

ALASKA LEGISLATURE SPECIAL COMMITTEE/SUBJECT FILE 8672
1878 SCOMM 75: MARICULTURE (FISH FARMING), 1987-1990

95

DISCUSSION AND MEETING RECORD

DATE: Aug 15, 1989

BY: Paul J. Pickett

REFERENCE: Global Aqua/Black

CONVERSATION/MEETING RECORDED

☒ NO ☐ YES — TAPE NO. _____

I MET WITH/SPOKE TO: Oly Flatraaker, Tim Montfort

OF: E.A.

TELEPHONE: 273-5925

ADDRESS (if applicable): _____

PARTICIPANTS: _____

SUMMARY OF MEETING/DISCUSSION: Barrels in Red Barn. Lime
bought from Wolf kill. Dan Potter returning today
One ton of lime. Imperial Limestone flour - now stored
in barn - 1 in channels one-half ton used.

Fish: Atlantic have no resistance to franc.

Past treatment: ROMET, Terramycin

Most practical time for economic reasons - planned
for a couple months - minimum stock levels, no eggs

Formalin - fungicide for eggs. October to March 10-11 barrels
per year. No formalin use since March. Also costia
(protogon) treatment

Red Barn - John Deere spreader w/ lime (1 1/2 ton left.

Pressure Washer - 5 gal. of "Top gun" 1/2 gallon

NEEDED FOLLOWUP ACTION(S): _____

BY WHOM: _____

W/Bice Mike

Inspector Paul - Mitchell

Permit Number 04-003944-0Permit Expires 6/86

New Industry _____

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

Unsatisfactory

surrounding
hills, the
thinner
examine
to

samples from the
dry matter)

ditto in the
distribution

Children and
Adult Collection

DISCUSSION AND MEETING RECORD

DATE: Aug 16, 10 am

BY: Paul Pickett

REFERENCE: Black River Kill

CONVERSATION/MEETING RECORDED

☒ NO ☐ YES — TAPE NO. _____

I MET WITH/SPOKE TO: Dan Swecker

OF: Swecker Salmon Farm

TELEPHONE: 273-5890

ADDRESS (if applicable): _____

PARTICIPANTS: _____

SUMMARY OF MEETING/DISCUSSION:

DS has done bioassays in river w/ hatchery fish - Dead within an hour. Experimented w/ acclimation, resulting in definite toxicity of river vs. hatchery water. Gill structure ruined. DO is supersaturated - very high levels indicating high productivity.

Dead clams and fish observed.

* Aug 17, 1989 - DS called. Observed mortality on the ~~Black River~~. Checking plankton species w/ samples sent to UW. DO up to 18 w/ DO meter. pH below 7. Impacts observed above Swecker's for 3 miles (downstream).

* Aug 18, 1989 - Suggested to DS that he contact Fisheries for pathology check on Bioassay morts.

NEEDED FOLLOWUP ACTION(S): _____

BY WHOM: _____

8/16/89 - 10 am

Dan Swecker -

Biossays in Black River - near Swecker's

Fish killed even after temp

Super saturation of O_2

Colors - yellow, etc.

Boat recon up to Canoe Company

10% O_2 total gas sat.

pH below 7

Supersaturation conditions

Gill lamellae shot - mucus & cell sloughing

Dead Clams

→ Sampling needs → call

8/17/89

Dan Swecker:

Continued mortality in Black R.

Jack Kneissel - ~~WW~~ - Plankton sampling

* 18 evening - 13 morning

DO Meter - pti - below 7

Phytoplankton species i.d. - toxins?

3 miles above Swecker in Black.

Paul

PIC for Black R fish kill

C32B5

Make sure lab has

for analysis

I have

DM Gale



INSPECTION REPORT

To Global Aqua - Black River

Date of Visit Aug 17, 1989

Name of Entity Global Aqua - USA

City Redmond Gate County Thurston

Inspector w/ Jon Neal
P. Pickett

Permit Number WA 003944-6

Permit Expires 4/86

New Industry _____

Person Contacted Mr. Flotzacker, Tim Mordant, Gary Van~

Type of Facility Aquaculture

Receiving Water Black River via GTW

Type of Treatment System _____

Operation: ☐ Satisfactory ☐ Fair ☐ Unsatisfactory

☐ Does not comply with permit conditions

Describe Visited Global Aqua w/ Jon Neal, toured entire facility. Discussed time frame of activities and use of chemicals (see attached). Questioned each employee separately - all agreed no spill had occurred. They resented attention paid to them w/ kills occurring upstream. Does not appear that Global Aqua spilled any foreign substance or discharged any materials other than shut down of facility w/ reduced flow.

Significant Dates - Global Aqua

7/27 two wells to one well (~3mgd)
8/03 last well shut off
6/26 last existing DO sampled (8-95)
8/03 Shut pumps off - fish removed; tanks draining
~~8/10~~ Tanks drained
8/05 Lake drained completely
8/09 Liming of channels

Morton Blomso - new V.P.

Explained engineering

chloramine T

Formalin 37%

Erythromycin IN FEED

Sodium Thiosulfite

oxolinic acid IN FEED FOR BACTERIAL INFECTION
salt

Hexamine 1622 TREATING BACTERIAL GILL

Diquat

"

"

"

argentyne IODINE DISINFECTANT

MS-222 (TRICAIN METHANE SULFONATE) ANESTHETIC

ROMET IN FEED

HALOWSAN LIKE ARGENTYNE BUT NO PH. BUFFERED

Formalin Usage 1989

8/16/89

GUR

I. June - A. ~~10l~~^{total} @ 1:8000 dilution in various
hotday locations. Treatment of Castia, ext, protozoa, etc.
weekly basis until mid June.

↑ B. Outside location prophylactics @ 1:6000

1. 6/20 33l P-3

2. 6/24 30l P-6

6/25 30l P-10

II. July 7/02 33l P-9

7/10 33l P-4

7/13 30~~l~~ P-12, 13

III. August None used

Chlorine Usage (Sodium Hypochloride @ 12.5%)

I. July 7/01 30L @ 10ppm dilution P-6
7/01 30L - " P-7

7/20 Both pools neutralized w/ 20Lbs Sodium Thiosulfate

7/26 Added 60L into P-16 as disinfect location. Still in pool.

7/27 shut off well 3 (leaving well 5 as only one operating)

7/31 well 5 down, started up well 4

II. August Remaining well (W-4) shut down 8/03

8/04 15L added to transport tanks to disinfect

Neutralized, left site w/out being drained

20th Century Plastics
1-800-421-4662
STOCK # PPV35



TELEFAX



Date AUGUST 17, 1989
To ~~XXXXXXXXXX~~ FAX 752-8531
From
Subject GLOBAL AQUA, USA INC.
Re
TOTAL PAGES INCLUDING COVER LETTER 6

CORPORATE OFFICE 355 SPRICKSON AVE SUITE 421
BAINBRIDGE ISLAND WA 98110
TEL (206) 842-9881
FAX (206) 842-9883
BLACK RIVER 11408 GATE ROAD SOUTH
OLYMPIA WA 98502
TEL (360) 771-0020
FAX (360) 771-0020

DEAR MR. PICKETT:

ATTACHED PLEASE FIND COPIES OF THE INVOICES FOR THE CHEMICALS THAT HAVE BEEN PURCHASED SINCE MAY 1, 1989.

SHOULD YOU HAVE ANY QUESTIONS, PLEASE DO NOT HESITATE TO CALL.

SINCERELY,

Doug Brickley
DOUG BRICKLEY

DB/DF

Handwritten signature and initials.

5

2/55

ST. ST.
MONDAY
NO.
ST. ST.
MONDAY
ST. ST.
MONDAY
NO.

1000 00
1000 00
1000 00
1000 00

12 52CAT, 20

10	STAVRS	SHIP TO	ELBERT, ALVA	11405 GATE RD. S.	ADDRESS	ROCKSTER, VA	2172
11	P.O. BOX 264						
12	CHATELAIN, WA						
13	98531						



PLEASE REPLY TO
P.O. BOX 268
TRACY, CA 95376-0268

INVOICE K 32036

8702 152nd AVE NORTHEAST
REDMOND WA 98052

(206) 885-3777

PAGE 1

GLOB35
S Global Aqua
O 355 Erickson Ave
L Suite 421
D Bainbridge Isl, WA 98110
T
O

S Global Aqua
O 11405 Gate Road
L Olympia, WA 98110
P
T
O

DATE 05/31/89		SALESMAN 550		ORDER NO. Tim	ORDER DATE 05/31/89	SHIPPED VIA UPS		TERMS 1.08/ 10	INVOICE NO. 00035225	
ORDERED	QTY SHIPPED	BACK ORDER	ITEM NUMBER	DESCRIPTION			UNIT	UNIT PRICE	AMOUNT	
1 0	1 0	0 0	1a	100lb Chloramine T 80#25226 FOB R			ea	550.000 .000	550.00 .00	
Thank you. We appreciate your order.				5043						
NON TAXABLE 00		TAXABLE 550.00		SALES TAX 44.55		FREIGHT 19.39		MISCELLANEOUS .00		INVOICE TOTAL 613.94

ENTERED
2163

8702 152nd AVE NORTHEAST (206) 885-3777
REDMOND, WA 98052

GLOB15
Global Aqua, Inc.
111 Queen Anne Ave N.
403
Seattle, WA 98109

11405 Gate Road
Olympia, WA 98502

PAGE 1

Global Aqua, Inc.
GLOB15

ATTN 05/19/89	SALESMAN 505	ORDER NO. Tim	ORDER DATE 05/16/89	SHIPPED VIA UPS	TERMS 1.0% / 10	INVOICE NO. 00034967	
ORDERED	QTY SHIPPED	BACK ORDER	ITEM NUMBER	DESCRIPTION	UNIT	UNIT PRICE	AMOUNT
2	2	0	1a	25# Chloramine T	ea	200.000	400.00
0	0	0		so#24996 FOB R		.000	.00
							
Thank you. We appreciate your order!				S038			
NON TAXABLE .00		TAXABLE 400.00		SALES TAX 32.40		FREIGHT 9.24	
				MISCELLANEOUS .00		INVOICE TOTAL 441.64	

INVOICE DATE 05/19/89	INVOICE NO. 00034967
 PLEASE DETACH HERE AND RETURN WITH YOUR PAYMENT	
INVOICE TOTAL 441.64	

8702-152nd AVE NORTHEAST
REDMOND, WA 98052

(206) 865-3777

8702-152nd AVE NORTHEAST
REDMOND, WA 98052
(206) 865-3777

PAGE 1

PAGE 1

GLOB20
Global Aqua
11405 Gate Road
Olympia, WA 98502

S Same
H
I
P
T
O

Global Aqua
GLOB20

DATE 05/03/89	SALESMAN 550	ORDER NO. Tim	ORDER DATE 02/26/89	SHIPPED VIA UPS	TERMS 1.0% / 10	INVOICE NO. 00034725
QUOTED 2 0	QTY 2 0	BACK ORDER 0 0	ITEM NUMBER 1a	DESCRIPTION 250 Chloramine T so#24703 FOB R	UNIT ea	AMOUNT 200.000 .000 400.00 .00
Thank you. We appreciate your order!				8034		
TAXABLE .00		TAXABLE 400.00		SALES TAX 33.18	FREIGHT 9.70	MISCELLANEOUS .00
INVOICE TOTAL					442.88	

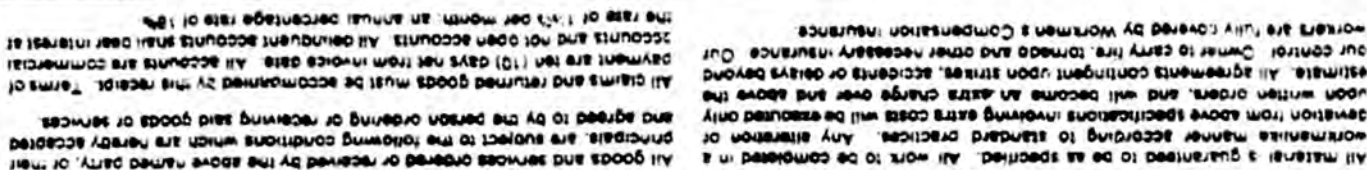
INVOICE DATE	INVOICE NO.
05/03/89	0003472

PLEASE DETACH HERE
AND RETURN WITH
YOUR PAYMENT

ENTERED
2054

5.05

AUG 12 1989 15:34 GLOBAL AQUA USA INC.



