

SCOMM

131:37

FISCAL NOTE

STATE OF ALASKA
2004 LEGISLATIVE SESSION

Fiscal Note Number: 1
Bill Version: CSSB 282(RES)
(S) Publish Date: 3/8/04

Revision Date/Time (Note if correction): _____ Dept. Affected: LAW
Title: "An Act relating to the identification of finfish in RDU: CIVIL
food products and to the misbranding of food products consisting..." Component: Natural Resources
Sponsor: Senator Elton
Requester: Senate Resources Committee Component No. _____

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
Personal Services						
Travel						
Contractual						
Supplies						
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous						
TOTAL OPERATING	0.0	0.0	0.0	0.0	0.0	0.0

CAPITAL EXPENDITURES						
----------------------	--	--	--	--	--	--

CHANGE IN REVENUES ()						
------------------------	--	--	--	--	--	--

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF						
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type--Do not abbreviate)						
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0

Estimate of any current year (FY2004) cost: 0.0

Mark this box (X) if funding for this bill is included in the Governor's FY 2005 budget proposal: ☐

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: (Attach a separate page if necessary)

This bill amends the Alaska Food, Drug, and Cosmetic Act, adding a new section requiring that food establishment menus discern between wild fish and farmed fish in prepared food products. A federal version of farmed fish labeling legislation was enacted last fall.

Passage of this legislation will have no fiscal impact on the Department of Law.

Prepared by: Kathryn A. Daughette, Director Phone: 465-3673
Division: Administrative Services Date/Time: 3/3/04 8:20 AM
Approved by: Kathryn Daughette for Gregg D. Renkes, Attorney General Date: 3/3/2004
Agency: Department of Law

FISCAL NOTE

STATE OF ALASKA
2004 LEGISLATIVE SESSION

Fiscal Note Number: 2
Bill Version: CSSB 282(RES)
(S) Publish Date: 3/8/04

Revision Date/Time (Note if correction): _____ Dept. Affected: Environmental Conservation
Title Identification of finfish in food products RDU Environmental Health
Component Food Safety and Sanitation
Sponsor Senator Elton
Requester (S) Resources Component No. 2343

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
Personal Services	55.9	55.9	55.9	55.9	55.9	55.9
Travel	5.0	5.0	5.0	5.0	5.0	5.0
Contractual	8.4	6.9	6.9	6.9	6.9	6.9
Supplies	1.0	1.0	1.0	1.0	1.0	1.0
Equipment	6.9	0.5	0.5	0.5	0.5	0.5
Land & Structures	0.0	0.0	0.0	0.0	0.0	0.0
Grants & Claims	0.0	0.0	0.0	0.0	0.0	0.0
Miscellaneous	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPERATING	77.2	69.3	69.3	69.3	69.3	69.3

CAPITAL EXPENDITURES						
----------------------	--	--	--	--	--	--

CHANGE IN REVENUES ()	0.0	0.0	0.0	0.0	0.0	0.0
------------------------	-----	-----	-----	-----	-----	-----

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts	0.0	0.0	0.0	0.0	0.0	0.0
1003 GF Match	0.0	0.0	0.0	0.0	0.0	0.0
1004 GF	77.2	69.3	69.3	69.3	69.3	69.3
1005 GF/Program Receipts	0.0	0.0	0.0	0.0	0.0	0.0
1037 GF/Mental Health	0.0	0.0	0.0	0.0	0.0	0.0
Other (Specify Type--Do not abbreviate)	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	77.2	69.3	69.3	69.3	69.3	69.3

Estimate of any current year (FY2004) cost: 0.0

Mark this box (X) if funding for this bill is included in the Governor's FY 2005 budget proposal: ☐

POSITIONS

Full-time	1	1	1	1	1	1
Part-time	0	0	0	0	0	0
Temporary	0	0	0	0	0	0

ANALYSIS: (Attach a separate page if necessary)

See attached.

Prepared by: Kristin Ryan, Director Phone (907) 269-7645
Division: Environmental Health Date/Time 3/1/04 10:00 AM
Approved by: Kurt Fredriksson, Deputy Commissioner Date 3/1/2004
Agency: Environmental Conservation

FISCAL NOTE #2

STATE OF ALASKA
2004 LEGISLATIVE SESSION

BILL NO. CSSB 282(RES)

ANALYSIS CONTINUATION

SB 282 requires retail food establishments to state on their menus whether the fish they serve is wild or farmed. Regulations would need to be revised, and inspection and compliance resources added to the retail food program to implement this requirement.

