The previous year saw harvests of approximately 27,000 fish. These oscillations are consistent with two-year cycles in pink salmon abundance.
- From 1990 to 2006, sport fishermen in the Prince William Sound area harvested 246,000 PWSAC salmon.
- Economic impacts from the 2006 harvest were an estimated \$524,000 in total output, including \$262,000 in payroll and 13 jobs.
- The record harvest of PWSAC fish occurred in 2006, when anglers harvested 49,000 fish. The 2000 harvest was second largest at 46,000 fish.

### Sport Harvest of PWSAC Salmon in Numbers of Fish, 2002 to 2006

| Species | 2002   | 2003   | 2004   | 2005   | 2006   |
|---------|--------|--------|--------|--------|--------|
| Chinook | 80     | -      | -      | -      | -      |
| Sockeye | 7,756  | 4,000  | 1,869  | 3,400  | 1,863  |
| Coho    | 22,698 | 13,067 | 4,543  | 22,673 | 46,425 |
| Pink    | 3,013  | 3,009  | 2,999  | 100    | -      |
| Chum    | 1,823  | 1,811  | 1,820  | 500    | 1,000  |
| Total   | 35,370 | 21,887 | 11,231 | 28,519 | 49,288 |

Source: ADF&G, PWSAC and McDowell Group estimates.

### Personal Use and Subsistence Fisheries

- In 2005, personal use and subsistence harvesters took 70,900 PWSAC-origin sockeye salmon.
- Between 1999 and 2005, Alaskans from across the state harvested 316,000 PWSAC sockeye in the Copper River personal use and subsistence fisheries.
- The largest harvests of PWSAC sockeye were by residents of Fairbanks, Anchorage, Wasilla, North Pole and Copper Center.

### Copper River Personal Use and Subsistence Fishery Harvest of PWSAC Sockeye, 1999-2005 Total by Place of Residence Top Nine Communities

| City          | 1999  | 2000  | 2001  | 2002   | 2003  | 2004  | 2005   | Grand Total |
|---------------|-------|-------|-------|--------|-------|-------|--------|-------------|
| Fairbanks     | 7,333 | 4,614 | 3,829 | 18,268 | 9,605 | 5,367 | 17,031 | 66,047      |
| Anchorage     | 9,388 | 4,896 | 5,071 | 18,190 | 9,634 | 4,525 | 12,593 | 64,297      |
| Wasilla       | 3,246 | 2,045 | 1,853 | 8,067  | 4,105 | 2,106 | 7,647  | 29,069      |
| North Pole    | 2,312 | 1,287 | 1,243 | 5,223  | 3,026 | 1,630 | 5,459  | 20,186      |
| Copper Center | 2,209 | 1,253 | 1,255 | 6,466  | 4,174 | 1,308 | 4,686  | 21,351      |
| Eagle River   | 2,352 | 868   | 1,149 | 4,278  | 2,063 | 970   | 3,294  | 14,974      |
| Delta         | 1,288 | 762   | 674   | 2,597  | 1,672 | 777   | 2,973  | 10,743      |
| Glennallen    | 2,254 | 1,100 | 944   | 5,175  | 2,652 | 688   | 2,964  | 15,777      |
| Valdez        | 1,182 | 769   | 744   | 3,010  | 1,271 | 814   | 2,224  | 10,014      |

Source: ADF&G and McDowell Group estimates.

\* Reporting requirements were changed in 2000 and may result in some inconsistencies in the time series data.

### PWSAC Organization

- The PWSAC organization creates an annual average of 72 jobs in the regional economy. The organization generates annual payroll and expenditures of \$3.5 million within the state, plus an additional \$2.5 million in out-of-state expenditures.
- Economic impacts of PWSAC spending include approximately \$17 million in total output, 190 jobs and \$5.7 million in labor income.

## Purpose and Scope

The purpose of this study is to provide an estimate of the economic impacts of PWSAC's hatcheries in Southcentral Alaska. Analyses include:

Commercial Harvest of PWSAC Salmon. In this section, the overall and regional economic benefits of PWSAC salmon are estimated based on ex-vessel income to permit holders in the Prince William Sound commercial fishery. In addition, regional economic effects from PWSAC salmon harvest are reported.

Economic Impacts of the Seafood Processing Industry. This section addresses the overall and regional economic impacts of processing PWSAC salmon based on first wholesale value and indirect economic impacts on the regional economy.

Sport Harvest of PWSAC Salmon. The sport harvest of PWSAC salmon is addressed, including economic impacts from angler spending.

Personal Use and Subsistence Harvest of PWSAC Salmon. The Copper River dipnet and fishwheel personal use and subsistence PWSAC harvests are described, including estimated number of fish harvested by fishermen's town of residence and economic impacts of participant spending.

Tax Payments from PWSAC Harvest. The fisheries business and enhancement tax revenue paid from the harvest of PWSAC fish are presented, including the ratio of income earned to enhancement tax paid by commercial fishermen.

## Methodology

The data used in this report comes from a variety of sources, including PWSAC, Alaska Commercial Fisheries Entry Commission (CFEC), Alaska Department of Labor and Workforce Development, Alaska Department of Revenue, and Alaska Department of Fish and Game (ADF&G). It should be noted that available data on the economics of the region's seafood industry, sport, personal use and subsistence fisheries are limited, and in some cases non-existent. This is particularly true in areas related to personal income of commercial fishermen and the value of sport fishing activity. In these cases, estimates are based on the best available data.

Some preliminary commercial and sport harvest data was available through 2004. Some wholesale value data was unavailable from the State of Alaska due to confidentiality regulations. Therefore, wholesale values should be considered minimum estimates. Ex-vessel income for some communities was restricted due to state confidentiality laws. For these communities, the fishery average income per permit by gear type was used as a proxy.

Processor wholesale data and commercial harvest data by community of residence were available through 2005 from ADF&G and CFEC. For 2006, processor wholesale data was estimated by multiplying the ratio of ex-vessel to wholesale value in 2005 by the estimated ex-vessel value for 2006, based on ADF&G annual reports. The study team also assumed that the wholesale value of PWSAC salmon in 2006 was apportioned by area as it was in 2005. Ex-vessel value by community for 2006 was assumed to be in the same proportion as for 2005, and is estimated based on ADF&G annual reports. The 2006 estimates will be updated with actual ADF&G and CFEC data in future reports.

Wholesale value data for roe in Prince William Sound is not available. When fewer than four companies in a region process a seafood product, the State of Alaska considers the data confidential to protect the financial interests of the involved parties. The value of roe in the region was estimated from the statewide wholesale roe values, and assumed to be in proportion to the total contribution of Prince William Sound region salmon to the statewide total, by species. The wholesale value contribution of PWSAC salmon roe to the regional total was assumed to be in the same proportion as the contribution of PWSAC salmon to the regional total, by species.