NOTICE: ALL CLAIMS AND RETURNED GOODS MUST BE ACCOMPANIED BY THIS RECEIPT.

329. 36

Sean A. Kelly

DESIGNER: NISSE

[illegible]

CONTRACTS

22 GALLON DRUMS LEAD TO CHLORINE
DRUM DEPOSITS

52.40	Tax
40.82	
124.00	
88.88	
15.00	

24524

DECEMBER 1964

UNCLASSIFIED

3.2.2

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AGBC

10

SECRET

SEARCHED INDEXED SERIALIZED FILED

SECRET - R/F (S&P)

התאחדות חסידים, ירושלים

11405 GATE RD. S.

יצרעלע יידן

PHONE (206) 736-3314
P.O. BOX 284
505 WEST MAIN
CENTRALIA, WASH. 98531
FED ID NO. 91-1231867

U B A N K S

NO. 32738

1. אלוהים

90734

66-10-50

75



INSPECTION REPORT

To Steelhammer Salmon Farm

Inspector P. Pickett

Date of Visit Aug. 18, 1989

Permit Number WA-003946-2

Name of Entit. same

Permit Expires 4/86

City Rochester County Thurston

New Industry _____

Person Contacted Barbara Steelhammer

Type of Facility Aquaculture

Receiving Water Rochester slough/Black R.

Type of Treatment System _____

Operation: ☐ Satisfactory ☐ Fair ☐ Unsatisfactory

☐ Does not comply with permit conditions

Describe Discussed operations - no chemical use,
no shut down, no cleaning - normal
operations. Took samples from sediment
in the slough. Took water samples
from slough at Schoolland Road. Noted
a large number of small fish in slough.

Talked to Paul Anderson - owner. Normal
operations, no chemical use.



INSPECTION REPORT

To Carlson Salmon Farm

Date of Visit Aug 16, 1989

Name of Entity same

City Richester County Thurston

Person Contacted Leonard Carlson (also Matthew, 12)

Type of Facility Aquaculture

Receiving Water Black River Swamp

Type of Treatment System none (settling)

Inspector P. Pickett

Permit Number none

Permit E _____

New Index _____

Operation: ☐ Satisfactory ☐ Fair ☒ Unsatisfactory

☐ Does not comply with permit conditions

Describe Four 50 foot concrete circular tanks, a
doughboy pool w/ fingerlings, about 10
hatching trays and an earth pond w/
fingerlings. Earth pond discharges to
stand pipe and trough into swamp.
Discharge goes to neighbor's property.
Earth pond not lined, but provided some
settling - only a few months old.
No chemical use, none stored on site.

Issues: 1) Discharge to neighbor

2) no permit

3) Unlined pond

Feed: over 10,000 lbs/mo.

Discharge: ~1000 gpm

Fish on stock: ~40,000 lbs

Map over



INSPECTION REPORT

To Swecker Salmon Farm

Date of Visit 8/18/89

Name of Entity same

City Rochester County Thurston

Person Contacted Dan Swecker

Type of Facility Aquaculture

Receiving Water Black River

Type of Treatment System none

Inspector P. Pickett

Permit Number WA-003945-4

Permit Expires 4/86

New Industry _____

Operation: ☐ Satisfactory ☐ Fair ☒ Unsatisfactory

☐ Does not comply with permit conditions

Describe ~~What is the~~ No unusual operations, no chemical use.

Atlantic Salmon in doughbox pools - '48 - 16'x4',

3-24'x4', 8-15'x3', four 30' concrete w/

choc, Ten earthen ^{regions} ~~settling~~ one settling pond.

Surface discharge 2500 ^{gpm} w discharge

1000 gpm. About 100,000 ^{lb} stock about

35000 lbs feed/month. Separate pit pond for

treatment wastewater - not used recently.

Issues: 1) No GW monitoring or sealed ponds

2) No treatment

3) possible permit violation due to

expansion of facility

[Map over]

Saw signs of burial of mounds in the woods

CC [DIR not signed by corporate officer

Facility expanded w/out reapp



INSPECTION REPORT

To Swecker Salmon Farm
Date of Visit Aug 21, 1989
Name of Entity Sam
City Rochester County Thurston

Inspector P. Pickett
Permit Number WA-003945-4
Permit Expires 4/81
New Industry _____

Person Contacted Dan Swecker
Type of Facility Aquaculture
Receiving Water ~~Black River~~ Black River
Type of Treatment System _____

Operation: ☐ Satisfactory ☐ Fair ☐ Unsatisfactory

☐ Does not comply with permit conditions

Describe Went to observe bioassay & pathology work
w/ Pat Chapman of WDF. Went via ATV to
Black River. Bioassay healthy after one hour.
Took samples. (Location - old duck/duck blind)
Observed Chapman's work - no signs of
gill damage or other disease. River of
cooler, less oxygenated.

Swecker reports that UW checked his phyto-
plankton samples, and the species present
appear normal for what a fresh-water
river population.

DISCUSSION AND MEETING RECORD

DATE: 8/22/89

BY: Paul J. Pickett

REFERENCE: Global Aqua

CONVERSATION/MEETING RECORDED

☒ NO ☐ YES ———→ TAPE NO. _____

I MET WITH/SPOKE TO: Judy

OF: Eubanks

TELEPHONE: 736-3314

ADDRESS (if applicable): 505 W. Main, Cuba

PART PANTS: _____

SUMMARY OF MEETING/DISCUSSION:

I requested a list of chemicals sold to Global Aqua. The following were reported:

Date	Amount	Item
<u>4/28/89</u>	<u>2 - 52 gal</u>	<u>12.5% Hypochlorite</u>
<u>6/8/89</u>	<u>2 - 52 gal</u>	<u>12.5% Hypochlorite</u>
<u>6/8/89</u>	<u>2 - 110 lb.</u>	<u>Sodium Thiocyanate</u>
<u>8/1/89</u>	<u>12 - 52 gal.</u>	<u>12.5% Hypochlorite</u>
<u>8/22/89</u>	<u>10 - 64 lb.</u>	<u>Sodium Thiocyanate</u>

These records confirm Global Aqua's records.

NEEDED FOLLOWUP ACTION(S): _____

BY WHOM: _____

TELEFAX



Date August 22, 1989
To Department of Ecology
Attn [REDACTED]
From Global Aqua-USA, Inc. Doug Brickley
Re Black River
FAX: 753-8531

CORPORATE OFFICE 155 BRICKSON AVE. SUITE 101
BAINBRIDGE ISLAND WA 98110
TEL: (206) 847-9881
FAX: (206) 842-4481

BLACK RIVER 11400 GATE ROAD SOUTH
OLYMPIA WA 98512
TEL: (206) 871-1100
FAX: (206) 871-1100

Paul Pickett
Department of Ecology

Dear Mr. Pickett:

Per your request, please find the list of names and phone numbers of the
at the Black River site.

Should you have any questions, please call me.

BLACK RIVER

NAMES

PHONE NUMBERS

Flatraaker, Ole Jan

(206) 273-8180

Monfort, Timothy

(206) 273-8729

Pearson, Karen

(206) 273-~~5976~~ 5976

Pearson, Sarah

(206) 273-5342

Raunholm, Steinar

(206) 273-5342

Rotter, Daniel

(206) 273-5473

Van Ree, Gary

(206) 273-8676

Doug Brickley

Sincerely,

Doug Brickley

DB/df *df*

*Lead off
next to
Brad Suttle - Menke/Cameron Creek
Will Cook - Temp*

Transmission of _____
If not all received, please call 1-800-853-1100

001 853 853 78808 2011 65 77 906

12068429881

DISCUSSION AND MEETING RECORD

DATE: 8/24/89

BY: Paul Pickett

REFERENCE: Global Agne

CONVERSATION/MEETING RECORDED

☒ NO ☐ YES ☐ TAPE NO. _____

I MET WITH/SPOKE TO: Karen Pearson

OF: GA

TELEPHONE: 273-5976

ADDRESS (if applicable): _____

PARTICIPANTS:

SUMMARY OF MEETING/DISCUSSION:

Asked her when she has been working at GA. She took 2 weeks vacation. Then worked mostly at Salt Water. After July 21, only worked Aug 15, now on sick leave. Only treatment was RIMET or formaldehyde for frankers. Obvious in May frunc problem was getting worse. Suspended treatment by late July. No spells that she's heard of. Always neutralize Chlorine, use barrels until empty and stored turned over.
She did general work as needed.

NEEDED FOLLOWUP ACTION(S):

BY WHOM:

M E M O R A N D U M

August 31, 1989

TO: File

FROM: Paul Pickett *PP*

SUBJECT: Black River Fish Kill, August, 1989
Summary of Investigations of Complaints and Rumors

I collected information on several rumors, reports, and theories that arose with regard to the Black River Kill. The information is summarized below.

First-hand Accounts of Swimming Irritation

Name	Date/Time	Place	Description
Sheree Bell	8-7-89/13:00	Turf Farm Pump	Irritated Eyes for 24 Hrs
Dave Walker	"	"	Irritated Eyes for 24 Hrs
(273-7401)	"	"	Upset Stomach for 36 Hrs
	"	"	(ingested river water)
Craig Davis	"	"	No Problem - Kept Eyes
(273-8044)			Shut
Tanya Fagernes	8-7-89/15:00	Big Rock	Irritated Eyes
Mark Fagernes	"	"	Irritated Eyes
	"	"	("Salty" taste to river)
Todd Fagernes	"	"	No Problem - Wore Goggles
(273-9689)			
Josh Wheeler	8-7-89/13:00	Below Moon Rd	Irritated Eyes for 18 Hrs
(273-5519)	"	"	Rash & Sores on Stomach
Pat Wright	"	"	Irritated Eyes
Kevin Duff	8-8-89/12:00	Below Moon Rd	Irritated Eyes for 24 Hrs
April Duff	"	"	No Problem - Brief Swim
(273-6916)			
Brian Douglas	8-8-89/16:00	Above Boat	Irritated Eyes for 18 Hrs
	"	Launch	Photophobia
Jason Albert	"	"	Irritated Eyes for 15 Hrs
	"	"	Photophobia

All swimmers reported that the river was unusually cloudy, and that there was no unusual odor other than a normal rotten smell.

The "Disgruntled Employee" Rumor

Tony Cudinski (273-8576), a Rochester resident, reported a rumor obtained from a fishing buddy that an employee at Global Aqua was unhappy with what was occurring there and had left their employment.

Gene Dechamps (Chehalis Tribal Biologist) reported an anonymous call from a distraught woman who said she had worked for Global Aqua and had information, but could not relay it at that time.

Global Aqua provided a list of employees at the Black River facility. All employees except two (Dan Rotter and Sara Pearson) were interviewed individually, and their descriptions of operations at the facility were consistent.

The "Nuked the Fish" Rumor

Gene Dechamps was told by an anonymous fish farmer that he knew that Global Aqua had "nuked the fish."

Dan Kneeland (352-3415), a businessman with connections to the aquaculture industry reported that a fish farmer he knew told him that Global Aqua had "nuked the fish."

Mark George, a Rochester resident, passed on a rumor that a fish farmer he knew told him that Global Aqua had "nuked the fish." While discussing this with him over the phone, he said that the person who told him that story was also at the restaurant he was calling from.

The fish farmer who apparently began these rumors was Dan Phillips. He told me that he had no first-hand knowledge of Global's activities, and that the information he was spreading was based on Dan Rotter's words ("nuked the fish" - i.e. killed them), and his knowledge of usual fish farm procedures. Thanks, Dan!

The Livestock Feed Tank Truck Complaint

An anonymous caller contacted Thurston county to report that a Stainless Steel Tanker with the words "Livestock Feed" on the side had been seen dumping into a lake or wetland along the Black River in the Mima area. This tanker had reportedly pumped the truck wash at the Restover Truck Stop.

On Friday August 18, Greg Cloud and I investigated a large area of DNR land between the Weyerhaeuser Tree Farm and the Black River Dairy. No signs of use by a heavy truck or of dumping of wastes were found.

The Restover Truck Stop truck wash has been closed for about a year. The previous operator ("Toby", works at Lacey Liquor Store) did not remember the truck we described.

Possibly the truck described was discharging or pumping from a manure lagoon at the Dairy.