An Environmental Health Technician would be hired to implement the requirements of SB 282. The position would survey retail food establishments and solicit menus for compliance review. This position would research and identify the sources and status of fish and fish products that are sold in Alaska and provide technical assistance on this identification to Alaskan suppliers and retail food establishments. The position would also conduct complaint investigations and initiate enforcement action.

Basic position support costs are included for contractual and supplies. An additional \$1.5 in contractual cost is included in the first year to public notice proposed regulations. Equipment cost in FY 2005 includes ordinary office equipment (desk, chair, and office furniture) and a computer workstation with \$.5 in subsequent years for equipment replacement and software upgrades.

Personal Services New Position Detail FN # 2 CSSB 282(RES)

Department of Environmental Conservation

Scenario: A Scenario for FY2005 Fiscal Notes (3605)

Component: Food Safety & Sanitation (2343)

RDU: Environmental Health (207)

PCN	Job Class Title	Time Status	Retire Code	Barg Unit	Location	Salary Sched	Range & Steps	Budgeted Months	Split / Annual Count	Annual Salary	COLA	Premium Pay	Annual Benefits	Total Costs
18-#032	Environmental Health Tech.	FT	A	GP	Anchorage	2A	15 B	12.0		38,280	0	0	17,585	55,865

Justification:

Required for implementation of SB 282. Position will research and identify finfish suppliers, provide technical assistance to Alaskan suppliers and retailers, conduct menu reviews, issue approvals, initiate enforcement actions and conduct complaint investigations.

Funding Detail:

1004	General Fund Receipts	100.00%	55,865
Total Funding:		100.00%	55,865

Component Summary:

Total New Positions: 1

Fund Description	Fund Percent	Fund Amount
1004 General Fund Receipts	100.00%	55,865
Total Funding:	100.00%	55,865

Note: If a position is split, an asterisk (*) will appear in the Split/Count column. If the split position is also counted in the component, two asterisks (**) will appear in this column.

FISCAL NOTE

STATE OF ALASKA
2004 LEGISLATIVE SESSION

Fiscal Note Number: _____
 Bill Version: CSSB 282(RES)
 () Publish Date: _____

Revision Date/Time (Note if correction): _____ Dept. Affected: Environmental Conservat
 Title Identification of finfish in food products BRU Environmental Conservation
 Component Food Safety and Sanitation
 Sponsor Senator Elton
 Requester (H) Fisheries Component No. 2343

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
Personal Services						
Travel						
Contractual						
Supplies						
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous						
TOTAL OPERATING	0.0	0.0	0.0	0.0	0.0	0.0

CAPITAL EXPENDITURES						
-----------------------------	--	--	--	--	--	--

CHANGE IN REVENUES ()						
-------------------------------	--	--	--	--	--	--

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF						
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type--Do not abbreviate)						
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0

Estimate of any current year (FY2004) cost: 0.0

Mark this box (X) if funding for this bill is included in the Governor's FY 2005 budget proposal: ☐

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: (Attach a separate page if necessary)

The Department has discretionary powers of enforcement. Enforcement of this bill can be incorporated into current restaurant inspections.

Prepared by: Cameron Yourkowski, Committee Aide Phone 465-3306
 Division: House Special Committee on Fisheries Date/Time 5/7/04 10:11 AM
 Approved by: Representative Seaton, Chair Date 5/7/2004
 Agency: House Special Committee on Fisheries

HOUSE COMMITTEE REPORT

Date Referred to Committee: May 6, 2004

FURTHER REFERRALS: Labor and Commerce

Date of Committee Action: MAY 7th, 2004

The HOUSE SPECIAL COMMITTEE ON FISHERIES Committee considered:

CSSB 282(RES)

CS FOR SENATE BILL NO. 282(RES)

PREPARED FOOD: WILD/FARMED FISH DISCLOSURE

"An Act relating to the identification of finfish in food products and to the misbranding of food products consisting of or containing finfish."

Recommends it be replaced with [] HCS or [] CS for _____(_____)

For Senate Bills with new title: ☐ Technical Title ☐ New Title: HCR_____ ☒ Same Title ☐ New Title

[] attach amendments

☐ add new referral to _____ Committee

☐ Letter of Intent _____ Committee

List of
Abbrev
for

Depts.:

ADM

CED

COR

CRT

EED

DEC
RES

DFG
GOV

GOV
USE

HSS
LEG

**LEG
LAW**

LAW
LWE

LWF
MVA

DNR

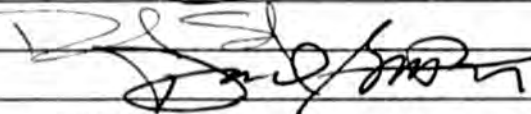
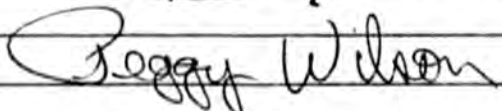
DPS

REV

DOT

UA

[illegible][illegible]

Signing with recommendations		Printed Last Name	DP	DNP	NR	AM
		Gara	✓			
		SAMUELS	X			
		WILSON	✓			
Chair: 		SEATON	✓			
Chair:						



SENATOR KIM ELTON

SB 282

Sponsor Statement

"An Act relating to the identification of finfish in food products and to the misbranding of food products consisting of or containing finfish."