Sport fishery harvest figures for PWSAC chinook, coho and sockeye are based on PWSAC hatchery manager estimates reported in annual reports to ADF&G. PWSAC pink salmon and chum are not reported in PWSAC reports, but are assumed to be harvested in substantial numbers by Prince William Sound anglers. For chum salmon, the percentage of PWSAC chum in the sport fishery is assumed to be the same as the PWSAC contribution to the commercial fishery. For pink salmon, the sport harvest in the Valdez area is assumed to be entirely from the Valdez Fishery Development Association (VFDA), and not from PWSAC. Therefore, the PWSAC contribution to the pink salmon sport fishery was assumed to be the same proportion as the PWSAC contribution to the commercial fishery in the Prince William Sound area, excluding the Valdez area.

The Copper River dipnet and fishwheel fisheries are important to thousands of Alaskans. The remoteness of the fishing area means that many users travel long distances to participate. These fishers buy fuel, ice, fishing equipment and clothing to harvest their catch. Estimating where these dollars are spent would require extensive research beyond the scope of this study. Furthermore, people would travel to the fishery to dipnet salmon even in the absence of PWSAC fish. Data is provided on estimated harvest per Alaska community, based on ADF&G Subsistence Division data.

### **Economic Modeling**

The McDowell Group used the Impact Analysis for Planning Model (IMPLAN) to estimate the distribution of economic impacts of PWSAC salmon harvest and production throughout the economy. The IMPLAN model estimates total economic output, which reflects the entire supply chain of transactions resulting from harvest or processing of fish. For example, harvesting of fish will require purchase of a vessel, fuel, food, gear, and many other goods. This spending cycles through the regional economy. The IMPLAN model estimates the total set of such transactions. As a result, one dollar of input often results in more than one dollar of output because the dollar may circulate several times through the economy. The model also estimates employment and labor income, including total wage and salary employment as well as self-employed jobs in a region. It includes both full-time and part-time workers and is measured in annual average jobs. The IMPLAN model estimates economic impacts by census area or region. Data was grouped accordingly when assessing impacts with the IMPLAN model. To determine an accurate estimate of expenditures in Alaska would require research beyond the scope of this study.

## **PWSAC – AN OVERVIEW**

### **Introduction**

The Prince William Sound Aquaculture Corporation (PWSAC) is a non-profit organization formed in 1974 by a local area fishermen's group to optimize salmon production in Prince William Sound for the long term well-being of all user groups. PWSAC headquarters are located in Cordova.

The organization operates four remote hatcheries in Prince William Sound and one inland on the Gulkana River. Four species of salmon are currently produced: pink, chum, coho and sockeye. The returning salmon benefit the commercial, sport, personal use and subsistence fishers in the Prince William Sound area and throughout the state.

PWSAC is a private non-profit corporation. It relies on cost recovery revenues and a 2 percent tax on the regional commercial salmon harvest to fund its salmon enhancement activities.

### **Facilities and Operations**

#### **Armin F. Koernig Hatchery**

The Armin F. Koernig Hatchery is located about 60 air miles west of Cordova in Sawmill Bay, on Evans Island. The site was originally a salmon cannery, but was converted to become the first PWSAC hatchery in 1975. The facility was built with monies borrowed from the State of Alaska's Fisheries Enhancement Revolving Loan Fund. Six on-site year-round staff and up to 14 seasonal staff operate the facility.

Armin F. Koernig was the only hatchery directly affected by the Exxon Valdez Oil Spill in 1989. Although oil booms surrounded the operation to protect the out-migrating fry, the effects of the spill to Armin F. Koernig and the Sound are still being investigated.

In 2006, Armin F. Koernig Hatchery saw estimated returns of 5.2 million pink salmon and 10.1 million pink salmon in 2005. The five-year average (2002-2006) for the hatchery was 7.0 million pink salmon.

#### **Wally Noerenberg Hatchery**

The Wally Noerenberg Hatchery was built in 1985 with monies borrowed from the State of Alaska's Fisheries Enhancement Revolving Loan Fund. It is located approximately 20 miles east of Whittier in Lake Bay on the southern tip of Esther Island, in the South Esther Island State Marine Park. WNH is the largest salmon production facility in North America. Eight on-site year-round staff and 30 seasonal staff operate the facility.

Wally Noerenberg Hatchery returns included an estimated 4.1 million pink, 2.2 million chum salmon and 100,000 coho salmon in 2006. In 2005 returns included 9.1 million pink, 1.9 million chum salmon and 80,000 coho salmon. Over the five-year period, the hatchery averaged returns of 7.8 million pink salmon, 3.2 million chum salmon, and 66,000 coho.

#### **Cannery Creek Hatchery**

The Cannery Creek Hatchery was built in 1978 by the Alaska Department of Fish and Game (ADF&G) Fisheries Rehabilitation, Enhancement and Development (FRED) division. PWSAC took

over operational control of the hatchery on July 1, 1988. The site is located on land managed by the U.S. Forest Service, approximately 40 miles east of Whittier, on the eastern shore of Unakwik Inlet in the northern area of Prince William Sound. PWSAC funds and operates the pink salmon facility under a 20-year contract with the ADF&G. Six on-site year-round staff and 14 seasonal staff operate the facility.

Cannery Creek Hatchery pink returns totaled an estimated 2.9 million fish in 2006. In 2005, the hatchery saw record returns of 13.5 million pinks. Over the five-year period from 2002 to 2006, average returns to the hatchery were 5.8 million pink salmon.

### **Main Bay Hatchery**

Main Bay Hatchery is owned by the State of Alaska and situated on land managed by the U.S. Forest Service in Main Bay on the western shore of the sound, approximately 40 miles southwest of Whittier. Main Bay was built in 1981 by ADF&G as a chum salmon hatchery, but switched to a sockeye salmon enhancement program in 1986, becoming the first sockeye salmon smolt-producing hatchery in the world. PWSAC took over operation and management on July 1, 1991. Six on-site year-round staff and 12 seasonal staff operate the facility.

Main Bay Hatchery sockeye returns totaled about 1 million fish in 2006 and 467,000 fish in 2005. The five-year average for the facility was 907,000 returning sockeye.

### **Gulkana Hatchery**

The Gulkana Hatchery is located on the Gulkana River near Paxson, 250 miles northeast of Anchorage and 177 miles south of Fairbanks on the Richardson Highway. PWSAC operates the facility under a contract, which began in 1993 and runs through 2013. The facility is owned by ADF&G and located on Bureau of Land Management land. Four on-site year-round staff and 12 seasonal staff operate the facility.

In 1973, the first streamside incubator box was introduced in an attempt to enhance Copper River sockeye salmon. With a survival rate of 79 percent the first year, significant enhancement opportunities were recognized along with the possibility of future expansion. By 1984, Gulkana became the largest sockeye salmon fry production facility in North America.

Gulkana Hatchery sockeye returns totaled about 272,000 fish 2006 and 261,000 fish in 2005. These numbers were consistent with the five-year average of 265,000 sockeye.

### **Cordova and Anchorage**

PWSAC administration offices are located in Cordova. PWSAC owns a distribution center in Anchorage to consolidate and expedite supplies to and from the remote hatchery sites via Whittier.

## **SALMON MARKET OVERVIEW**

### **Market Discussion**

This section is intended as a broad overview of salmon market conditions relative to the species mix of PWSAC-origin salmon. Assessment of market performance and outlook is based on first wholesale value and product-form data published by Alaska Department of Revenue in the Alaska Salmon Price Report (ASPR) series.