Ammonia/Sulphide Theories

Several bits of information support the possibility of Ammonia and/or Sulphide toxicity contributing to the kill:

- 1) Jim Douglas (273-9747), a Rochester resident, reported that on Wednesday August 9 he saw a light blue plume in the river at Sickman-Ford Bridge, on the right-hand side facing downstream.

During a series of fish kills in Budd Inlet in September 1981, a light glacial blue color was observed. It was theorized that hydrogen sulphide released from Capital Lake was precipitating as elemental sulphur and causing that color.

- 2) Conditions in the Global Aqua settling pond may have been appropriate for sulphide and ammonia production because: a) the weather was hot and still, b) the sediments in the pond are high in nutrients and organic material, c) oxygenated influent was no longer entering the pond, and d) water discharged from the pond through the bottom sediments, which were most likely to be anoxic.
- 3) An ammonia level of over 700 mg/l was measured in water puddled over sediments in the influent channel to the settling pond. A sample was collected from the settling pond at the time of the fish kill and analyzed a week later, and a level of 12 mg/l ammonia was found. These values indicate that very high levels of ammonia were possible in the water percolating out of the settling pond.
- 4) Under conditions observed in the Chehalis River, pH 8.3 and a temperature of 20 centigrade, a level of 2.9 mg/l total ammonia as nitrogen would be acutely toxic, based on the one-hour EPA water quality criteria. Discharge from Global Aqua would have needed to be on the order of 200-500 mg/l $\text{NH}_3\text{-N}$ to reach this level in the Chehalis River.
- 5) Low DO conditions were observed in deeper waters of the Black River. Generation of sulphides and ammonia may have already been occurring in anoxic river sediments. Oxidation of additional sulphides and ammonia entering the river would further deplete oxygen. Very slow velocities and thermal stratification may have contributed to the creation of a stable anoxic layer in the river with high ammonia and sulphide levels.
- 6) Several swimmers on the river reported a rotten smell, like dead fish. A hydrogen sulphide or ammonia smell may have been masked by the rotten odors normal to a slow river in the summer.
- 7) Symptoms experienced by the swimmers, burning eyes and photophobia, could have been caused by sulphides.

ATTACHMENT 6

Hallock Aquatic Plant Report

DRAFT

WASHINGTON STATE DEPARTMENT OF ECOLOGY
ENVIRONMENTAL INVESTIGATIONS AND LABORATORY SERVICES

MEMORANDUM

TO: John Bernhardt
FROM: David Hallock
SUBJECT: Black River Field Results: Biological
DATE: August 21, 1989

The following plant species were observed in the Black River between RM 7 and -RM 17 (Littlerock) on Friday, August 18, 1989:

Algae

One clump of attached filamentous algae was collected for analysis. This algae was ubiquitous in the river and was attached to and covering many macrophyte beds. The primary alga was the filamentous diatom, *Melosira*. *Fragillaria* was next in abundance. Various other diatoms and non-filamentous green algae were also present. The only blue-green algae observed was a short strand of *Oscillatoria* (not a toxin-forming species to my knowledge).

Macrophytes

The following macrophytes were observed:

<u><i>Elodea canadensis</i></u> (waterweed)	<u><i>Potamogeton</i> sp.</u> (pondweed)
<u><i>Potamogeton zosterifolius</i></u> (pondweed)	<u><i>Sparganium</i> sp.</u> (bur-reed)
<u><i>Myriophyllum</i> sp.</u> (water-milfoil)	<u><i>Najas polycarpa</i></u> (water lily)
<u><i>Elatine</i> sp.</u> (waterwort)	<u><i>Polygonum</i> sp.</u> (smartweed)
<u><i>Ceratophyllum</i></u> (coontail)	<u><i>Lemna minor</i></u> (duckweed)

A few other macrophytes were seen but not identified. Both *Sparganium* and *Polygonum* covered the channel in places to the point of interfering with the jet boat's intake. Dense beds of *Elodea* were present in places. The *Myriophyllum* species was probably not eurasian milfoil.

ATTACHMENT 7

Gene Deschamps (Chehalis Fisheries Biologist) Report

Chehalis Indian Tribe Fisheries Program
Notes on Black River/Chehalis River Fish Kill
Between August 10-19, 1989

- Aug. 10 Tribal Fish technicians (A.O. & D.C.) float in rubber raft from informal boat launch in Black River on Schoolhouse Road (River mile 8.6) to highway 12 bridge (RM 4.1) total length 4.5 miles.
Observations: (all dead) (Time: In 10:00a.m. Out 1:00p.m.). Start to Gate Bridge (RM 7.1) 3 dead coho fingerling (est. 3"); 1 squawfish (est. 16"). Gate Bridge to Highway 12 Bridge 4 large Cutthroat Trout (12-16") native coloration; 1 sucker (est 18"); 1 red-sided shiner (est. 4").
Comments: Water not the usual clear brownish tinged, but very murky with apparent suspended plant material. Aquatic plants very thick "hiding" mortalities. (2 coho kept, frozen and later given to pathologist). (Casual observations (G.D.) several weeks earlier at survey start and end revealed good abundance of live coho fingerling).
- Aug. 10 Spot checks (G.D.) on Black River.
Lower Bridge on Howanut Road (RM 1.1) 10:45 a.m.: 5 large live squawfish just above bridge. Schools of live 1"-3" cyprinids near shore-appear OK; 3 live sculpins near shore. Also, 1 8"-10" trout and 2 coho fingerlings swimming rather slow. Water getting murky.
Gate Bridge (RM 7.1). Several lamprey ammocetes left mud and are swimming on the surface. No schools of cyprinids or coho fingerling seen. (These were numerous several weeks ago). Several 3"-4" dead fish on bottom (not identified). One stressed 12" squawfish just below bridge repeatedly surfacing. Water murky.
Highway 12 Boat Ramp (RM 4.1 2 dead sculpins (3") several red-sided shiners stressed (4") can be caught by hand at the surface. Schools of small 1/2" -1" cyprinids seem ok.
- Aug. 11 (A.O. & D.C.)
Floated Chehalis River in rubber raft from Sickman-Ford Bridge (RM 44.04) to Oakville Boat Launch (RM42.2). (1.85 miles). 31 dead adult chinook (22 females, 4 males, 5 SND). Also, 16 live stressed, 4 swimming very weakly. Most mortality near bridge, progressively less downstream. Dead piled on gravel bar.
- Aug. 12
& 13 Picked up an additional 30 dead adult chinook washed up at riffle just below Sickman-Ford bridge. (81 total put on bank) (Chehalis Enforcement Officers)

Aug 13

(G.D.)

Spot Checks

Porter Boat Launch (RM 33.3). 7:15 a.m. No dead fish seen. Schools of 1"-3" cyprinids are OK. Larger fish (not I.D.) feeding on insect hatch. Water murky - lots of foam. (Chehalis River).

Below Oakville Boat Launch (RM 42). Two dead 8"-10" fish near far bank (probably whitefish). Several large (12"-18") fish feeding at surface. (Chehalis River.) (7:37 a.m.)

Highway 12 Boat Launch (RM 4.1) Black River. 4 stressed red-sided shiner seen (3"-4"); 3 dead sculpin; water very murky, the schools of small cyprinids seen Aug. 10 are gone. Aquatic plants dying. (8:00 a.m.)

Lower Black River Bridge (RM. 1.1) (8:15 a.m.)

All previous activity absent, except 1 school (25-35 fish) 1 1/2" cyprinids appear stressed. No dead fish seen, however weeds thick.

Chehalis River at Independence Bridge (RM 54.2) Lots of surface feeding cyprinids of all sizes. Water appears clearer than Black River. 1 dead adult chinook (seen previously in mid July) at surface just above bridge on south bank. Heavily fungused - dead 3 weeks or more from presumably natural D.O. sag then.

Aug 14

Spot Checks Black River (G.D.)

Bridge at Little Rock 7:30 a.m., RM 18.4 No dead fish. Coho fingerling seen in eddies, hit "thrown twigs". Gravelly riffles & shallow pools.

Boat launch south of Little Rock (RM 16.2) No dead fish - flow is slow-weedy plants appear ok. Coho fingerlings fairly numerous - hit thrown twigs on surface.

Aug 14

Float Trip - Chehalis River Oakville boat launch to Porter (RM 42.2 to RM 33.3). 8.9 miles. 4 dead female chinook adults and 1 adult summer steelhead. Scattered out from start to 2 miles above Porter. Also 2 barely alive. (Dead fish flagged and put on bank) (65 adult dead chinook accounted for in Chehalis River to date).

Aug 15

(B.S. & J.Y.)

RM ad

Float in raft Black River (RM 1.1 to RMD) Lower bridge to mouth 1:00 p.m. 2 dead suckers, lots of dying lily pads and aquatic plants. 2 tame ducks sitting on log. River appears "dead". No fish activity, water murky. No adult dead chinook (water too low).

3

Continue float in Chehalis River (RM 47 to Sickman Ford Bridge (RM 44.05), (2.95 miles). Terrific kill - 60 adult female chinook; 7 males; 65 (SND) - total 131 dead. Also 15 live chinooks with varying degrees of stress. Also numerous (un counted) dead squawfish, suckers, etc., plus 1 adult shad dying. (196 dead chinook accounted for by Tribe to 8/15). Need to reconcile Ecology helicopter count from Satsop River mouth to Sickman Ford bridge/Garrad Creek to get total dead. Because of overhanging trees, the Tribes float count from the mouth of Black River to Sickman ford bridge is more accurate than the helicopter count. Below here, the chopper count would be best.

(Gene's preliminary chopper count from Oakville Boat launch to Sickman Ford bridge is 44 dead chinook. This added to the previous 196 gives an observed total of 240. We will also have to resolve the number of unseen to calculate a total loss.

P.S. Efforts to secure moribund chinook were unsuccessful on on August 12, 18, 19, 21

Gene Deschamps
Fish Biologist
Chehalis Indian Tribe

Continued Observations

- Aug. 10 Two moribund coho fingerlings collected and frozen.
Given to DOE Aug. 16. (below Gate Bridge)
- Aug. 11 Two recently dead adult chinook picked up in vicinity of
Sickman-Ford bridge and frozen. Given to DOE Aug. 16.
- Aug. 16 One live chinook collected in the Chehalis river by set net
at night about 1 1/2 miles upstream from the mouth of the
Black River in an area not "affected. Kept cool and fresh -
given to DOE August 16. (RM 48.7)

Aug. 22

Highway 12 Boat Launch (1:23 p.m. (RM 4.1)

Small schools of cyprinids (1/2"-1 1/2") seen near weed beds. Seem OK. No coho or larger fish seen. Bottom blanketed with brown organic material, with small chunks breaking off and rising to the surface. Dead plant life present. Water much cleaner than before.

Gate Bridge (1:55 p.m.) (RM 7.1)

A few small cyprinid schools (1/2"-1 1/2" fish) seen near shore or grassy islands. No coho fingerlings or larger fish seen. Bottom and aquatic weeds covered with brown organic matter. Water clearer than before.

Boat Launch below Little Rock (2:19 p.m.) (RM 16.2)

Aquatic plants look OK (some emergent large plants on far bank browning). Water clear. Coho fingerling present, 8 rose to surface to hit twigs thrown in water. Bottom with no blanket of organic matter.

Black River Spot Checks (G.D.)

Lower Bridge (RM 1.1) (1:36 p.m.) A few small cyprinids (1/2"-1 1/2") next to shore. Lots of dead plant material on bottom and on water weeds. No surface feeding fish seen. No large fish seen. Water is clearer.

Aug. 22

(11-11:30 a.m.)

Citizen Tony Cudinski of Rochester stopped by Tribal Center and talked to G.D. He was fishing August 19th, in Black River from the canoe launch to the boat launch at RM 8.6. He said he caught numbers of cutthroat, bass, yellow perch, squawfish and white fish down to 500-600 yards above the "Trestle" near Global Aqua. From there to the boat launch he caught nothing. He thought a "reward" notice should be circulated to attract comment from people who might know something. (His telephone number is 273-8576).

Other

Key to Chehalis Tribe Personnel

G.D. - Gene Deschamps
D.C. - Dennis Cayenne
A.O. - Albert Ortiz
B.S. - Bill Secena
J.Y. - Jerry Youckton

Also

At the invitation of Gary Van Ree of Global Aqua, Gene Deschamps and Sam Secena (Tribal Business Committee) were given a tour of the facilities at 1:00 p.m. August 17. Material was recorded on a "Cam-corder".