SB 282 requires retail food establishments to state on its menu whether fish it is selling in a prepared food product is wild fish or farmed fish. State law currently provides that farmed fish be identified on the label when the fish is sold at the retail level.

Recent reports in the scientific and general media focus on increased toxin loads in farmed fish and environmental degradation near fish farm sites. Restaurant consumers in Alaska deserve the same notice as retail consumers when they make purchase decisions based on whether the fish is farmed or wild.

The Joint Legislative Salmon Task Force comprised of legislators, seafood harvesters and seafood processors has unanimously supported SB 282.

SPONSOR STATEMENT

ALASKA SENATE

STATE CAPITOL • JUNEAU, ALASKA 99801-1182 • (907) 465-4947 • FAX (907) 465-2108

SENATOR KIM ELTON@LEGIS.STATE.AK.US

THE
FOLLOWING
DOCUMENT(S)
ARE
POOR
ORIGINAL
COPIES

[Home](#) [News](#) [Speeches](#) [Photos](#) [Bio](#) [First Lady](#) [TV](#)

Governor Murkowski

News & Announcements

[State of Alaska](#) > [Governor](#) > [News](#) > [News Details](#)

Governor Comments on USDA Labeling Rule

FOR IMMEDIATE RELEASE: February 27, 2004 No. 04-031

Governor Sends Comments, Recommendations to USDA on Country of Origin Labeling Rule

(Juneau) - In a letter to the USDA Agricultural Marketing Service, Governor Frank H. Murkowski has provided the State of Alaska's position and recommendations on a proposed rule that would require country of origin labeling (COOL) for, among other commodities, wild and farmed seafood products.

Murkowski, who has long supported COOL as helpful to consumers as well as America's food producers, expressed the state's support for the regulation, but added a number of recommendations to make the rule better.

"Today, there is often a premium paid in the market for Alaska seafood products," Murkowski said. "The state believes this trend will increase, but only if truthful information reaches the consumers. Consumers, particularly in Europe and most recently Japan, want to know where their food comes from, who made it, what is in it, and what safety conditions apply to that production. COOL supports this growing trend and puts US producers on a competitive track."

Among modifications to the proposed rule that Murkowski recommended are: • To include compliance by specialty shops, such as butcher shops and fish markets, which would be exempted under the current proposal. • To clarify coverage of products that have undergone a chemical or physical change, such as cured ham. In other words, if the product from which a second product is made is covered, the resultant product should not be exempted. • To clearly identify canned salmon as a commodity that is covered by COOL regulations. • To extend the time that a retailer must maintain records of the sale of an item from seven to 30 days. • To revise USDA's statement regarding the potential cost of COOL and whether US consumers would be willing to pay for the labeling.

"US consumers do want to know where their food comes from," Murkowski said. "When determining the actual value of the COOL regulations, the state asks that USDA consider the importance of consumer education, our small US-based producers and their inability to mount expensive lobbying campaigns, the importance of progressive regulations, and discouraging fraudulent information in our marketplace." # # #

News Archive >

[Old site News Archive](#)

John Manly Press Secretary, 465-3995

Office of the Governor Box 110001 Juneau, AK 99811 907.465.3500 465.3532 fax



In other news: Fol H. Murkowski's Sta speech calling for a Conference of Alas the Permanent Fun chair and convenor reporters in the Go room Wednesday. Rogers answers a regarding the Feb. in Fairbanks. Behin left) Marc Langland Helvi Sandvik, Stev Sturgulewski, and (Full story >

More Hot Topics

Office of the Lt. Go
Weekly Updates
FY'05 State Budget
Boards and Commi
Division of Election
Human Rights Cor
Management & Bu
Missions & Measur
Administrative Ord
Proclamations