PWSAC primarily produces pink and chum salmon and those species are the focus of this discussion. By volume, the five-year average of PWSAC production (2002-2006) is 70 percent pink, 24 percent chum and 6 percent sockeye.

The 2005 and 2006 seasons are unusual relative to the 5-year average of PWSAC salmon production. In 2005, the harvest of PWSAC pink salmon was the second-largest since 1990, totaling 104 million pounds and 85 percent of the total PWSAC harvest. 2006 was another anomaly, with the return of PWSAC pinks at just 40 million pounds, second-lowest in 10 years.

**Table 1**  
**Recent Harvest Composition of PWSAC Salmon by Volume**

| Species | 2002-2006 Avg |         | 2005         |         | 2006         |         |
|---------|---------------|---------|--------------|---------|--------------|---------|
|         | Million lbs.  | Percent | Million lbs. | Percent | Million lbs. | Percent |
| Pink    | 68.5          | 70%     | 104.0        | 85%     | 40.6         | 62%     |
| Chum    | 23.6          | 24%     | 15.3         | 13%     | 17.7         | 27%     |
| Sockeye | 5.9           | 6%      | 3.1          | 3%      | 7.6          | 11%     |

Source: ADF&G Salmon Enhancement Annual Reports. Data from 2006 is preliminary.

### **Chum Salmon**

Statewide average chum salmon prices have improved substantially in recent years, from 19 cents per pound in 2003 to 31 cents per pound in 2006. The rebound in chum price is a result of improved market conditions for chum salmon meat products rather than roe.

The previous 10-year peak for Prince William Sound chum price was 2001, when ex-vessel average for the region was 40 cents per pound. This was driven largely by strong first wholesale values for chum roe, at or near \$11 per pound.

More recently, chum roe has been selling at statewide average first wholesale prices in the \$6 to \$7 per pound range and has remained fairly steady at that level from 2003 through 2006. In comparison, first wholesale value of frozen headed and gutted (H&G) chum has risen steadily since 2003, from the mid-40-cent range in 2003 to 97 cents per pound in late 2006. Frozen chum fillets show similar first wholesale value growth, from the \$1.30-1.40 range in 2003 and 2004 to \$2.00 per pound in 2006.

The improved price for chum salmon meat products are widely considered to be a function of the continued growth in broad consumer demand for salmon, and the ongoing success of efforts to differentiate wild salmon from farmed product.

## Pink Salmon

While ex-vessel pink prices from the 2006 season show only a modest improvement (with the statewide average up from \$0.10 in 2004 to \$0.13 in 2006), recent changes in inventory and growth in first wholesale prices provide more promising signs of recovery for Alaska pink salmon value.

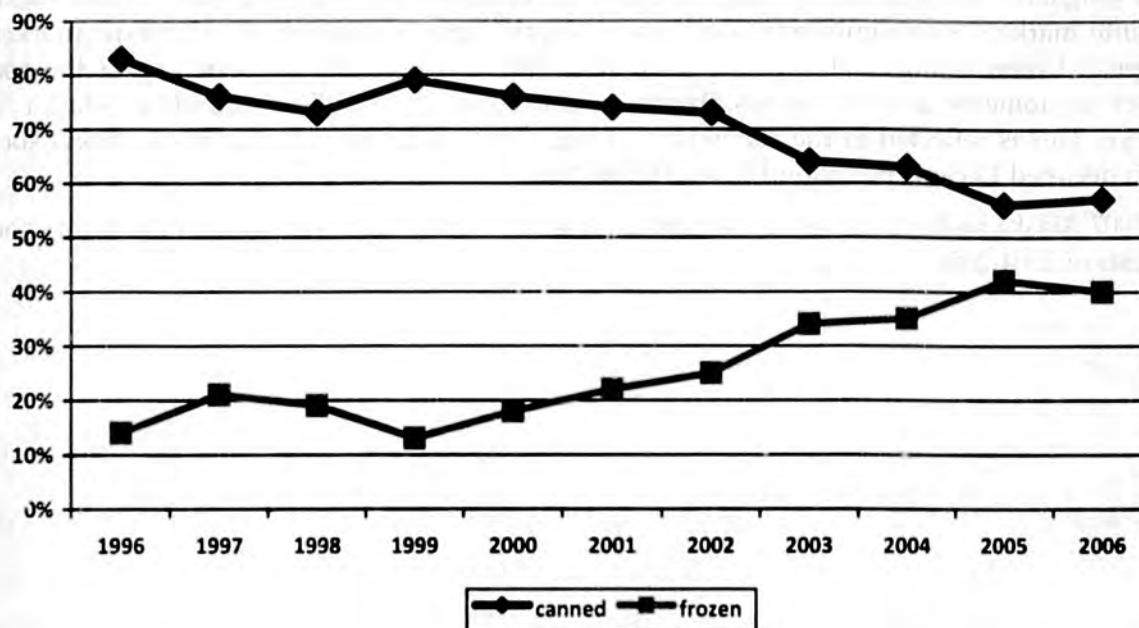
The market outlook for pinks is positive, based on three factors. First, market demand for salmon and for wild salmon in particular continues to grow. Pink salmon makes up nearly half of Alaska salmon harvest tonnage and pink products benefit from the upward trend in demand and salmon commodity value. Second, the recent product-form shift from canned to frozen pink has reduced the supply of raw material for the canned pack, helping balance supply and demand in the canned segment. Third, the below-average pink harvest of 2006 (the smallest in 10 years) heightened demand for frozen pinks and helped "dry up" surplus inventory of canned pinks.

The September 2006 canned pink salmon inventory is estimated at 2.8 million 48-tall case equivalent, a major reduction from the 5-year average of 4 million 48-tall equivalent. Five-year average sales volume of canned pink salmon is 3.2 million cases.

With canned pink inventory significantly below average sales (by 12 percent), the longstanding surplus of canned pink appears to be at an end. This is reflected in the most recent first wholesale case price figures for 48-tall canned pinks, up from the \$35 - \$42 per case range of the last five years to over \$53 per case in the September - December 2006 reporting period.

Frozen H&G pink salmon value has increased substantially, from 41 cents per pound in 2003 to 82 cents per pound in 2006. Per-pound value of frozen pink doubled in four years and sales volume during the same period grew from 36 million pounds to 62 million pounds. The combination of increased price and increased sales volume are clear indicators of genuine growth in demand rather than scarcity-driven pricing.

**Figure 1**  
**Pink Salmon Product Form Composition, 1996-2006**



Source: ADF&G Commercial Operators Annual Report, Alaska Department of Revenue ASPR.

## Sockeye Salmon

Prince William Sound sockeye typically bring the highest ex-vessel value in the state. Average ex-vessel sockeye price for Prince William Sound has increased steadily over the last four years, from \$1.10 per pound in 2003 to \$1.65 in 2006. In contrast the statewide average price of sockeye changed little during the same period, from 62 cents in 2003 to 67 cents in 2006.