6.

Bottom Line Summary - Chehalis Tribal Observations

1. Our first observations revealed a fish kill in progress in Black River between RM 8.6 and RM 4.1 on August 10. Whatever had caused the problem had reached somewhere between RM 4.1 and RM 1.1 at that time. Valuable species lost were coho fingerlings (1988 brood, and resident cutthroat trout. Visual observations probably did not represent the true loss.
2. By Friday August 11 the "Cause" had reached the Chehalis river and began killing adult chinook salmon. Peak losses occurred probably August 12-15, but lasted through the week. About 240 have been seen, with the "unseen" mortality adding to this amount.
3. Observations in the Little Rock area of Black River August 14 (RM 16.2 & 18.4) revealed no dead fish, live coho fingerlings, and apparently healthy aquatic plant life.
4. Below the start of our survey on Black River at RM 8.6, plant life appeared to be severely affected, with decaying matter coloring the water and blanketing the bottom.
5. Small cyprinids seemed to be the most resistant species, perhaps residing in dead-water pockets in weed-beds, etc.
6. By the time it was suggested capturing moribund chinook (or other species) for tissue and other analyses, it was too late.

ATTACHMENT 8

Dave Seiler, WDF, Report on Loss of Coho Salmon
in the Black River Fish Kill.

STATE OF WASHINGTON
DEPARTMENT OF FISHERIES
PLANNING, RESEARCH AND HARVEST MANAGEMENT

MEMO

TO: Lew Kittle, Department of Ecology September 27, 1989
FROM: Dave Seiler DS
SUBJECT: Loss of Coho Salmon in the Black River Fish Kill

Per your request, I have estimated the loss of coho salmon in the Black River fish kill of August 1989. I estimate that around 100,000 fry were killed and that these would have resulted in 45,000 smolts in Spring 1990 which in turn would have survived to produce 3,263 adult coho in 1991.

Attached is a detailed explanation of the information and analysis that produced these estimates. If you have any questions or desire additional background information just let me know.

DES:des

cc: Didonato
L. Phinney
D. Phinney
Austin
Cooney
Lincoln
Edie
Gene Deschamps, Chehalis Tribe

Estimation of the Coho Salmon loss in the 1989 Black River Fish Kill

Coho salmon fry rear throughout the Black River system and consequently a significant number were lost in the fish kill that occurred downstream from river mile 9.2 during August of 1989. This paper provides an estimate of the coho loss in this event and estimates the resultant loss to the fisheries and spawning escapement. These estimates are based on studies conducted by the Washington Department of Fisheries' Freshwater Production Evaluation Program, a long term research program designed to quantify natural salmon production, survival and escapement. Various juvenile and adult trapping and tagging techniques are employed to assess wild salmon populations at different lifestages (Seiler et al. 1981 and 1984).

In 1980, this program established a permanent upstream and downstream migrant trapping facility on Bingham Creek (tributary to the Satsop River). In 1982, efforts expanded to include other tributaries of the Grays Harbor Basin (Seiler, 1989). Over the years 1982 through 1985, downstream migrant traps were operated in the Black River system and emigrating coho smolts were trapped and coded wire tagged (CWT). Adult escapement of coho was estimated via adult trapping and tagging in the Black River in 1985. In 1986, adult escapement was also estimated in this system (via CWT ratios). Taken together, these studies provide a means to estimate Black River coho smolt production, survival and contribution to all fisheries and escapement.

Smolt Production

In addition to the Black River, smolts were also trapped in two of its tributaries, Beaver and Waddell Creek. Traps were located near the town of Littlerock (near the mouths of the tributaries and at RM 18.3 on the mainstem (Fig. 1). Consequently, the numbers of smolts trapped relate only to the habitat above these trap sites. Due to the Black River's low gradient and resultant swampy character, the majority of the rearing area critical to coho production is found in the mainstem below Littlerock. Because trapping was possible only on the upper Black River and in certain tributaries, estimation of smolt production for the entire system also requires estimates of basin escapement.

In 1985, we estimated coho escapement to the Black River system at 1,678 adults. Relating the estimated survival to escapement for the 1982 brood of .74% (359/48,278) (Table 2) to this escapement, estimates that 227,000 smolts emigrated from the system in spring 1984. By subtracting the 89,000 smolts we trapped, we estimate that 138,000 were produced downstream of Littlerock. The only tributary of consequence to coho rearing below this point is Mima Creek. Considering its size and habitat, I estimate that it may produce around 10,000 smolts. Subtraction of this production yields an estimate for the 1982 brood of around 128,000 coho smolts from the lower 18.3 miles of Black River mainstem. This level translates into an average production in this reach of around 7,000 smolts per mile.

In the following year, 1986, we estimated Black River coho escapement at

6,200 adults and smolt production for this brood at around 140,000. By subtracting the 81,000 smolts we trapped and the estimated 10,000 from Mima Creek, we estimate 49,000 smolts were produced from the lower 18.3 miles of mainstem, an average production per mile of 2,700 smolts in Spring 1985.

The average 1985-1986 production rate of 4,850 coho smolts per mile can be applied to the lower 9.2 miles affected by the 1989 fish kill. The fish kill loss then, is estimated at 45,000 smolts.

Several questions that should be asked in assessing the veracity of this estimate include the following:

1. How many fry would have been killed to result in this loss?
2. Is the answer to #1 a reasonable estimate of the August standing crop of fry for this quantity of habitat and reach of the river?
3. Was seeding adequate in 1988 to produce this population level of coho fry?

The first question asks what is the survival from August fry to smolt emigration. Literature values range from 30% to 50%. These rates would equate to a population in this reach of 90,000 to 150,000 fry.

Average fry densities in August for a system like the lower Black River, if fully seeded, would likely average over one fry per square meter. As the affected reach of the Black River has over 100,000 square meters of area (9.2 mi. x 1,609 m/mi. x 8 m average width) this fry population could exist at densities even lower than capacity.

Seeding was good in 1988. We estimate escapement to the upper Chehalis River (upstream of Porter) in 1988 at around 30,000 coho, a level of spawning I consider adequate to seed the watershed. While we did not estimate Black River escapement separately in 1988, it would be similar to the 1986 level, around 6,000. In addition to the natural seeding, some 260,000 fed coho fry were outplanted into the mainstem Black River in April, 1988 (Table 1). The combination of good natural spawning and this outplant of fed fry directly into the mainstem probably resulted in full or near full seeding.

Table 1 Releases of fed coho fry into the Black River in 1989.

Release Date	Number Released	Release Site (RM)	Days Reared	Size f/lb
4-14-89	93,288	18.3	45	507
4-18-89	85,800	15.5	43	429
4-19-89	85,800	7.1	43	429
total	264,888			

Marine Survival

Average marine survival of Black River wild coho is estimated at 7.25% over the four broods we tagged (Table 2). This estimate relies on the harvest rate measured each year on the Bingham Creek wild tag group as the upstream trapping facility on this stream provides a complete and precise accounting of tag escapement not available in the Black River system.

Harvest

Over the four broods, an average of 35.4% of the run was harvested in ocean and harbor fisheries. In recent years, the harvest rate by the Chehalis Tribe's net fishery has varied from a high near 20% (1987) to less than 2% (1988). Of the four years we tagged Black River coho, we obtained an adequate sample of the Chehalis Tribe's catch in only one year, 1986. In this year, I estimate the harvest rate by this fishery at 5.5% (117 tags caught of 2,123 tags estimated to escape the harbor fisheries). For estimating purposes in this assessment, a harvest rate for this fishery of 10% would be appropriate.

Harvest in the ocean is shared between commercial troll fishermen and sport fishermen. Treaty and non-treaty gill net fisheries share the harvest in the harbor. Table 3 splits the combined catch of Black River tagged coho by all states and British Columbia into sport, troll and net components within each brood year. These were averaged over the four broods to estimate the harvest components at 8.4% sport, 67.9% troll and 23.7% net.

Estimated Loss of Adult Coho

By applying the average marine survival rate of 7.25% to the estimated loss of 45,000 smolts, we estimate the adult loss at 3,263. Use of the 4 year average harvest rate estimates that 1,156 of these fish would be harvested in ocean and harbor fisheries and the balance, 2,107 would escape up the river. Of these, the Chehalis tribe would catch 211 at the 10% harvest rate, leaving 1,896 to spawn. Based on the four year average catch shares, the estimated total harvest would breakdown as follows: 97 sport, 785 troll and 485 net. The loss of the 1,896 adults that would have escaped to spawn in 1991 also translates into a direct loss to fishermen as harvests will have to be restricted. As this is nearly impossible on a subbasin scale, future production from the Black River will also likely be impacted.

BLACK RIVER

Upper Chehalis Basin

Fig 1.

2 1 1/2 0 1 2 MILES

SCALE 1" = 2 MILES

SYMBOLS

PASSABLE - BARRIERS - IMPASSABLE

	Falls	
	Beaver Dams	
	Dams	
	Salmon Hatchery	
	Fish Passage Facility	
	Stream Gage	
	Stream Mile	
	Reference Point	

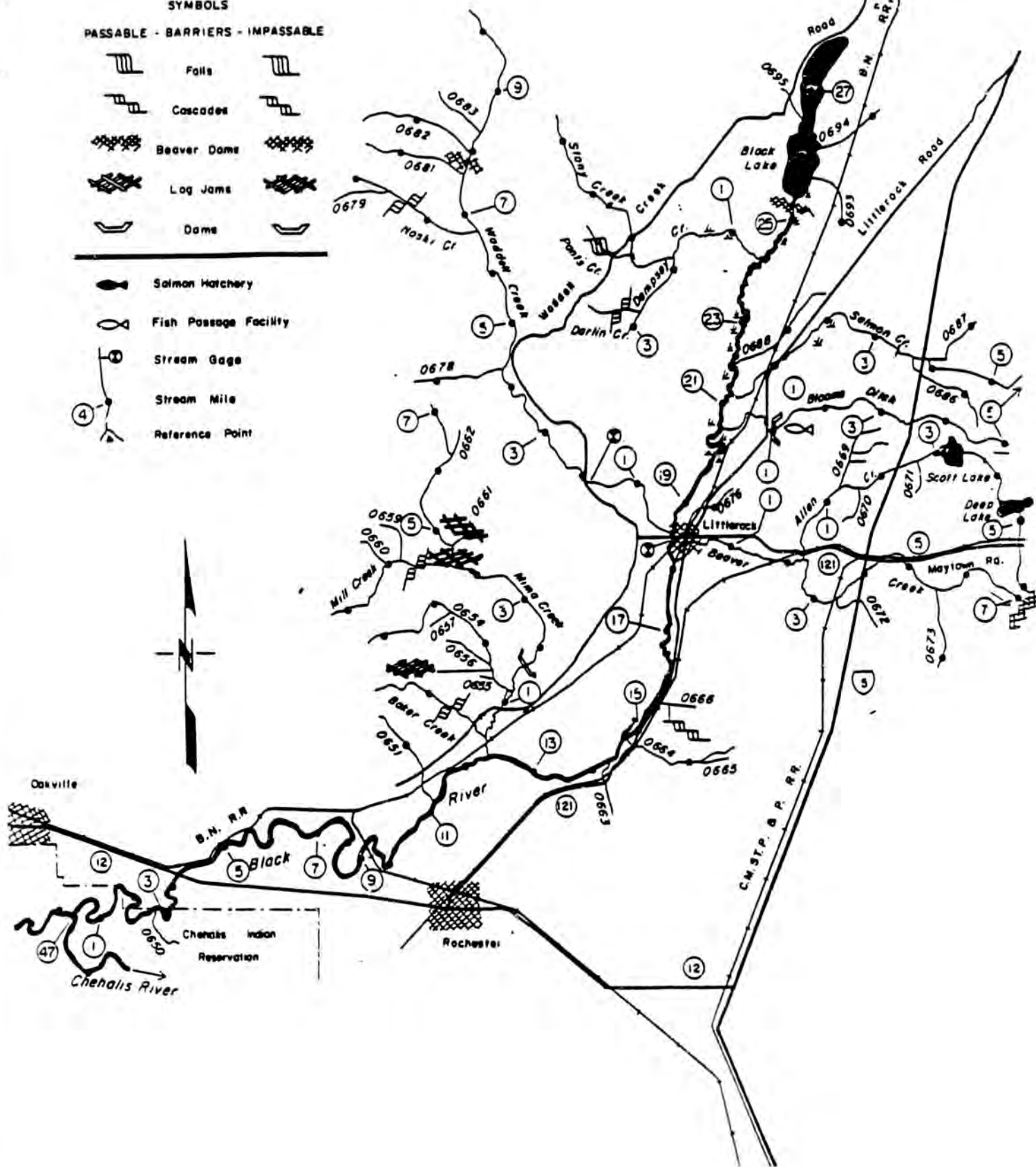


Table 2 Estimated recoveries in fisheries and estimated escapement of tagged Black River and Bingham Creek wild coho, brood years 1980-1983.