GOVERNOR'S COMMENTS



Alaska Trollers Association

130 Seward St., No. 211
Juneau, Alaska 99801
(907) 586-9400
(907) 586-4473 Fax

2004 Legislative Positions

House Bills

HCR 25	Support	Alaska Wild Salmon Week
HJR 32	Support	Labeling of wild and farmed / country of origin
HJR 34	Support	USDA Trade Adjustment Assistance Program
HJR 36	Support	NPS mitigate adverse effects of fishing closures and restrictions
HB 396	Oppose	MSY of "important salmon stocks" and ensuring hatchery brood stock.
HB 409	No Action	Maximum length of seine vessel
HB 410	No Action	CFEC permit buy-back programs
HB 415	No Action	Permit holders (not vessels) fish in multiple areas
HB 419	Oppose as written	Regional seafood development associations and taxes
HB 426	Oppose	Tax certain tourism/recreation-related goods and services
HB 433	Support	Labeling and ID of genetically modified fish & fish products
HB 435	Support	Labeling and misbranding
HB 444	Support	Direct marketing taxes
HB 473	No Action	JV fish processing businesses and tax liability.
HB 478	No Action	Issuance of commercial fishing interim-use permits.

Senate Bills

SCR 19	Support	Support fisheries education
SB 27	No Action	Pesticide Use
SB 281	Support	Labeling and ID of genetically modified fish & fish products
<u>SB 282</u>	Support	Labeling and misbranding
SB 286	Support	Direct marketing taxes
SB 315	No Action	CFEC permit buy-back programs
SB 322	No Action	Salmon enhancement tax rate

ASMI Issues

Support 1% salmon marketing assessment
Neutral on mandatory processor assessment
Support ASMI board size of 11-15 members

LETTER OF SUPPORT



seattlepi.com **Commentary**

Sunday, January 25, 2004

P-I Focus: Farming is a net-loss proposition -- ecologically, socially and economically

A Salmon Scare
By JOHN VOLPE

From the perspective of the specialist, it is a mixed blessing when the world turns its attention to your chosen area of endeavor. You feel somehow legitimized when, if only briefly, the public shares your own intense interest in the issues to which you have devoted your professional life. However, initial excitement quickly gives way to exasperation as rhetoric overshadows the substantive deliberation necessary to move from knowledge to understanding.

As a university professor dealing with issues surrounding seafood ecology, I toil in relative obscurity. The bread and butter of my research is how the relationship between the fishing and aquaculture industries is altering ecological, social and economic checks and balances the world over.

The landmark study detailing the greatly increased toxin loads found in farm salmon relative to their wild counterparts has thrust me and my colleagues around the world into the media limelight for a few moments. A seemingly endless parade of cameras and microphones has passed through my lab recently at the University of Alberta in search of expert opinion to put these startling data in perspective.

On average, farm-raised salmon have an order of magnitude higher load of cancer causing POPs (persistent organic pollutants) than wild caught salmon. This is not new. In fact over the last few years three other such studies -- albeit much smaller -- have come to nearly identical conclusions. As the dust settles around the current research, attention is shifting to consumer reaction and what effect this news will have on the aquaculture industry.

What I have not seen in any of the worldwide coverage is anyone asking "Why?" By this I don't mean, "Why are toxin loads higher in farm salmon?" The answer is straightforward and was predicted long ago from well-established bioaccumulation principles. Nor am I referring to the implied paradigm of the existence of such a thing as a safe level of carcinogen. No, my frustration is rooted in the deafening absence of what should be a vigorous debate -- "Why industrial aquaculture?" -- or more specifically -- "Why industrial salmon aquaculture?"

Consider the following:

- Current production methods adopt maximum economies of scale. Thus, feedlot style, open net-pens in the oceans simultaneously maximize

consumption of marine (read: public) resources (i.e. fresh, oxygenated water) while offloading production wastes (feces, uneaten food) and byproducts (toxins, antibiotic residues, escaped fish, bioamplified parasites and pathogens). Each net-pen (numbering in the hundreds on both of Canada's coasts) is tantamount to an untreated sewer outfall introducing solid and dissolved wastes directly into the marine environment. This is in every way "industrial waste," disposed of at no charge.

- The unnaturally high densities of animals in the feedlot environment of net-pens make that environment a breeding ground for disease and parasites. Recently in British Columbia, farm-derived parasites were implicated as the causal agent leading to the largest salmon cohort collapse on record anywhere in the world, ever.
- Three to five kilos of edible fish are used to make one kilo of farm salmon; a net loss of protein badly needed by humanity.
- The contribution of the salmon aquaculture industry to British Columbia's gross domestic product in 2001, as calculated by the Canadian Centre for Policy Alternatives, was \$87 million. Marine-based industries directly jeopardized by salmon farming, including commercial and sport fisheries and marine tourism, contributed \$582 million, or 51 percent of the provincial total.
- Salmon farming in Canada is dominated (greater than 80 percent of B.C. production) by foreign-owned multinational companies seemingly intent on liquidating Canada's natural marine capital for a very small profit. A similar arrangement characterizes the Washington state industry.
- Farm salmon overproduction (principally from Chile and Norway) has driven the price of all salmon to all-time lows. This forces Canadian and American farms to slash jobs to remain competitive and has brought ruin to coastal fishing communities across the Northern Hemisphere (which depend on a fair price for their wild catch).