While a significant amount of Prince William Sound (Copper River) sockeye is sold at high specialty-market prices early in the season, a good deal of PWS sockeye is caught and sold in June and early July while other Alaska sockeye fisheries are producing substantial volumes of fish. Buyers of early-season PWS sockeye generally purchase the fish for reasons other than price, but for mid-season and late-season production, PWS sockeye value is more directly linked to the broader Alaska sockeye market.

That market is showing two significant developments that are likely to keep statewide average prices stable or slightly lower in the short term. First, canned salmon makes up about a third of sockeye production and the canned sockeye market appears to be oversupplied. The September 2006 canned sockeye inventory is estimated at 1.4 million 48-tall case equivalent. Five-year average sales volume for the September - August reporting period is 1.1 million 48-tall equivalent. The oversupply will probably weaken ex-vessel price, particularly in Bristol Bay which contributed nearly 70 percent of Alaska sockeye production in 2006.

Second, there was a dramatic reduction in the export of frozen Alaska sockeye to Japan in 2006. In the last three years (2004-2006) Alaska produced between 80 million pounds and 96 million pounds of frozen H&G sockeye. In 2004 and 2005, about three-quarters of that production (74 percent and 80 percent, respectively) was exported to Japan. In 2006 frozen H&G sockeye production was slightly over 80 million pounds but only 30 million pounds (37 percent) was exported to Japan.

The decline in sockeye exports to Japan nearly doubled the supply of frozen Alaska sockeye available to other markets, from 28-30 million pounds in 2004 and 2005 to 53 million pounds in 2006.

In the long term, this will likely create a favorable situation for Alaska producers as more sockeye is sold into markets with significant salmon consumption growth, namely the domestic market and European Union countries. But in the short term, there is potential for softening of the sockeye market, as domestic and EU buyers absorb an additional 20-25 million pounds of Alaska frozen sockeye. This is reflected in the statewide average first wholesale price for frozen H&G sockeye, which declined 17 cents per pound from 2005 to 2006.

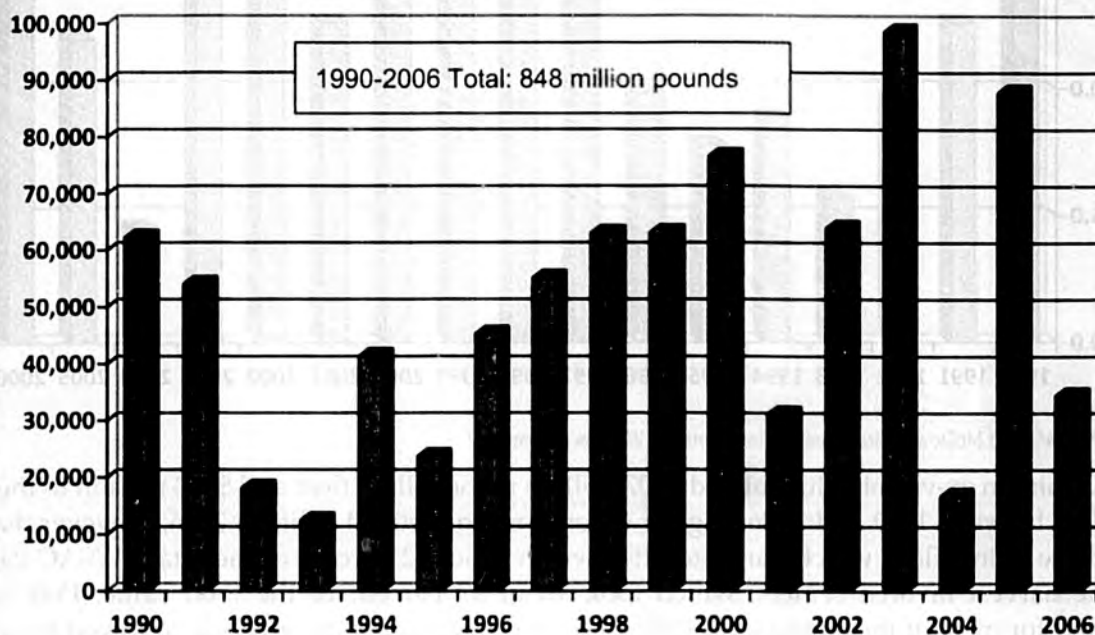
The 2007 Alaska sockeye harvest projection is for 41 million fish, consistent with the strong sockeye harvests of 2004-2006.

## COMMERCIAL HARVEST OF PWSAC SALMON

### Commercial Harvest and Ex-Vessel Value

Commercial fishermen harvested 34 million pounds of PWSAC salmon in 2006, and 88 million in 2005. While the 2006 harvest was the third lowest in a decade, the 2005 harvest was the second highest on record. Year-to-year oscillations in harvest are common as pink salmon returns, which make up the majority of PWSAC's fish, tend to cycle over a two-year period. Cumulatively from 1990 to 2006, commercial fishermen harvested 848 million pounds of PWSAC salmon in common property fisheries (see Figure 2). This was an average of 50 million pounds annually. The 2003 harvest was a record at nearly 100 million pounds of fish, with a second record season following in 2005 with 88 million fish.

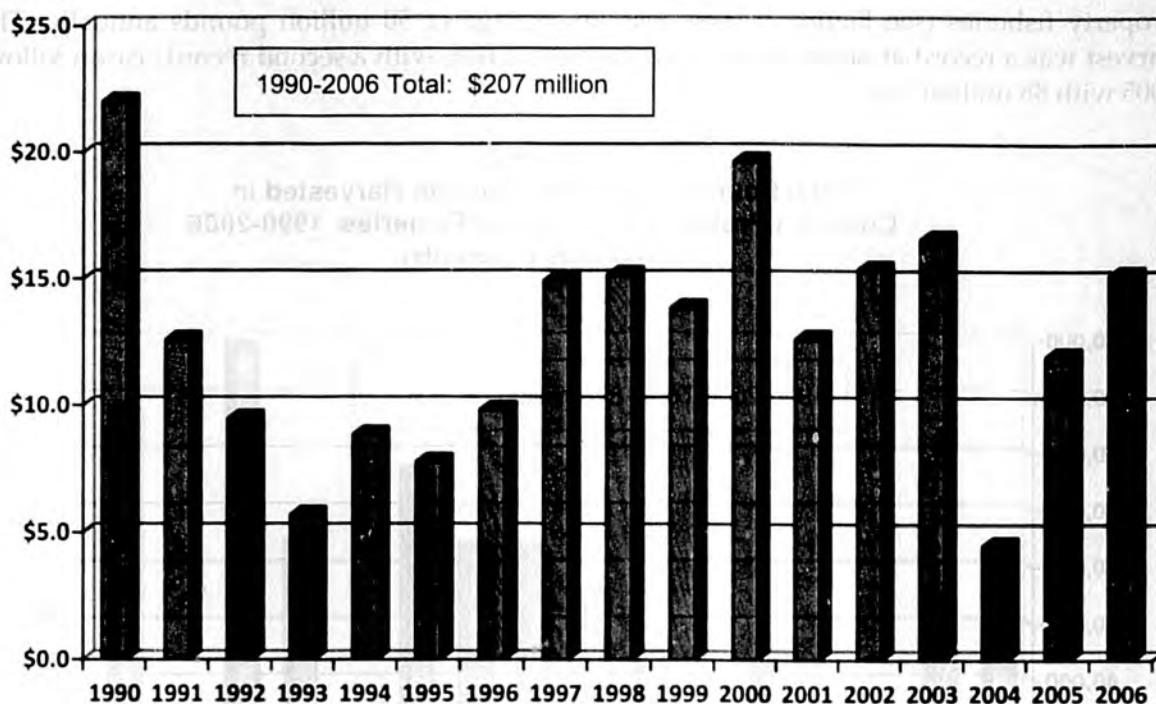
**Figure 2**  
**Total Pounds of PWSAC Salmon Harvested in**  
**Common Property Commercial Fisheries, 1990-2006**  
(thousands of pounds)



Source: ADF&G and McDowell Group estimates. 2006 data is preliminary. Number of PWSAC fish provided by Alaska Department of Fish and Game annual enhancement reports; total poundage based on average weight by species by gear type.