Brood Year	Stream	# Tagged 1/	OR	Estimated Catch					Escapement 2/	Total	Marine Surv. (%)
				WA	BC	AK	GH	Total			
1980	Black River	11,474	17	73	275	-	41	406	635	1,041	9.07
1980	Bingham Cr.	21,874	18	22	264	13	63	380	594	974	4.45
1981	Black River	34,772	49	56	479	24	39	647	3,390	4,037	11.61
1981	Bingham Cr.	20,012	9	27	185	4	76	301	1,577	1,878	9.38
1982	Black River	48,278	7	53	230	-	99	389	359	748	1.55
1982	Bingham Cr.	26,546	-	22	96	-	52	170	157	327	1.23
1983	Black River	47,855	18	87	641	4	359	1,109	2,123	3,232	6.75
1983	Bingham Cr.	17,950	12	43	151	-	189	395	756	1,151	6.41
Average	Black River										7.25
Average	Bingham Cr.										5.37

Table 3 Estimated tag recoveries in the ocean and Grays Harbor fisheries of Black River wild coho by catch components of sport, troll and net fisheries, catch years 1983-1986.

Catch Year	Catch Area	Fishery			Total
		Sport	Troll	Net	
1983	ORE	9	8	-	17
	WA	52	21	-	73
	BC	-	275	-	275
	AK	-	-	-	-
	GH	-	-	41	41
	totals	61	304	41	406
	prop. (%)	15.0	74.9	10.1	
1984	OR	30	19	-	49
	WA	16	-	40	56
	BC	10	449	20	479
	AK	-	24	-	24
	GH	-	-	39	39
	totals	56	492	99	647
	prop. (%)	8.7	76.0	15.3	
1985	OR	4	3	-	7
	WA	19	30	4	53
	BC	5	215	10	230
	GH	-	-	99	99
	totals	28	248	113	389
	prop. (%)	7.2	63.8	29.0	
1986	OR	9	9	-	18
	WA	10	19	58	87
	BC	10	600	31	641
	AK	-	4	-	4
	GH	-	-	359	359
	totals	29	632	448	1,109
	prop. (%)	2.6	57.0	40.4	
average prop. (%)		8.4	67.9	23.7	

Literature Cited

Blankenship, H.L. and P. Hanratty. 1988. Effects on Survival of Trapping and Coded Wire Tagging Coho Salmon Smolts. In, Proceedings, International Symposium and Educational Workshop on Fish-Marking Techniques, American Fisheries Society.

Seiler, D., S. Neuhauser, and M. Ackley. 1981. Upstream/Downstream Salmonid Trapping Project, 1977-1980. Wash. Dept. Fish. Prog. Rept. No. 144: 197 p.

1984. Upstream/Downstream Salmonid Trapping Project, 1980-1982. Wash. Dept. Fish. Prog. Rept. No. 200: 152 p.

Seiler, D. 1989. Differential Survival of Grays Harbor Basin Anadromous Salmonids: Water Quality Implications. In, Proceedings of the National Workshop on effects of habitat alteration on salmonid stocks. Can. Spec. Publ. Fish. Aquat. Sci. 105

SCOMM

75.15

PUBLIC OPINION MESSAGE

DEAR: SENATOR ELIASON

NAME: LINDA WRIGHT

TITLE:

ADDRESS: BOX 407

CITY: KASLOF

ZIP: 99610

PHONE: 262-9694

BILL NO:

SUBJECT: FIN-FISH FARMING

MESSAGE: I URGE YOU TO BAN FIN-FISH FARMING IN ALASKA. IT IS HIGH TIME FOR SOME RESPONSIBLE LEGISLATION THAT REFLECTS THE WILL OF THE MAJORITY OF ALASKANS. OUR ENTIRE FUTURE IS AT STAKE.

POMID: 13094712

DATE: 04/15/90

TIME: 09:17:12

LIONAME: SOI JOTNA LIO

COPIES: 5 NATORS

FAIRBANKS

KERTTULA

FRANK

HALFORD

STURGULENSKI

ZHAROFF

PUBLIC OPINION MESSAGE

DEAR: SENATOR ELIASON

NAME: TED DEATS
TITLE: BUSINESS OWNER AND FISHERMAN
ADDRESS: P.O. BOX 87
CITY: JUNEAU
PHONE: N/R-
BILL NO:
SUBJECT: HB 432, SB 397
MESSAGE: AS A COMMERCIAL FISHERMAN AND A SMALL BUSINESSMAN AND A VOTER, I AM
100% OPPOSED TO FISH FARMING IN ALASKA. THANK YOU.

ZIP: 99802

POMID: 00101127
DATE: 04/13/90
TIME: 10:11:27
LIONAME: JUNEAU LIO

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FRANK
HALFORD
ZHAROFF

PUBLIC OPINION MESSAGE

DEAR: SENATOR ELIASON

NAME: ELIZABETH BALKUS

TITLE:

ADDRESS: BOX 2993

CITY: HOMER

ZIP: 99603

PHONE: N/R-

BILL NO: HB 432

SUBJECT: PROHIBITION OF FINFISH FARMING

MESSAGE: PLEASE SUPPORT HB432 AND SB397 AS WRITTEN REGARDING MORATORIUM ON FINFISH FARMING. THANK YOU.

POMID: 18145550

DATE: 04/11/90

TIME: 14:55:50

LOCATION: HOMER INFORMATION OFFICE

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ZHAROFF

PUBLIC OPINION MESSAGE

DEAR: SENATOR ELIASON

NAME: CLIFF WARD
TITLE: COMMERCIAL FISHERMAN
ADDRESS: P.O. BOX 264
CITY: CORDOVA
PHONE: 424-5188

ZIP: 99574

BILL NO: HB 432

SUBJECT: PROHIBITION OF FINFISH FARMING

MESSAGE: I'M OPPOSED TO FINFISH MARICULTURE IN ALASKA. LETS PRESERVE THE NICHE
ALASKA FISH HAVE IN THE MARKET PLACE AS GOOD, HEALTHY, NATURAL, WILD,
FISH FROM A COLD CLEAN AND NATURAL ENVIRONMENT. FARMED FISH FROM AK.
WOULD CLOUD OUT REAL FISH DISTINCTIVE CHARTER & ENDANGER THE WILD
ENVIRONMENT & ITS AESTHETICS

POMID: 17085456

DATE: 05/03/90

TIME: 08:54:56

LIONAME: VALDEZ INFORMATION OFFICE

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SHARP	HALFORD
HUDSON	JONES
DAVIS, M.	KELLY
	KERTTULA
	RODEY
	SZYMANSKI
	UEHLING
	ZHAROFF

PUBLIC OPINION MESSAGE

DEAR: SENATOR ELIASON

NAME: ELIZABETH BALKUS

TITLE:

ADDRESS: BOX 2993

CITY: HOMER

ZIP: 99603

PHONE: N/R-

BILL NO:

SUBJECT: VARIOUS

MESSAGE: PLEASE SUPPORT HB331 FOREST PRACTICES; HB328 BRISTOL BAY HABITAT;
SB443 AND SB441 RE NON-RECYCLABLE CONTAINERS; SB397 COMMERCIAL FISH FARMING.
REQUIRE STATE PURCHASE RECYCLED PAPER. ALSO SUPPORT HJR56 NUKE FREE ARCTIC
AND HB25 FOOD IRRADIATION BAN. ASK SENATOR ZHAROFF TO RELEASE HB25 FOR SENATE
FLOOR VOTE, MANY THANKS.

POMID: 18133015

DATE: 05/03/90

TIME: 13:30:15

LIONAME: HOMER INFORMATION OFFICE

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FOSTER	FRANK
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SHARP	FOURCHOT
HUDSON	FAIKS
DAVIS, M.	ADAMS
	KELLY
	FAHRENKAMP
	KERTTULA
	HALFORD
	STURGULEWSKI
	JONES
	RODEY
	COGHILL

PUBLIC OPINION MESSAGE

DEAR: SENATOR ELIASON

NAME: DAVID MCFADDEN
TITLE: FISHERMAN, A.T.A. BOARD OF DIRECTORS
ADDRESS: BOX 668 KEENE CHANNEL
CITY: PETERSBURG, AK ZIP: 99833
PHONE: N/R-
BILL NO: SB 195

SUBJECT: FINFISH MARICULTURE

MESSAGE: PLEASE FIRMLY REJECT THIS BILL. UPLAND FISH FARMING DOES NOT HAVE SUPPORT HERE. BLACK RIVER FISH KILL IS UPLAND CONTROVERSY THAT WILL BE REPEATED WHICH WE MUST PREVENT. WE DO NOT HAVE SURPLUS EGGS. INSTEAD OF FISH FARMS REINSTATE ADF&G AND F.R.E.D. BUDGETS. INCREASE INVESTMENT IN CURRENT SUCCESSFUL OCEAN RANCHING. THANK YOU.

POMID: 15134340
DATE: 05/04/90
TIME: 13:43:40
LIONAME: PETERSBURG LIO

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STURGULEWSKI

PUBLIC OPINION MESSAGE

DEAR: SENATOR ELIASON

NAME: DAVID MCFADDEN
TITLE: FISHERMAN, A.T.A. BOARD OF DIRECTORS
ADDRESS: BOX 668 KEENE CHANNEL
CITY: PETERSBURG, AK
PHONE: N/R-
ZIP: 99833

BILL NO: HB 432
SUBJECT: PROHIBITION OF FINFISH FARMING
MESSAGE: I STRONGLY URGE YOU TO GET THIS BILL OUT OF COMMITTEE AND UP FOR
CONSIDERATION. DELAYING IN COMMITTEE IS NOT IN PUBLIC INTEREST. THIS BILL
HAS STRONG SUPPORT. OUR EXISTING FISHING INDUSTRY AND ADF&G NEED CONTINUED
SUPPORT. PLEASE SUPPORT HB 432 AND THEREBY PROTECT OUR WATERS AND WILD FISH
MARKETS. THANK YOU.

POMID: 15141019
DATE: 05/04/90
TIME: 14:10:19
LIONAME: PETERSBURG LIO

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KERTTULA
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HALFORD
STURGULEWSKI
ZHAROFF

PUBLIC OPINION MESSAGE

DEAR: SENATOR ELIASON

NAME: DERRELL R. SHORT
TITLE: TREASURER, KODIAK REG.AQUACULTURE ASSOC.
ADDRESS: P.O. BOX 831
CITY: KODIAK
PHONE: 486-6169
ZIP: 99615

BILL NO:

SUBJECT: HB 432 & SB 397

MESSAGE: PLEASE, DON'T PASS THESE BILLS WITH PROVISIONS FOR ADF&G TO PROVIDE FISH EGGS FOR UPLAND ~~FISH FARMS~~. THE REGIONAL AQUACULTURE ASSOCIATIONS, AS PRIVATE NON-PROFITS, WILL SOON HAVE CONTROL OF MOST OF THE EGG PRODUCING HATCHERIES IN THE STATE. TO FORCE US TO PROVIDE FISH EGGS WOULD BE COERCION.

POMID: 09153937

DATE: 04/30/90

TIME: 15:39:37

LIONAME: KODIAK LIO

COPIES: REPRESENTATIVE SENATORS

DAVIDSON

ZHAROFF
FAHRENKAMP
KERTTULA
FRANK
HALFORD
STURGULEWSKI



P.O. Box 23, Craig, Alaska 99921

(907) 826-3275

May 23, 1990

Senator Richard Eliason
Rm. 417, Capitol
PO Box V
Juneau, Alaska 99811

Dear Senator Eliason:

We'd like to take this opportunity to thank you and your excellent staff for your valiant efforts during the legislative session to promote and secure legislation that reflects the needs of all of Alaska, but especially Southeast Alaska in general and Prince of Wales in particular.