So, even a cursory review of the available information leads to the question of why we are engaging in this activity? This industry is clearly a net-loss proposition, whether viewed from the ecological, social or economic perspective. Consumers have either been uninformed or have opted to turn a blind eye to these facts. Admittedly, the cause-and-effect relationship between the viability of the world's oceans and your choice of entree is not as obvious as it could or should be but that does not make it any less real.

The take-home message of the recent research is that we can no longer ignore the natural law that what is bad for the environment is bad for your health. Perhaps if industrial salmon aquaculture really held promise to feed the world's hungry or revitalize our struggling coastal communities or even provide a worry-free epicurean experience, there would be reason to give that industry the benefit of the doubt.

Alas, the farm-raised salmon destined for your dinner plate arrives with overwhelming environmental and social baggage, in addition to -- as we now know -- not being as healthful as you've been told.

As with most enviro-social dilemmas, there is hope, and options are available to consumers. The wild Pacific salmon fishery, contrary to popular belief, is not dead. Its major problem has not been lack of wild salmon, which have been plentiful in recent years. Rather, the problem has been to remain viable in the face of rock-bottom prices from the farms offloading costs of production to our coastal habitats. There are five wild Pacific salmon species, each unique in taste and texture.

Advances in flash freezing at sea have resulted in continent-wide availability of a prime product 12 months of the year. In fact, for anyone who cares about what she/he eats, Internet communication and entrepreneurial spirit have combined to make it possible to buy fish (not just salmon) directly from the fisherman, regardless of location (some even have on-board Web cams). Supporting these fisheries not only does your body a service but also helps to support the dozens of coastal communities hurt by plummeting salmon prices.

The major hurdle to the informed consumer is the current lack of labeling in supermarkets and restaurants. Without consistent labeling (farmed or wild, country of origin), the consumer cannot make an informed decision. Currently grocers and restaurants are not required to provide this information, a situation that is unfair to consumers and must change.

The moral of this story resonates far beyond the farm salmon debate, coloring all of industrial agriculture: There are no shortcuts. So long as market forces alone shape how our food is produced, we will be faced with similar reality checks with increasing frequency and magnitude. Market forces only work when truthful product labeling and public understanding of all the costs accompany them.

Indeed, the current crop of toxic farm salmon stories appearing in this paper compete for page space with mad cow disease coverage, transgenic crops and the like -- all born of the shortsighted demand for more with less.

In light of the remarkable shortcomings of this industry, it is time consumers and bureaucrats recognize that industrial salmon farming is a solution in search of a problem. Aquaculture in general has a bright future to be sure, but farm-rearing salmon is no one's idea of sustainability. The story is not just that farm salmon have greatly elevated toxin loads, but that this is actually the thin edge of the wedge.

John Volpe is assistant professor of fisheries and seafood ecology at the University of Alberta-Edmonton.

Think Twice About Eating Farmed Salmon

Salmon Farming and Human Health

Nutrition

A single serving of most seafood, including wild or farmed salmon, provides the daily requirement of healthy Omega 3 - an essential fatty acid with many health benefits. However, wild fish have a higher Omega 3 to Omega 6 ratio than farmed salmon which is best for your diet and overall health.

Farmed Atlantic salmon also contain higher levels of unhealthy saturated fats than wild coho, sockeye, steelhead pink and chum salmon. In addition, preliminary research indicates farmed salmon have up to 10 times more PCBs and dioxins than wild salmon. People who eat between 1 and 3 servings of farmed salmon per week are exposed to an amount of contaminants which exceeds the safety level set by the World Health Organization.



SalmoFan - CAAR Files

The food given to farmed salmon does not contain the natural sources of color and as a result, their flesh is an unappetizing gray color. To make their product more marketable, fish farm companies choose what color they want their salmon from the SalmoFan. Chemical additives are then added to the fish feed.

Farmed Atlantic salmon contain 200 per cent more unhealthy, saturated fat than wild pacific pink or chum salmon. This has led some health professionals to question the nutritional value of farmed salmon.

In a letter urging retailers to stop selling farmed salmon to customers, Warren Bell MD, president of the Canadian Association of Physicians for the Environment (CAPE) writes, "Not only is the fat content of farmed salmon higher than that of wild salmon but the composition of farmed salmon fat is also less healthy than that of wild salmon fat." He also writes that, "Another issue of concern to consumers is the fact that the monitoring of residues of antibiotics and other drugs in farmed salmon is inadequate."