The harvest value of the 2006 commercial fishery was relatively high, at \$15 million, despite the modest return. This was due largely to a species mix that favored higher valued species, supported by improving ex-vessel prices. Commercial fishermen earned an estimated \$207 million in ex-vessel value from PWSAC salmon in common property fisheries from 1990 to 2006, an average of \$12 million annually. Averages are pulled down by extremely low earnings in 2004 caused by poor pink salmon returns.

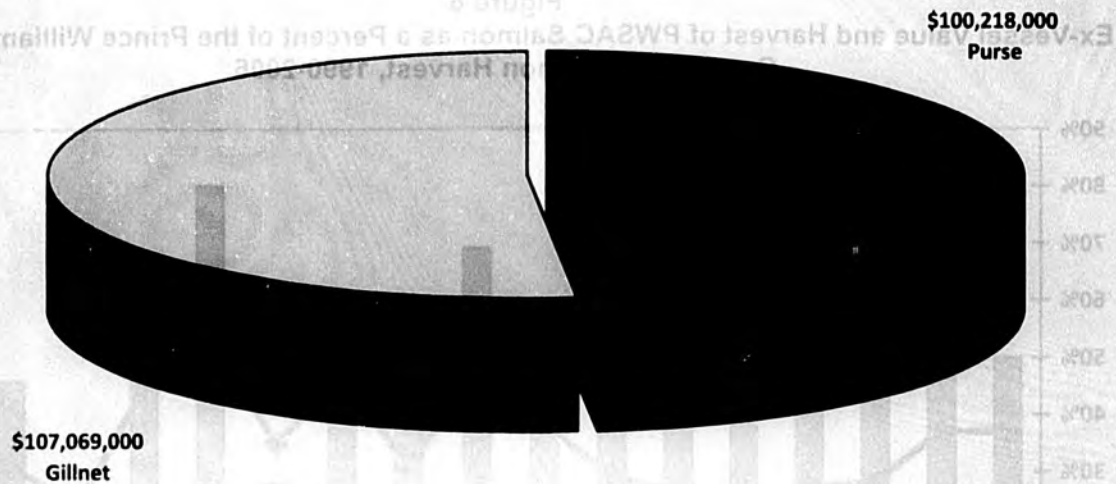
**Figure 3**  
**Ex-Vessel Value of Common Property Commercial Harvest of**  
**PWSAC Salmon, 1990-2006**  
 (millions of dollars)



Source: ADF&G and McDowell Group estimates. Data for 2006 is preliminary.

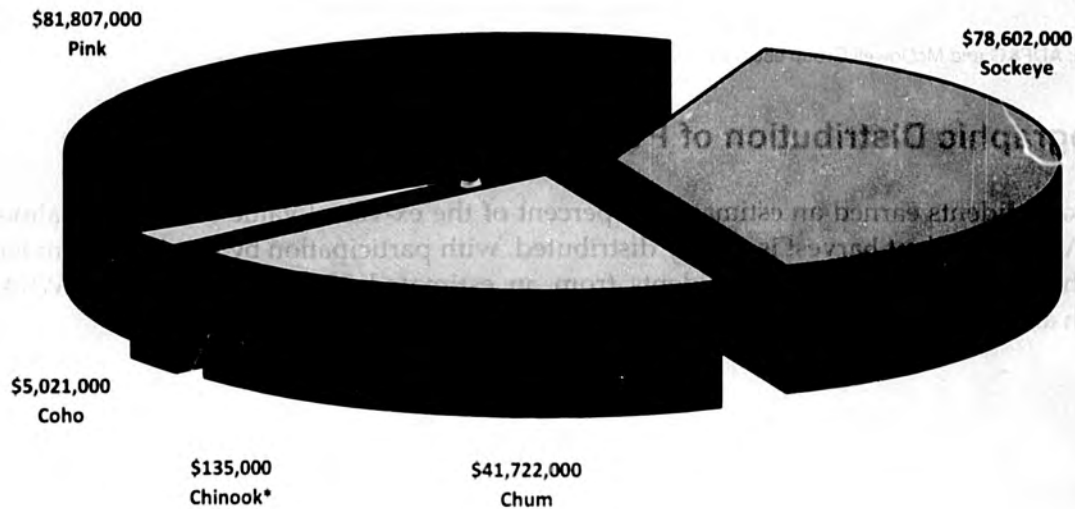
PWSAC salmon ex-vessel value totaled \$107 million to the gillnet fleet and \$100 million to the purse seine fleet between 1990 and 2006 (Figure 4), or close to a 50/50 split. In 2006, however, harvests favored the gillnet fleet, which harvested fish worth about 62 percent of the total PWSAC value. In 2005 the harvest favored seiners, which took about 57 percent of the total value. Pink salmon accounted for most of the cumulative 1990-2006 ex-vessel value (\$81 million), followed by sockeye salmon (\$79 million), chum (\$42 million), coho (\$5 million) and chinook (\$135,000) (Figure 5). (PWSAC no longer produces chinook salmon.)

**Figure 4**  
**Ex-Vessel Value of PWSAC Salmon**  
**by Gear, 1990-2006 Total**



Source: ADF&G and McDowell Group estimates. This data excludes fish used for cost recovery.