The ban on finfish farming is especially critical and appreciated. It is generally accepted that without your reputation and legislative skills behind the bill, the measure would have failed.

Also, we of Craig want to thank you and your staff, especially Mary, Sheila and Laura, for your support of Craig's capitol projects needs. The breakwater and the water treatment plant are critical to the present and future economic development of our community.

We hope that the session set well with you and that you will continue serving all of us on Prince of Wales for many years to come. It is legislators like you that maintains our faith in the legislative process. Thank you, and we wish you good fishing.

Sincerely,

Dennis Watson
Mayor

Tom Briggs
City Administrator



Southeast Alaska Conservation Council

SEACC • P.O. Box 021692 • Juneau, Alaska 99802 • (907-586-6942)

May 15, 1990

Senator Dick Eliason
Alaska State Legislature
P.O. Box V
Juneau, Alaska 99811

Dear Senator Eliason:

On behalf of the Southeast Alaska Conservation Council, including the Yakutat Resource Council, we'd like to extend our deepest gratitude for your hard work to ban fish farming and create the Yakataga State Game Refuge this session.

Your unflagging efforts over the past four years to establish a responsible mariculture policy is greatly appreciated! It is probably one of the first times this state has entered into a new industry with a sound policy that minimized potential impacts on other resources.

With passage of HB 346, the 15th Legislature set Cape Yakataga land management on a new course, rectifying two decades of neglect and abuse of the valuable resources of this magnificent area.

Commercial and subsistence fishermen, hunters, commercial guides, tourism companies, and the people of Yakutat and Cordova will at last see their interests protected by the refuge and fully considered in a comprehensive land management planning process and University timber buyout.

Again, please accept our thanks and pass along our appreciation to Sheila and Mary for their excellent work this session on these victories. (And to Laura for her encouragement).

We hope you enjoy a well-deserved rest over the next few weeks.

Sincerely,

Steven Kallick
Deputy Director/ Staff
Attorney

Nevette Bowen
Legislative Affairs
Coordinator

F.I.I.
Dale - Just in case
this didn't appear in Geneva
shall we start another
Cascade of letters??
Clark

T.N.T. 4/12/90
**Norwegian salmon hurt
U.S. sales, body rules**

WASHINGTON — Imports of salmon allegedly subsidized by the Norwegian government and sold at unfairly low prices may be hurting U.S. fishermen in Maine and Washington state, the U.S. International Trade Commission said Wednesday.

As a result of the ruling, the Commerce Department will investigate and report to the commission by May 24 on the subsidy allegation and by Aug. 7 on the fairness of the price.

If one of the allegations is confirmed, the Bush administration may impose additional duties that would make the imports more expensive and presumably leave a larger share of the market to American producers.

— The Associated Press

Tacoma News Tribune
4/12/90

FOR YOUR INFORMATION

TO: Dick & Staff

FROM: Dale

AIA

RETURN

Keep on Boss





CORDOVA DISTRICT FISHERMEN UNITED

P.O. Box 939

Cordova, Alaska 99574

(907) 424-3447

April 25, 1990

Senator Richard I Eliason
SENATE RESOURCES COMMITTEE
P.O. Box V - (MS 3100)
Juneau, Alaska 99811

Re: House Bill 432 - "Prohibition of Finfish Farming"

Dear Senator Eliason:

Cordova District Fishermen United (CDFU) supports HB 432 prohibiting finfish farming in Alaska. All concerns voiced by United Fishermen of Alaska (UFA) and CDFU have been documented as true. The finfish farms in Canada are in receivership and there has been a world wide glut on farm fish during the past year.

The people of Alaska have entrusted millions of dollars to enhance wild stocks for Commercial, Sport and Subsistence fishermen. In 1975 the fishermen of Prince William Sound formed Prince William Sound Aquaculture Corporation (PWSAC) and created one of the most successful hatchery and enhancement programs in North America. Enhancement of wild stocks and ocean ranching are the best investments the State of Alaska has ever made. As wild stocks are on the decline hatchery production is kicking into gear.

It makes no sense to the CDFU Board of Directors to cut funding for state hatcheries, management of the commercial fishery and the enforcement division while at the same time starting a new industry which will require millions of dollars in start up funds when the industry is failing elsewhere.

April 25, 1990
Re: HB 432
Page 2 of 2

We are harvesting 130 million salmon per year and are continuing to build our future renewable salmon runs to obtain greater harvest. We are the fish farmers of Alaska and have made a big commitment to the State of Alaska by building new hatcheries, paying assessments, upgrading fishery vessels and producing a better quality of salmon each year.

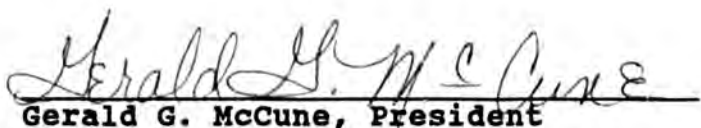
CDFU is concerned that coastline, wild stocks, traditional fishing grounds and enhancement programs will all experience a negative effect from finfish farming in Alaska waters.

We are also opposed to any upland salmon or steelhead tank farms. The same problems exist with tank farming as with netpen farming. Brood stock needs take away from other resources. The discharge water from tanks has the potential to transfer diseased water into the environment.

CDFU appreciates your attention to the passage of this vital legislation.

Sincerely,

CORDOVA DISTRICT FISHERMEN UNITED


Gerald G. McCune, President

cc: Senator Mike Szymanski
Representative Gene Kubina

GGM/rfh

Summary

Jobs: The seafood industry is Alaska's largest private basic industry employer, providing nearly 70,000 seasonal jobs which translates to 33,000 direct, indirect and induced year-round jobs.

Payroll: The total seafood industry payroll in 1987 was the largest among private basic industries, estimated at \$596 million.

Revenue: The seafood industry is the second largest revenue generator in the state. The industry paid \$27 million in fish taxes during 1987 and is the major contributor to the \$5 million marine fuel tax.

Expenditures: Expenditures in Alaska on goods and services in support of processing and harvesting are nearly \$300 million.

Harvest Value: Alaska leads the nation in value of commercial seafood landings. The 1987 Alaska seafood harvest was worth \$1.1 billion, and the estimate for 1988 is a record \$1.8 billion. The salmon fishery is the most important, bringing in 42% of all harvest income.

Wholesale Value: The 1987 Alaska seafood harvest was worth \$1.9 billion at the first wholesale level, after primary processing. It rose to \$3 billion in 1988.

Exports: Alaska exported \$561 million in seafood during 1987, a third of all U.S. seafood exports. Japan received 95%.

Capital Assets: Total investment by the Alaska seafood industry is estimated at \$4 billion.

- The salmon fleet has a capital investment of \$800 million in vessels and onboard equipment, and \$900 million in permits.
- The offshore groundfish industry accounts for \$500 million, and crabbers account for \$400 million in capital investment.
- The value of processing plants and tenders is estimated at \$1 billion.

Regional Impacts: The Alaska seafood industry is the most important employer in five regions of the state — Southeast, Kodiak, Aleutians, Bristol Bay and Northwest Alaska.

Community Impacts: The leading beneficiaries of seafood harvesting are Kodiak, where residents earned \$86 million in 1986; Dillingham, \$46 million; and Anchorage, \$31 million.

'Radical change' in state's VHS policy suggested

Up until 1989, the Viral Hemorrhagic Septicemia virus (VHS-V) had not been known in North America, Washington State Department of Fisheries (WDF) director Joe Blum told the Washington Senate Environment and Natural Resources committee March 5 in Olympia.

Very serious, the annual loss in Europe has been estimated at \$40 million, he added.

VHS does not effect warm-blooded animals, Blum stated. Per policy regarding fish diseases in Western states—in cases of Class-1 virus—all eggs and fry associated with infected fish must be destroyed and facilities sanitized, then quarantined for a five-year period.

He explained that WDF's concern and methods used in combatting the disease had been approved by Danish VHS expert Dr. Paul Vestergard-Jorgensen, who visited the state last year.

The director said that he had hoped that measures taken last year would wipe it out here, but that discoveries this

Norwegian vessels may sail NorthEast passage

A limited number of Norwegian vessels will be allowed to sail the NorthEast Passage—Top of the World route, over the Soviet Union—this summer, according to a Norwegian Information Service report. (Ed.: See "Over the (Soviet) top..." Nov., 1989 issue, *The Fishermen's News*.)

Norwegian factory fishing vessels are among the many seeking clearance to use the passage, which has been closed for 50 years to international shipping,

winter of VHS presence in Lummi Sea Farms samplings and in wild late-run coho in the Quillayute River system (Elwha chinook fry held at Sol Duc Hatchery, too) has led to destruction of approximately 1.5 million eggs and fry.

"We've had to destroy more than 12 million eggs and fry from VHS-effected facilities during the last two years." Blum stated, adding that "we truly do not know where it comes from."

Kevin Amos, chief pathologist from the WDF Fisheries Disease laboratory, added that the virus could have been here for a number of years at very low levels. He added that VHS had never been found occurring naturally in salmon, in Europe.

Blum said that every fish farm in the U.S. and Canada has been sampled for VHS effects. And he suggested that one possible source here might be the bilge pumpings of vessels from Europe.

"This year, in conjunction with the federal government, we are studying VHS effects on salmon, trying to find how it spreads. The Fish and Wildlife Service is kooking for about \$300,000 in federal money for research," the director added.

He explained that the Sol Duc has been being used as a "cross-roads" facility, raising and transferring on or

back to the original facility, a variety of salmonid stocks.

Asked what is happening with fish associated with VHS-effected stocks. Blum replied that "we're continuing to destroy; Coho from Queets, the Clearwater, Hoh...have destroyed more than one-half million chinook fry from the Elwha...into a pit at the Sol Duc Hatchery.

Due to fears of VHS spreading, Blum said that the policy folks are discussing the advisability of continuing cross-roads types of operation.

Asked if it is possible to rear affected fish in isolated ponds, the answer was "no. All fish are to be quarantined, remaining on-station."

Don Stevens, identifying himself as a commercial salmon troller, one relying on the Quillayute River stocks, stated: "The garbage needs to be cleaned up!"

Explaining that Jim Porter, also a commercial troller and he had visited several hatcheries 17 days after the (VHS) outbreak had been discovered, Stevens reported finding three open pits of carcasses and one open pit of eggs, "with birds of all descriptions feeding on the carcasses, and then messing in the river.

"You people have to stop the movement of fish within this state!" Stevens

commanded. "We've got real problems here, be it smolt, fries, adults, eggs—whatever!"

"We've got it (VHS) in Puget Sound. We've got it at the Cape (Flattery). We've got it on the coast. Where next?! Grays Harbor, the Columbia...Canada? We don't know.

"I'm a fisherman, and I need some salmon to make a living," he concluded.

Dr. Anna Marie Johnstone, with a Phd. in fish diseases, a fish toxicologist/consultant, suggested investigation of how the disease (VHS) is being handled within Washington State.

Noting that the visiting VHS expert (Vestergard-Jorgensen) said that the VHS virus cannot be identified at any other time than during winter, and that all the expensive monitoring is being done in February and March and later, that "we need a radical change in our methodology of studying this disease."

Explaining that the (great blue) heron, feeding on VHS-infected fish can regurgitate the virus back into streams within two hours after feeding—placing native rainbow trout and steelhead populations at risk—"open pits, per Mr. Stevens' statements, are no good!" As rainbow trout move upriver into fresh water, all fish can be affected, she added.

Out here,

Washington reconsiders 'diapers' for salmon-farm wastes

The Associated Press

SEATTLE — State officials are rethinking their decision to require that "diapers" be installed on new salmon-rearing pens in Washington's inland waters.

The state Department of Ecology, preparing to issue water-pollution permits for three new net-pen salmon-raising operations, decided to require that plastic sheets be installed under the pens to catch feces, food and other wastes.

The wastes would be gathered and shipped to a sewage treatment plant in a system that officials say never has been used before in U.S. tidal waters.

Salmon farmers, however, have raised a stink about the proposed requirement.

"It would be like putting a sail on these things," said Terry Wright, spokesman for the Northwest Indian Fisheries Commission. "It would just blow them away."