Antibiotics & Biocides

Disease and parasites are frequent occurrences on salmon farms. Farmers attempt to control these problems by using powerful drugs including antibiotics and biocides. Farmed salmon are fed more antibiotics per pound, than any other livestock in North America.

Excess drugs make their way along the food chain. Research suggests that between 74-100 per cent of wild fish caught near farms contain antibiotics in their flesh. Escaped fish caught in a Broughton Archipelago stream were found carrying bacteria known to cause a range of human maladies and these bacteria were resistant to 10 different antibiotics. Excessive use of antibiotics has already led to the development of antibiotic resistant "super-bugs".

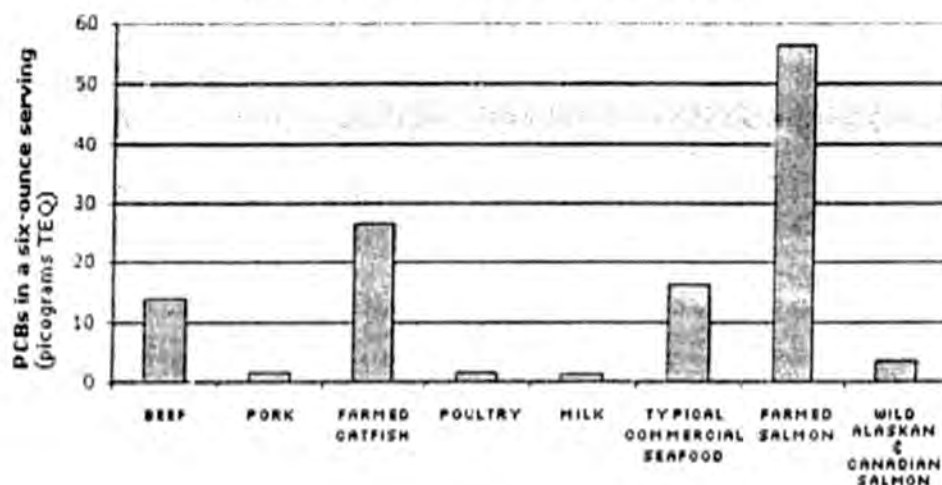


Summary — PCBs in farmed salmon

Seven of ten farmed salmon purchased at grocery stores in Washington DC, San Francisco, and Portland, Oregon were contaminated with polychlorinated biphenyls (PCBs) at levels that raise health concerns, according to independent laboratory tests commissioned by Environmental Working Group.

These first-ever tests of farmed salmon from U.S. grocery stores show that farmed salmon are likely the most PCB-contaminated protein source in the U.S. food supply. On average farmed salmon have 16 times the dioxin-like PCBs found in wild salmon, 4 times the levels in beef, and 3.4 times the dioxin-like PCBs found in other seafood. The levels found in these tests track previous studies of farmed salmon contamination by scientists from Canada, Ireland, and the U.K. In total, these studies support the conclusion that American consumers nationwide are exposed to elevated PCB levels by eating farmed salmon.

A serving of farmed salmon has up to 40 times more PCBs than other foods



NOTES: The levels shown on this figure represent the sum of the 12 PCB compounds that resemble dioxin, widely recognized as the most toxic of all industrial pollutants, and linked to cancer as well as to damage of the nervous, reproductive, and immune systems. PCB concentrations are shown as toxic equivalents (TEQs) of 2,3,7,8-Tetrachlorodibenzo-p-dioxin, the benchmark dioxin chemical.

SOURCE: EWG analysis of data from Axiys (2003), Easton et al. (2002), EPA (2000a and 2000b), Fiedler et al. (2000), Jacobs et al. (2002), NMFS (2002), NAS (2003), Schecter et al. (2001), and USDA (2002).

LINK: [Methodology and References](#)

PCBs are persistent, cancer-causing chemicals that were banned in the United States in 1976 and are among the "dirty dozen" toxic chemicals slated for global phase-out under the United Nations Convention on Persistent Organic Pollutants, signed by

President Bush on May 23, 2001. Because of their persistence, PCBs continue to contaminate the environment and the food supply.

A number of studies show that farmed salmon accumulate PCBs from the fishmeal they are fed. The feed is often designed to have high amounts of fish oil and is made largely from ground-up small fish. PCBs concentrate in oils and fat, and previous tests of salmon feed have consistently found PCB contamination.

If farmed salmon with the average PCB level found in this study were caught in the wild, EPA advice would restrict consumption to no more than one meal a month. But because farmed salmon are bought, not caught, their consumption is not restricted in any way.