**Figure 5**  
**Ex-Vessel Value of PWSAC Salmon**  
**by Species, 1990-2006 Total**

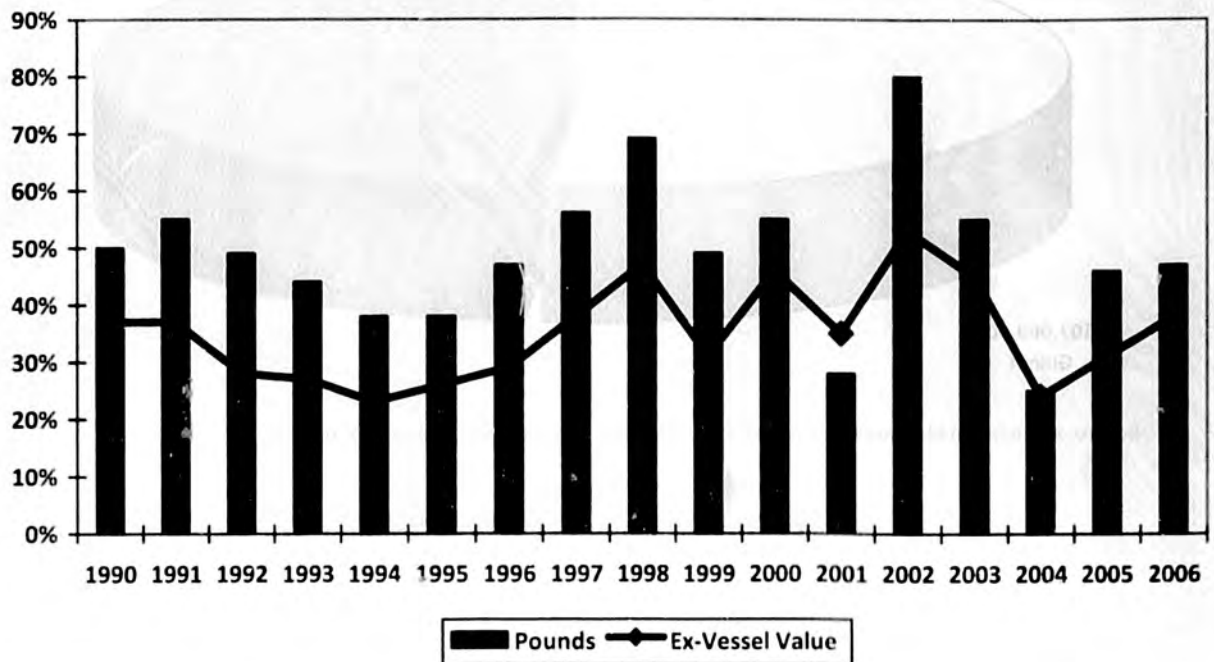


Source: ADF&G and McDowell Group estimates. This data excludes fish used for cost recovery.

\* PWSAC no longer produces chinook salmon. Final returns occurred in 2001 and 2002.

PWSAC salmon production is of major importance to Prince William Sound fisheries. Since 1990, PWSAC salmon have accounted for an average of 35 percent of ex-vessel value and 49 percent of volume (Figure 6).

**Figure 6**  
**Ex-Vessel Value and Harvest of PWSAC Salmon as a Percent of the Prince William Sound Commercial Salmon Harvest, 1990-2006**



Source: ADF&G and McDowell Group estimates.

### Geographic Distribution of PWSAC Commercial Harvest Value

Alaska residents earned an estimated 77 percent of the ex-vessel value of PWSAC salmon in 2006. The Alaska resident harvest is widely distributed, with participation by residents from Fairbanks to Dutch Harbor to Hydaburg. Residents from an estimated 38 towns harvested PWSAC salmon worth an estimated \$11.7 million in ex-vessel value in 2006.

**Table 2**  
**Geographic Distribution of Estimated Ex-vessel Earnings**  
**by Fishermen's Place of Residence\***  
**PWSAC Commercial Harvest, 2004-2006**

|                    | 2004                | 2005**              | 2006***             |
|--------------------|---------------------|---------------------|---------------------|
| Anchor Point       | \$44,000            | \$124,000           | \$138,000           |
| Anchorage          | 283,000             | 666,000             | 741,000             |
| Bethel             | 10,000              | -                   | -                   |
| Big Lake           | 10,000              | 10,000              | 11,000              |
| Bird Creek         | 10,000              | -                   | -                   |
| Chenega Bay        | 10,000              | 10,000              | 11,000              |
| Chitina            | 10,000              | 20,000              | 22,000              |
| Chugiak            | 39,000              | 117,000             | 130,000             |
| Circle City        | 21,000              | 20,000              | 22,000              |
| Copper Center      | 21,000              | 20,000              | 22,000              |
| Cordova            | 2,391,000           | 5,121,000           | 5,694,000           |
| Delta Junction     | 46,000              | 51,000              | 57,000              |
| Dutch Harbor       | 10,000              | 10,000              | 11,000              |
| Eagle River        | 24,000              | 31,000              | 34,000              |
| Fairbanks          | 10,000              | 10,000              | 11,000              |
| Fort Richardson    | 10,000              | 10,000              | 11,000              |
| Girdwood           | 88,000              | 506,000             | 563,000             |
| Homer              | 641,000             | 1,990,000           | 2,213,000           |
| Hydaburg           | -                   | 10,000              | 11,000              |
| Indian             | 10,000              | 10,000              | 11,000              |
| Juneau             | 25,000              | 24,000              | 27,000              |
| Kasilof            | 48,000              | 207,000             | 230,000             |
| Kenai              | 23,000              | 113,000             | 126,000             |
| Kodiak             | 21,000              | 20,000              | 22,000              |
| Nikiski            | 21,000              | -                   | -                   |
| Ninilchik          | 21,000              | 10,000              | 11,000              |
| Palmer             | 75,000              | 61,000              | 68,000              |
| Sand Point         | 10,000              | 10,000              | 11,000              |
| Seldovia           | -                   | 10,000              | 11,000              |
| Seward             | 72,000              | 91,000              | 101,000             |
| Soldotna           | 31,000              | 20,000              | 22,000              |
| Tatitlek           | 31,000              | 29,000              | 32,000              |
| Tok                | -                   | 10,000              | 11,000              |
| Valdez             | 178,000             | 945,000             | 1,051,000           |
| Wasilla            | 88,000              | 231,000             | 257,000             |
| Willow             | 21,000              | 20,000              | 22,000              |
| <b>Grand Total</b> | <b>\$ 4,353,000</b> | <b>\$10,537,000</b> | <b>\$11,716,000</b> |

Source: CFEC and McDowell Group estimates. Totals may not be exact due to rounding.

\* Data for 2005 is preliminary.

\*\*Data for some communities is unavailable due to confidentiality. Estimates for these communities are based on average Alaska resident earnings, by permit type, for the preceding three years.

\*\*\* Ex-vessel earnings data are not yet available on a community level for 2006. Earnings per community based on total ex-vessel estimates for 2006 and are assumed to be proportionate to those in 2005.

Cordova residents harvested fish worth an estimated 55 percent of the total value of the PWSAC harvest by Alaska residents (\$6.5 million), followed by residents of Homer (14 percent, \$1.7 million), Anchorage and Valdez (7 and 6 percent, respectively; \$827,000 and \$688,000).

The estimated economic impacts from Alaska resident PWSAC-related ex-vessel income of \$11.7 million were \$22.8 million in total output, including \$18.7 million in labor income and 345 jobs. Total resident and non-resident ex-vessel earnings of \$15.2 million resulted in \$29.5 million in total output, including \$24.2 million in labor income and 445 jobs (Table 3).