"We have grave reservations whether any existing design is workable," added John Forster, president of Sea Farm Washington Inc., which is seeking a permit for net pens at Whiskey Point, 14 miles west of Port Angeles.

Installing the plastic sheets for 42 net pens it plans off Hartstene Island north of Olympia would cost Switzer Sea Farms about \$1 million, said company employee Brian Moog.

The third enterprise seeking a permit is the Jamestown Clallam Tribe, which plans an operation in Discovery Bay, west of Port

Townsend on the Olympic Peninsula.

The U.S. Environmental Protection Agency last year ruled that net pens need water pollution permits under the Clean Water Act, and state law requires the use of "all known available and reasonable" methods of treatment.

State officials heard that such net-pen diapers were used in Europe and suggested the same for here. But DOE officials said Monday that no decision had been made.

"There are a lot of questions about whether this technology is available," said Chris Haynes, head of DOE's water-pollution permit program.

"We're not backing down from saying that treatment may be attainable," said Michael Herold, the department's aquacul-

ture permit writer. "But we don't know enough to know what form it will take."

Herold said the agency had considered a system for vacuuming wastes from under net pens, but worries that it might harm the environment. A large net pen would emit as much sewage as a town of 10,000 to 20,000 people, he said.

Eventually, permits are expected to be required for all net pens producing 20,000 pounds of fish a year, or using 5,000 pounds of fish food a month, said Wright said.

Thirteen existing commercial net pens tend to be in calmer water better suited to waste gathering. Although they haven't yet been required to get pollution permits, Herold said, "we'll be getting to them."

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CORDOVA DISTRICT FISHERMEN UNITED

P.O. Box 939

Cordova, Alaska 99574

(907) 424-3447

FAX TRANSMITTAL

DELIVER TO:

NAME: Richard Eliason

DATE: 5/1/90

LOCATION: Juneau

FAX NO. 465-4928

FROM:

NAME: Jeff McClure / CDFU

SUBJECT: Mariculture

TOTAL NUMBER OF PAGES, INCLUDING TRANSMITTAL SHEET: 5

If all pages are not received, please call sender at 907-424-3447.

MESSAGE:

Fish Dominates Icelandic Trade -- Exports of \$866 million worth of fishery products accounted for 79 percent of Iceland's total exports, which amounted to \$1.1 billion in 1986. The United States remained Iceland's best customer for fishery products (\$217 million), followed by the United Kingdom (\$188 million), the FRG (\$60 million), Portugal (\$70 million), the Soviet Union (\$42 million), Japan (\$40 million), and France (\$38 million). (WF: News from Iceland, May 1987).

Norwegian Farmed Salmon Disease -- An outbreak of Hitra disease has resulted in the slaughtering of farm-raised Atlantic salmon in Norway. The disease apparently struck in December 1986 and reportedly resulted in fish mortalities which reached as high as 60 percent on some farms. The exact cause of Hitra disease has not been fully identified; it is precipitated by water temperatures below 7°C and results in a vibrio-type bacteria which is thought to be a symptom of the secondary stage of the disease. (Note: Norwegian sources available to NMFS have not reported this outbreak. Irish sources expect a shortfall of salmon from Norway this summer with high prices extending through Autumn). (WF: BDM Market Information Bulletin, May 18, 1987)

New algae bloom hits Gulf salmon farmers

An unexpected algae bloom wiped out 10 percent of the farmed salmon in some aquaculture operations in the north end of the Gulf of Georgia last month, says the fisheries department.

"Some fish farmers are not at all keen to broadcast how much fish was lost," said Dorothy Kieser, a fish pathologist at the Pacific Biological Station.

The bloom of chaetoceros algae erupted in the Campbell River area April 1 and lasted just over a week, she said, but the department was unable to estimate how many farms were affected.

Fish farms on the Sunshine Coast suffered significant losses last summer during an outbreak of heterosigma algae and smaller outbreaks hit farms during the fall, she said.

Are B.C. farms prone to serious losses from algae? Kieser said that "Norwegian and Scots experts claim to have occasional problems that are not as problematical as it appears to be here. It's early to tell."

The algae blooms are part of marine life and would go unnoticed if farms were not affected, she said. Farmed fish are killed by gill damage or oxygen depletion because of the algae. Wild fish simply leave the area.

Although farmers are required to report losses every day, none have reported algae losses because of the April outbreak.

But one farmer told the Campbell River Courier in mid-April that his operation in Hoskyns Channel lost "between 5,000 and

10,000" of its approximately 60,000 400-gram chinooks because of the algae.

Kieser said the blooms are natural for the area and occur cyclically. She said it is "too early to tell" if marine conditions will adversely affect fish farming in the area.

Sea Products (NSP) recently was charged of a provincial lawfully processing 1 t of ed that he believed company e was being used only as an (MZ: The Atlantic Fisherman,

As part of Fishery Products International (FPI) process, shares have been given to employees who says for the company. The value of FPI shares [tial offering price of C\$12.50 to C\$16.00. FPI in December 1986 by giving them a cash bonus it of the first 9-month profits, an amount totaling ion, an employee share-purchase program will enable es through payroll deductions. FPI's gross income llicon, an increase of C\$64 million above FPI's 1985. (MZ: The Atlantic Fisherman, June 1987)

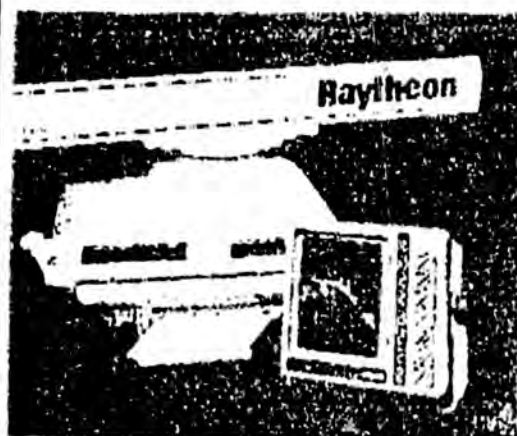
International Center for Ocean Development (ICOD), is, is planning to help the Maldives Islands learn heir fishery resources. Two projects are planned: and identify the reef fishes in the Maldives otography. ICOD will contribute C\$92,150 to this live Islands will give C\$10,000. The second project amend a surveillance and search and rescue system. ect includes C\$79,500 from ICOD, and C\$35,000 from (MZ: Fishing News International, May 1987)

Season's
Greetings



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Fish farm use of antibiotics poses threat

The widespread use of antibiotics in fish culture poses a serious potential threat to public health, says a Washington State zoologist, and should be strictly controlled.

Arthur Whiteley, a zoologist with a long-standing interest in microbiology, told a Washington State Shorelines Hearing Board inquiry Nov. 14 that antibiotic use on fish farms will produce antibiotic resistant bacteria in the human food chain.

If these resistant bacteria occur in humans, "the diseases caused by that organism could not be medically treated."

"It would eliminate from the tools of the physician those he would want to control disease."

Whiteley was qualified as an expert witness in the hearing, which was set up to hear an appeal against a decision by Skagit County to deny permits for a fish farm near the mouth of the Skagit River.

Whiteley produced a pile of scientific studies which show that "in almost every case resistant bacteria is selected by the use of antibiotics in fish culture."

In other words, use of antibiotics to treat bacteria causing fish disease kill all but the bacteria which is resistant to the antibiotic.

Studies have proved that this

resistance can be transferred from one type of bacteria to another, Whiteley said, and can create resistance to several types of antibiotic.

Whiteley said this type of transference has been documented in the case of a vibrio bacteria which causes disease in fish. In a laboratory, this resistance was transferred to different bacteria which exist in the North Pacific food chain and are pathogenic to humans.

"This has not been observed in the wild," he said, "but there is a probability it could occur. Experiments indicate the genetic mechanism is in place and we can predict it will occur in nature under certain conditions."

The Centre for Disease Control in Atlanta has found the same phenomenon in beef and poultry, he said, and blame it for a dramatic increase in salmonella.

The only solution, he said, is to ban the use of antibiotics in fish culture which are used in human treatment.

In B.C., both oxytetracycline and erythromycin are used in fish culture even though they also are used in human medicine. There is no inspection to determine whether or not this transference of resistance is occurring and consumers is free of antibiotics.

UFAWU loses close vote to bargain at Aquarius

The UFAWU has narrowly missed winning certification to bargain for employees at Aquarius Seafoods' fish farm processing plant at Egmont on the Sunshine Coast.

Cox said the company has moved to clean up its act by improved shift arrangements, better conditions, an employee-financed medical and dental plan, and some pay increases.

E ENGINE

FROM THE



A NEW colour brochure says that the salmon location for development by the Irish Sea Fisheries Board (BIM).

SURPLUS SALMON WARNING

A NEW estimate of farmed Atlantic salmon production and demand comes from the Irish Sea Fisheries Board (BIM).

Production may exceed demand by 23,000 tons

In a research study of international production and market trends, it finds that the market is expected to grow to 153,000 metric tons by 1990 -- with Norway providing 100,000 tons, Scotland 25,000 tons and Ireland 10,000 tons.

For Ireland alone, this could mean farm earnings of IR£32 million, exports of IR£44 million and 1200 jobs.

According to the report of this study, Europe's technical maximum of farmed salmon production is around 250,000 to 300,000 tons. Norway, says the report, can produce 200,000 tons a year, Scotland up to 30,000 tons and Ireland up to 15,000 tons.

The market will determine the limits to output. But other constraints will include lack of suitable sites for sea cages.

Ireland is already facing this problem, notes BIM. But Bridgestone cages have been used in exposed sea conditions with encouraging results.

Atlantic salmon farming has also been greatly assisted by recent major developments in feed compounding and stock improvement programmes have been underway for some time.

But, with the prospect of rapidly increasing supplies, there will be a need for increasing emphasis on marketing with effective performance making the difference between success and failure.

With the growth in production, falling real price trends for fish and frozen salmon are already evident in most European and North American countries. If continued, they should produce greater consumption. And growing awareness of salmon's health value will add to its marketability.

However, a total world demand for Atlantic salmon by 1990, after considering present trends in individual markets, is likely to be only 130,000 tons, which is 23,000 tons less than forecast production.

BIM's conclusion from this is that the imbalance of projected supply and

demand by 1990 could cause reductions in price and margins greater than farmers and traders presently envisage.

Lower margins will force the least efficient producers out of the industry and will deter potential small-scale new entrants.

The emphasis on greater efficiency will stimulate high standards of technology and training, and a larger minimum-volume production unit.

Salmon farms based on integrated smolt and sea cage production are unlikely to be less than 500 tons a year capacity, notes the BIM report.

Investment needed for such a project would be around UK£22 million and would be capable of earning 18 per cent internal rate of return.

But the investment is risky. A drop of ten per cent in real revenues through low prices would halve the rate of return. A stock loss say every five years (through disease or unusual weather con-

ditions) would reduce this return to zero.

● We shall be looking at this BIM report and its conclusions in more detail in our January 1987 issue.

Bridgestone "Hi-Sea"



One of four Bridgestone Fish Cages

Since the introduction of the first Bridgestone Cages, succeeding 18 months have seen the sale of a further 1000 cages world-wide. Thirteen times larger than a typical new contract are repeat orders from existing customers.

Exceptionally severe weather conditions in demonstrated without reservation the unequalled Bridgestone Warranty.

Existing customers have shown their confidence buying more. Security against storm damage, high growth rates & extended life span combine to make the most economical system for Off-Shore fish production.

Flexible Rubber

Chatland

Approved by

Letter from the people
Anchorage Daily News
P.O. Box 149001
Anchorage, AK 99514-9001

Salmon feed lots are not fish farms

Editor:

In his column about fish farming the only thing Mike Dooan has straight is that Alaska has invested a lot of money to build a very healthy and successful fishing industry.

So why gamble with it?

Raising fish in pens has nothing to do with land-based agriculture and his simplistic comparisons of cows and salmon are irrelevant.

If he insists on an agricultural model, a pen full of salmon most resembles a cattle feed lot. The beef industry is having its own problems trying to peddle a force-fed, hormone and antibiotic laden product.

The issue is more complex than Dooan's western movie script. Before statehood there were fish barons who controlled traps and markets but the state through the limited entry system has assured individual fishermen participation in controlling their industry.

Salmon feed lots(SFL's) would consolidate control of production in a few agribusiness corporate hands.