This is because the EPA sets health guidance levels for PCBs in wild-caught salmon, and its standards, which were updated in 1999 to reflect the most recent peer-reviewed science, are 500 times more protective than the PCB limits applied by the Food and Drug Administration (FDA) to commercially-sold fish. The FDA has not updated its PCB health limit for commercial seafood since it was originally issued in 1984. In the intervening two decades new scientific research has shown that the PCBs that build up in fish and people are more potent cancer-causing agents than originally believed, and that they present other health risks as well, in particular neurodevelopmental risks to unborn children from maternal consumption of PCB-contaminated fish.

When the FDA's standard was developed, salmon was something of a rarity in the U.S. diet. Today it is standard fare at home and in restaurants, particularly among consumers who are health-conscious, well educated, and relatively affluent. Last year salmon overtook "fish sticks" as the third most popular seafood in the American diet (trailing only tuna and shrimp). The increased consumption was made possible by the explosive growth in salmon farming, an industrial system that produces the fish in vast quantities at a price far lower than wild salmon.

Seven of the farmed salmon we tested came from factory-scale farms in Canada, the U.S., and Iceland. Six of these seven were polluted with PCBs at levels that would be safe to eat no more than once a month, according to EPA health standards. About 23 million Americans eat salmon more than once a month, the majority of it farmed salmon. One salmon imported from Scotland contained PCBs at levels so high that EPA would restrict consumption to no more than six meals a year, if the salmon were caught, not bought.

The farmed salmon industry claims that both farmed and wild salmon can be eaten safely more than once a week. This claim relies on FDA's outdated contamination limit. In EWG's testing program, nine of 10 farmed salmon tested from five countries of origin failed EPA's health-based limits for weekly consumption (6000 parts per trillion), exceeding the standard by an average of 4.5 times. A pilot study published by Canadian scientists last year showed that farmed Canadian salmon contain ten times the PCBs of wild Alaskan and Canadian salmon.

EWG's analysis of seafood industry fish consumption data shows that one quarter of all adult Americans (52 million people) eat salmon, and about 23 million of them eat salmon more often than once a month. Based on these data we estimate that 800,000 people face an excess lifetime cancer risk of more than one in 10,000 from eating farmed salmon, and 10.4 million people face a cancer risk exceeding one in 100,000. The government's preferred level of increased risk from contaminants like PCBs is no more than one in one million, a threshold set to account for a regulatory system that addresses chemicals or chemical classes individually and is unable to set safe levels for the complex mixtures of hundreds of industrial chemicals to which people are exposed.

Recommendations

Six of every ten salmon sold in stores and restaurants are raised in high-density fish pens in the ocean, managed and marketed by the salmon farming industry. These fish are eaten by a quarter of all adults in the U.S. and experts predict that the exponential growth of the farmed salmon industry will continue.

Farm-raised fish are here to stay. If raised correctly, these fish can help meet global demand for high-quality protein and take some of the pressure off of highly depleted populations of wild fish. But major reforms to the industry are needed.

In addition to the well documented ecological problems with salmon farming, there is now compelling evidence of near industry-wide contamination with unacceptably high levels of PCBs.

To remedy this problem, we recommend that:

- Congress pass a funding increase for FDA to support testing of farmed salmon and other protein sources for PCBs.
- The Food and Drug Administration move quickly to conduct a definitive study of PCB contamination in farmed salmon, and make all results public. This testing is critical, because FDA will be unable to update its regulation on PCBs in farmed salmon until the agency conducts its own laboratory studies.
- The FDA issue a PCB health advisory for seafood consumption in line with current PCB health guidance issued by the EPA.
- Policy-makers do more to preserve salmon habitat in Alaska, where, preliminary indications are, fish are naturally low in PCB contamination.
- The salmon farming industry monitor salmon feed for PCB contamination and shift or refine feed sources to produce fish lower in PCBs and other pollutants.

What you can do

To reduce your exposure to PCBs, trim fat from fish before cooking. Also, choose broiling, baking, or grilling over frying, as these cooking methods allow the PCB-laden fat to cook off the fish. When possible, choose wild and canned Alaskan salmon instead of farmed, and eat farmed salmon no more than once a month.

Two Groups to Sue Farmed Salmon Industry

TERENCE CHEA, Associated Press Writer

AP Online 01-23-2004

Dateline: SAN FRANCISCO

The farmed salmon industry faces legal action in California for failing to warn consumers that the fish contain what environmental groups say are potentially dangerous levels of cancer-causing chemicals.

The Environmental Working Group and the Center for Environmental Health filed notice last week of their intent to sue 50 salmon farms, fish processors and grocery chains under a California anti-toxics law.