**Table 3**  
**Regional Economic Output, Including Jobs and Payroll**  
**from Commercial Ex-Vessel Value of PWSAC Salmon, 2006**

| Sector                    | Ex-Vessel Income | Economic Output | Jobs | Payroll    |
|---------------------------|------------------|-----------------|------|------------|
| Alaska Resident           | \$11,700,000     | \$22,800,000    | 345  | 18,700,000 |
| Resident and Non-Resident | \$15,200,000     | \$29,500,000    | 445  | NA*        |

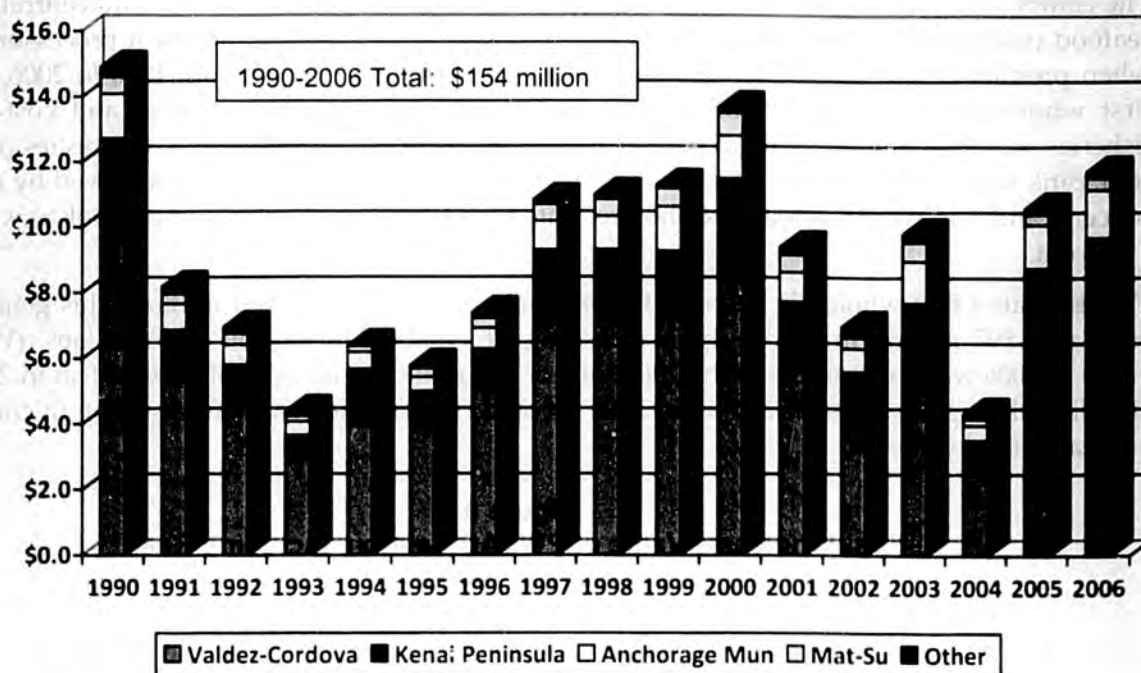
Source: CFEC and McDowell Group estimates.

\* This analysis focuses on direct and indirect payroll generated in Alaska. It is assumed that a significant portion of non-resident income is spent outside of Alaska. Therefore the payroll effects of that spending are not considered in this analysis.

### **Regional Economic Impacts of PWSAC Commercial Salmon Harvest, 1990 to 2006 Total**

- Fishermen from the Valdez-Cordova area harvested \$7 million of PWSAC salmon in 2006, and \$6 million in 2005. Total harvests from 1990 to 2006 were worth \$96 million, an average of \$5.6 million per year.
- Kenai Peninsula fishermen earned close to \$3 million in both 2005 and 2006. The total value from 1990 to 2006 was \$33 million, for an annual average of \$1.9 million.
- Anchorage fishermen earned \$1.5 million in 2006 and \$1.3 million in 2005. The 1990 to 2006 total was \$16 million, for an annual average of \$916,000.
- Matanuska-Susitna fishermen earned \$320,000 in 2005 and \$360,000 in 2006, with 1995-2006 total of \$7 million and an annual average of nearly \$398,000 (Figure 7).

**Figure 7**  
**Ex-Vessel Income from PWSAC Salmon by Alaska-Resident Permit Holder, 1990 to 2006**  
(millions of dollars)



Source: CFEC, ADF&G and McDowell Group estimates.

- PWSAC salmon contributed \$6.8 million to Valdez-Cordova commercial permit holder ex-vessel income in 2006, resulting in an estimated economic output of \$9.9 million, including 120 jobs and \$8.2 million in labor income.
- Kenai Peninsula permit holders earned \$2.9 million in ex-vessel value from PWSAC salmon in 2006, resulting in \$4.9 million in economic output, including 90 jobs and \$3.5 million in labor income.
- Anchorage permit holders earned \$1.5 million in ex-vessel value from PWSAC salmon in 2006, resulting in \$2.6 million in economic output, including 60 jobs and \$2.1 million in labor income.
- Statewide, resident permit holders earned \$11.7 million in ex-vessel value from PWSAC salmon in 2006, resulting in \$22.8 million in economic output, including 345 jobs and \$18.7 million in labor income.

**Table 4**  
**Regional Economic Output, Including Jobs and Payroll, from**  
**Commercial Ex-Vessel Value of PWSAC Salmon, 2006**

| Census Area     | 2006 Ex-Vessel Income | Economic Output | Jobs | Payroll      |
|-----------------|-----------------------|-----------------|------|--------------|
| Valdez-Cordova  | \$6,789,000           | \$9,946,000     | 120  | \$8,195,000  |
| Kenai Peninsula | \$2,913,000           | \$4,897,000     | 90   | \$3,472,000  |
| Anchorage       | \$1,475,000           | \$2,621,000     | 60   | \$2,105,000  |
| Statewide       | \$11,716,000          | \$22,846,000    | 345  | \$18,734,000 |

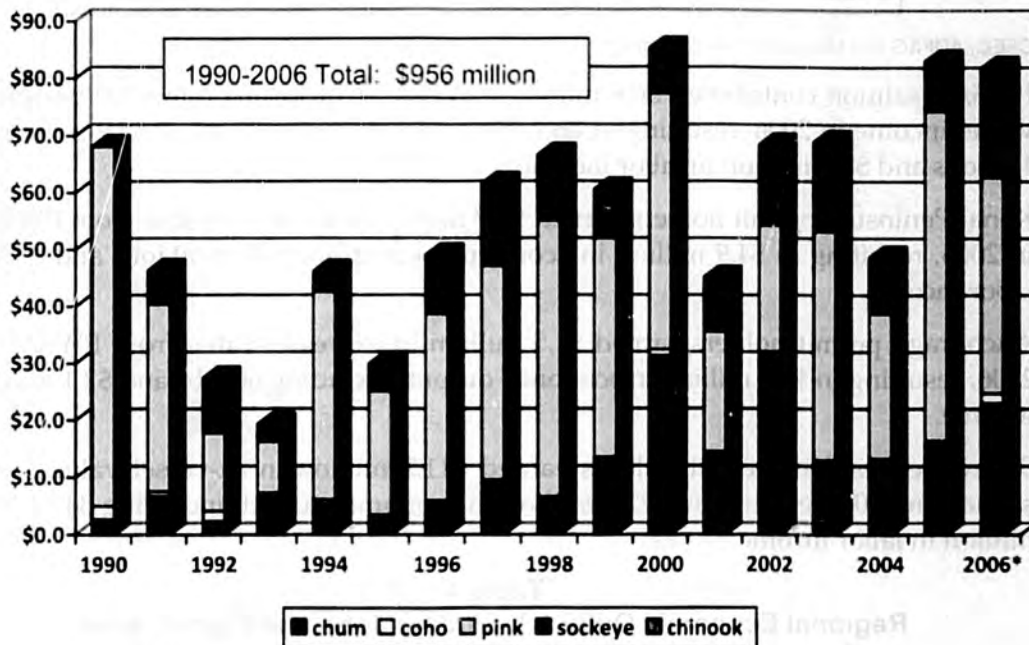
Source: CFEC and McDowell Group estimates.