"Our goal is to challenge them to change their practices so their fish is safe to eat," said Michael Green, executive director for the Oakland-based Center for Environmental Health.

The potential lawsuit comes after a major study published earlier this month in the journal *Science* found that farm-raised salmon contains significantly more contaminants than salmon caught in the wild because of PCBs, polychlorinated biphenyls, in feed. It recommended that farmers change fish feed and urged consumers to buy wild salmon.

The farmed salmon industry disputes the conclusions, citing experts who say the benefits outweigh the risks of eating farmed salmon.

"(Consumers) will be doing themselves and their families a great disservice if they stop eating farmed salmon," said Alex Trent, executive director of the trade group Salmon of the Americas. He noted that farmed salmon, a source of heart-healthy omega-3 fatty acids, is much cheaper than wild salmon and can be purchased year-round.

Under Proposition 65, the Safe Drinking Water and Toxic Enforcement Act of 1986, companies are required to notify consumers if their products contain hazardous levels of chemicals known to cause cancer or reproductive harm.

State law requires private groups to first file notice of their intent to sue to give the state attorney general and other prosecutors 60 days to decide whether to join or take over the lawsuit.

Defendants named include major U.S. grocery chains such as Safeway Inc., Kroger Co., Albertsons Inc. and Costco Wholesale Corp. and farmed salmon producers in Canada and Europe.

Risky behaviour: Well, it's up to you; Peter McKnight
Vancouver Sun 01-19-2004

Let's say the Environmental Protection Agency and Health Canada give you conflicting information about the safety of eating farmed salmon. Whom should you trust?

The answer: Trust yourself.

That's a bit cryptic, I know, but then there's been a lot of cryptic reporting on this subject. So let me try to clarify.

On Jan. 9, Science magazine published the now (in)famous study that found farmed salmon had much higher levels of polychlorinated biphenyls (PCBs) than wild salmon.

Specifically, farmed salmon had average PCB levels of 36.63 parts per billion, compared to 4.75 parts per billion for the wild variety.

By themselves, those numbers are uncontroversial. After all, even fish farmers admit their fish contain higher PCB levels than wild salmon.

However, the researchers also relied on Environmental Protection Agency guidelines (which set limits for PCBs in fish at 24-48 parts per billion), and concluded that it might not be safe to eat farmed salmon.

That prompted a quick response from the U.S. Food and Drug Administration and Health Canada, both of which set limits for PCBs at 2,000 parts per billion.

Health Canada issued a news release stating that, based on its risk assessment, "consuming farmed salmon does not pose a health risk to consumers."

So who's right? The EPA or the FDA and Health Canada?

Someone must be correct, since this is all based on science, right? Well, no.

While the amount of PCBs in fish is a scientific fact, any recommendation -- whether it be to eat or avoid salmon -- is necessarily a value judgment.

Agencies look at the (scientifically verified) amount of PCBs in contaminated fish and then decide what they consider to be an "acceptable" risk.

What counts as acceptable depends, of course, on the values of the agency.

For example, the EPA guidelines are based on the amount of PCBs that could cause one case of cancer in 100,000 people over a 70- year lifetime.

But why choose one in 100,000 as an appropriate limit? Why not one in a million? Or one in 10,000?

There's no scientific answer to that question because it's not a scientific question.

Science is a purely descriptive, rather than prescriptive, enterprise.

It deals with cold, hard facts, and tells us how things are rather than how they should be.

In other words, science can tell us how many PCBs are in fish, and it can approximate the probability that we will develop cancer if we eat contaminated fish.

But safety is another matter entirely, since nothing is 100 per cent safe. When agencies label a food unsafe, they are making a prescription: They are saying you shouldn't eat the food.

That is a value judgment -- it's a statement of how much risk the agencies think you should assume. But, ultimately, only you can decide what is an acceptable risk.

Interestingly, we engage in risky behaviour every day, without even thinking about it. Everything we do has attendant risks -- from driving a car (relatively speaking, a highly dangerous activity) to taking a shower (perhaps the most dangerous thing you do in your own home) to eating farmed salmon.

Yet when a scientific study appears, we suddenly look to scientists to tell us whether we should continue to engage in certain activities.

Scientists simply can't tell us that -- they can only suggest what might happen to us if we do so. As far as eating farmed salmon is concerned, it's up to each of us to decide whether the risk is worth it.

In the final analysis, the whole shebang comes down to what my mother used to say whenever she was dissatisfied with the many hare-brained decisions I've made.

"It's your life," Mom would say. And she was right.

It is your life, and while you can and should avail yourself of information provided by scientists, no one but you -- not scientists, or government agencies, or environmental activists, or fish farmers -- can tell you how to live it.

(Copyright Vancouver Sun 2004)