## ECONOMIC IMPACTS OF SEAFOOD PROCESSORS

The commercial harvest of PWSAC salmon generates significant benefits for Southcentral Alaska's seafood processors, as indicated by the first wholesale value (i.e., the income a processor receives when product is sold outside its affiliate network for the first time). From 1990 to 2006, the total first wholesale value of PWSAC salmon and roe harvested in commercial and cost-recovery fisheries was \$956 million, with an annual average value of about \$56 million. By species (including roe), pink salmon led with the largest share of wholesale value (61 percent), followed by chum (21 percent) and sockeye (16 percent). Coho accounted for 1 percent of value and chinook was less than 1 percent.

The estimated first wholesale value of PWSAC salmon in 2006 was \$81 million. This generated an estimated \$95 million in total output, including \$17 million in payroll and 305 jobs. (Wholesale value in 2006 was comparable to the 2005 total of \$83 million. Though volumes of fish in 2005 were significantly higher, the species mix in 2006 favored higher value salmon, resulting in comparable estimated total value.)

**Figure 8**  
**First Wholesale Value of PWSAC Salmon, Including Roe,**  
**by Species, 1990-2006**  
(millions of dollars)



Source: ADF&G and McDowell Group estimates. Excludes confidential values

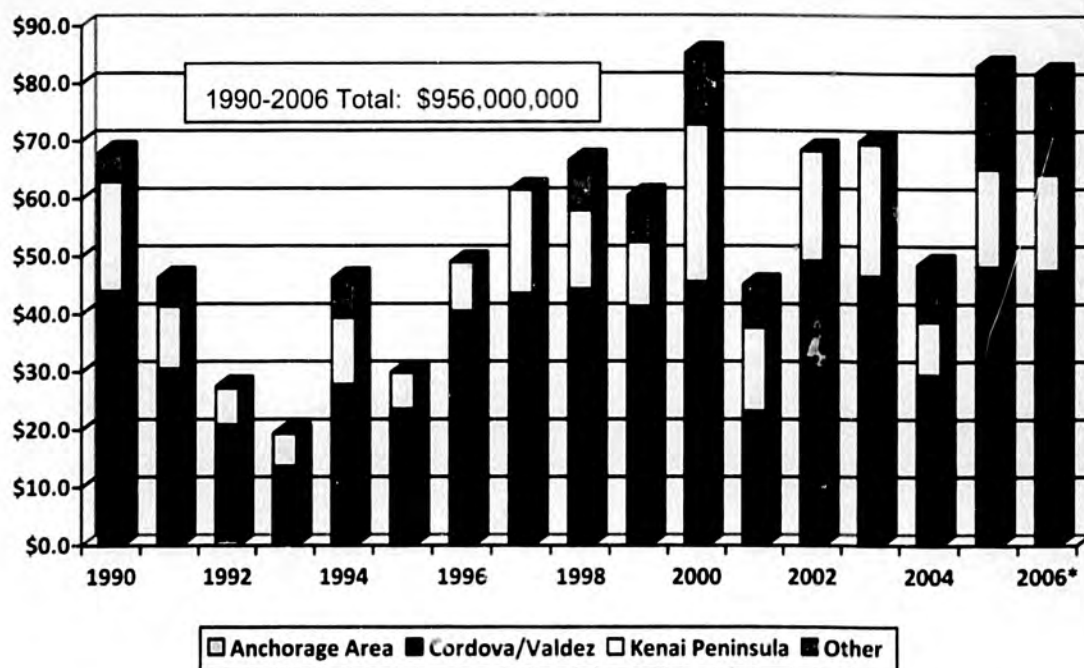
Note: Wholesale value for 2006 is based on the proportion of first wholesale value to ex-vessel value in 2005.

## Regional Impacts of PWSAC Salmon Processing

PWSAC salmon was processed by as many as 17 different Alaska processors in 2005 (the most recent year for which data is available). Processors were grouped by geographic area to estimate regional impacts. As would be expected, most PWSAC wholesale value is realized in the Cordova/Valdez area. This is followed by the Kenai Peninsula. It should be noted that, while salmon from Prince William Sound are known to be processed in Anchorage, confidentiality restrictions limit the availability of data in some years, resulting in Anchorage's exclusion from some years' estimates.<sup>4</sup>

From 1990 to 2006, first wholesale value for Cordova/Valdez area processors totaled about \$618 million, followed by \$237 million to Kenai processors, and \$83 million to processors elsewhere in the state (Figure 9).

**Figure 9**  
**First Wholesale Value of PWSAC Salmon and Roe by Processor Region, 1990-2006**  
(millions of dollars)



Source: ADF&G and McDowell Group estimates. Excludes confidential values.

Notes: Wholesale value for 2006 is based on the proportion of first wholesale value to ex-vessel value in 2005.

Data on Anchorage-area processing activity is frequently subject to confidentiality restrictions due to the limited number of processors handling Prince William Sound fish in the area.

<sup>4</sup> The Alaska Department of Fish and Game suppresses data when fewer than three companies report value information (in previous year this threshold has been fewer than four reporting). This protects the confidential data of individual firms. However, in some cases it can result in limiting the availability of data.

Of the estimated \$82 million in first wholesale value of PWSAC salmon to Alaska processors in 2006, \$48 million went to Cordova/Valdez processors, \$17 million to Kenai processors, and \$18 million to processors elsewhere in the state. Processing of PWSAC fish generated an estimated 115 jobs in Cordova/Valdez, 55 jobs on the Kenai Peninsula, and 135 jobs elsewhere in the state (Table 5).

**Table 5**  
**Economic Output, Including Jobs and Payroll, from Processing**  
**of the Commercial Harvest of PWSAC salmon, 2006**

| Region             | First Wholesale Value | Economic Output | Jobs | Payroll      |
|--------------------|-----------------------|-----------------|------|--------------|
| Cordova/Valdez     | \$47,586,000          | \$48,395,000    | 115  | \$3,298,000  |
| Kenai Peninsula    | \$16,813,000          | \$19,213,000    | 55   | \$2,797,000  |
| Other Alaska Towns | \$17,506,000          | \$26,998,000    | 135  | \$11,347,000 |
| Statewide          | \$81,905,000          | \$94,606,000    | 305  | \$17,441,000 |

Source: ADF&G and McDowell Group estimates. Excludes confidential values.

Economic output totals do not include output associated with ex-vessel value.