The cost of raising a fish in a pen is in excess of three dollars a pound. How does Dooan figure this product will drive down the value of wild salmon? He is correct there is competition from other countries. Countries that have mismanaged their wild stocks into near extinction and have nothing to lose by introducing fish feed lots.

The fishing industry is the largest private employer in the state and generates a huge amount of economic activity. SFL's would cause economic displacement without adding much to the economy.

SFL's pose ecological risks and hazards to the natural stocks. Although a task force said these risks could be minimized (like the risk of an oil spill can be minimized) it would take new regulations and enforcement to control the new industry. Why add another expensive state regulatory project for an industry that is already in trouble worldwide?

If Dooan gets real life lessons from old western movies maybe he can recall the ones that featured big developer villains who killed off the cattle to buy up the ranch cheap for the coal, oil or to build a railroad.

Alaska is the largest natural salmon farm in the world. The industry is healthy and an important part of the state economy. Why risk it?

Cecil Ranney
Box 5545

PUBLIC OPINION MESSAGE

DEAR: SENATOR ELIASON

NAME: WARD PERSON

TITLE:

ADDRESS: BOX 38

CITY: HOMER

ZIP: 99603

PHONE: 235-8088

BILL NO:

SUBJECT:

MESSAGE: I'M IN SUPPORT OF BANNING ALL MARICULTURE UNTIL THERE ARE BETTER STUDIES ON DISEASES THAT ARE BEING TRANSMITTED RAPIDLY IN THE NORTHWEST, CANADA AND THE WASHINGTON AREA BY THE IMPORTATION OF ATLANTIC SALMON EGGS FROM NORWAY. AS A FISHERMAN I'M NOT SO CONCERNED ABOUT THE PRICE BEING SHOT DOWN BY THE FARMED FISH AS CONCERNED ABOUT THE LOSS OF OUR WILD RUNS.

POMID: 13162714

DATE: 04/23/90

TIME: 16:27:14

LIONAME: SOLDOTNA LIO

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Box 281

Cordova, Alaska

4/23/90

Alaska State Legislature

P.O. Box UMS 31001

Juneau, Alaska 99811



Mr.-Mrs Virgil Carroll
P O Box 281
Cordova AK 99574

Dear Senator Eliason:

I am a commercial Fisherman in The Prince William Sound Area and a 22 yr. resident of The state. My wife was born in Alaska and is a 43 yr. resident of The state. We have a family commercial Fishing business in which our Three sons participate. We urge you to put a total ban on all types of finfish mariculture in Alaska. We want to protect and preserve The niche Alaskan fish have in The market place as good, healthy, natural wild fish from a clean and natural

2

environment. We all need to be more concerned with our environment and the effects the things we do have on it. All I have read on British mariculture shows a real pollution and disease problem with pen reared fish. Thank you for your attention.

Sincerely,
Mr. & Mrs. Virgil L. Canell

PUBLIC OPINION MESSAGE

DEAR: SENATOR ELIASON

NAME: CELIA M. HUNTER

TITLE:

ADDRESS: 1819 MUSKOX TRAIL

CITY: FAIRBANKS

ZIP: 99709

PHONE: 479-2754

BILL NO: HB 432

SUBJECT: PROHIBITION OF FINFISH FARMING

MESSAGE: I STRONGLY SUPPORT HB432 WHICH WOULD PROHIBIT FINFISH FARMING IN ALASKA. THE REPORT BY THE FINFISH FARMING TASK FORCE NOTED SERIOUS RISKS TO THE NATURAL FISH STOCKS AND POTENTIAL ENVIRONMENTAL HAZARDS CAUSED BY POLLUTION ATTENDING FINFISH FARMS IN COASTAL WATERS. PLEASE RECOMMEND FAVORABLY ON THIS BILL AND BRING IT TO VOTE.

POMID: 07153636

DATE: 04/20/90

TIME: 15:36:36

LIONAME: FAIRBANKS LIO

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FAHRENKAMP

KERTTULA

FRANK

HALFORD

STURGULEWSKI

ZHAROFF

PUBLIC OPINION MESSAGE

DEAR: SENATOR ELIASON

NAME: JOE O'LEARY
TITLE:
ADDRESS: P.O.BOX 240693
CITY: ANCHORAGE ZIP: 99524
PHONE: N/R-
BILL NO:
SUBJECT: SB 195, SB 397, HB 432: FINFISH FARMING
MESSAGE: STOP DUCKING THE ISSUE. HEAR THE BILLS. THANK YOU. /BN

POMID: 03135402
DATE: 04/20/90
TIME: 13:54:02
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FAHRENKAMP
KERTTULA
FRANK
HALFORD
STURGULEWSKI
ZHAROFF

PUBLIC OPINION MESSAGE

DEAR: SENATOR ELIASON

NAME: GINNY H. WOOL

TITLE:

ADDRESS: 1819 MUSKOX TRAIL

CITY: FAIRBANKS

ZIP: 99709

PHONE: 479-2754

BILL NO: HB 432

SUBJECT: PROHIBITION OF FINFISH FARMING

MESSAGE: URGE A DO PASS ON PROHIBITING FINFISH FARMING ETC FOR REASON STATED
IN THE HOUSE BILL 432. PLEASE MOVE OUT OF RESOURCE COMMITTEE TO SPEED VOTE
ON SENATE FLOOR.

POMID: 07154600

DATE: 04/20/90

TIME: 15:46:00

LIONAME: FAIRBANKS LIO

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FAHRENKAMP

KERTTULA

FRANK

HALFORD

STURGULEWSKI

ZHAROFF

PUBLIC OPINION MESSAGE

DEAR: SENATOR ELIASON

NAME: ROBERT H. LOHSE
TITLE:
ADDRESS: HC 60 BOX 310
CITY: COPPER CENTER
PHONE: N/R-

ZIP: 99573

BILL NO:

SUBJECT: FINFISH FARMING

MESSAGE: I SUPPORT HB 432 AND SB 397 BECAUSE I THINK FISHFARMING WOULD BE
DETRIMENTAL TO THE SPORT AND COMMERCIAL FISHING IN ALASKA.

POMID: 01160040

DATE: 04/09/90

TIME: 16:00:40

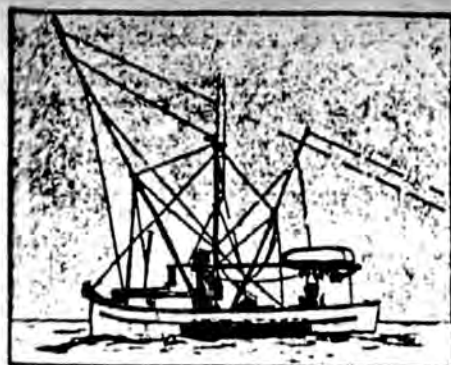
LIONAME: GLENNALLEN LIO

COPIES: REPRESENTATIVE

SHULTZ

SENATORS

COGHILL
FAHRENKAMP
KERTTULA
FRANK
HALFORD
STURGULEWSKI
ZHAROFF



Alaska Trollers Association

REPRESENTING ALASKA TROLLERS

130 Seward St., No. 213
Juneau, Alaska 99801
(907) 586-9400

*Thanks to
all !! dk*

April 23, 1990

Senator Bettye M. Fahrenkamp
Alaska State Legislature
P.O. Box V (MS 3100)
Juneau, AK 99811

Dear Senator Fahrenkamp:

In these final hours of the session I am compelled to write to you regarding the thorny issue of mariculture. As you are well aware, our association firmly supports the ban on fin fish farming which HB 432 seeks to provide.

We are disappointed that you have chosen not to hear this bill in your committee to date, and understand that you are currently interested in passing a compromise bill which would provide for fish farming in upland tanks. Alaska's commercial fishing industry has long been an opponent of any movement toward fish farming within the state. As the sector within the fleet that has already begun to suffer the effects of the sale of farmed fish from other states and nations, the troll fleet can never endorse a compromise on this issue.

Given that our state is so dependent on a healthy fishing industry, it is surprising that upland tank farms are of such high priority for you. You are attempting to cater to a minority group who is trying to break open the door for fish farming, while ignoring a very large constituency who is concerned about the ramifications of allowing this unstable industry to do business. To what end?

The seafood industry is Alaska's number one basic industry employer, and provides about 70,000 harvesting and processing jobs annually. The troll fleet alone accounts for roughly 2000 permit holders, and is the largest resident fleet in the state (85%). In hand, Alaska has a billion dollar a year industry that provides economic opportunities for more residents, in more areas, than any other private industry. Why should we compromise a healthy industry and resource in order to benefit so few?

You probably wonder what harm tank farms could pose for commercial fishermen. Our fleet is currently projecting, with some concern, their earnings for 1990. During the 1989 season trollers

received \$1.80 - 2.30 a pound for chinook salmon. This was far below normal for Alaska's premier salmon product. Processors up and down the Pacific coast gave the same reason for the declining value - farmed fish.

In 1989, many small scale fish farms worldwide went bankrupt due to the trend towards overcapitalization. In some instances large corporate farmers bought out small scale investors, but too often the small farms just sold their product below cost in order to cut their losses. This, in turn, led to a glut of farmed fish against which our market could just not hold out.

Trollers sell primarily in the frozen market, which Chile has entered with gusto. Additionally, due to the rush of farmed fish to hit the market in 1989 Norway began freezing as well. In 1990 we are expecting to see 50% more farmed fish than 1989; the market can only absorb so much product.

It is not only the trollers who will suffer. Troll fish are noted by processors as a catalyst for selling higher volumes of net fish. If the trollers can't afford to fish due to a declining market price the impact could be felt by other traditional fisheries as well. Norway is now contemplating the canned salmon market; this will also impose serious threats to net fishermen.

Aside from farmed salmon there is a threat to our markets from other fish products. Proponents of fish farming often claim that "pan size" coho or trout fill different market niches than wild salmon, but let's consider the consumer for a moment. We are all consumers, and all consumers are concerned about price. When we are shopping for the family dinner table we often pass up more expensive products for "bargains". In the store, fish is fish. Rainbow trout on sale next to winter chinook steak looks pretty competitive...fish is fish, or is it?

Alaskan fishermen are proud of their wild drug-free product. The consumer does not have to worry about whether or not our fish has been fed hormones or, worse yet, an antibiotic they are allergic to. Buyers do not want to worry about whether or not the fish they are buying went through an adequate drug withdrawal time prior to entering the market. Alaska has a responsibility to provide wholesome seafood for the consumer, as well as ensuring that wild caught product is not lost in the fast paced shuffle of salmon marketing. This would be difficult to do if both wild and farmed products were processed and shipped from our state at the same time.

Senator, you have heard the fishing community's arguments time and again, and it is likely that we will continue to agree to disagree on the topic. However, I would like to make note of an item that may be of interest to your mining constituents - water allocation.

Here in Alaska we do not often think about the potential of battling over water usage rights. A quick look at the troubles of California and Washington should be cause enough to vow avoidance of this issue at all cost, but are you aiming our interior communities in just such a direction?

Tank farming incorporates huge volumes of water on a daily basis. A 200 ton tank farm can use as much water as the city of Eugene, Oregon - that is a frightening figure. Mining also calls for large amounts of water.

Small farmers often set goals for bigger operations - sometimes just to remain viable. Overcapitalization has been the pitfall of the fish farming industry. How can we be certain that tank farmers wou'd learn from the mistakes of their pen rearing brethren?

Presently, we do not have any legislation which guarantees minimum in-stream flow. When the demand for water becomes high amongst the users, particularly in years of low availability, how will we provide for equitable allocation among user groups and adequate protection of the in-stream resident species?

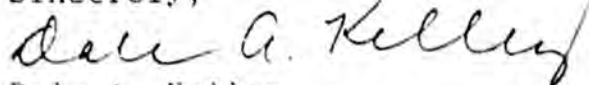
California is a case in point where the resource has lost. What will happen in Alaska? Tank farm fish will die without enough high quality water, mining operations will be curtailed if they must go without water, and certainly our fishery resource will be lost if there is insufficient high quality water available in the streams. Someone will have to make a choice, and the choice will be between three industries, dependent subsistence users, and critical wildlife values. We would prefer that Alaskans never have to make such a choice.

Perhaps this is one aspect of fish farming that has not often been of focus; however, it would seem to be in the best interest of your constituents for you to carefully weight the pros and cons of water allocation and what it could mean for them.

It appears to us that you have become champion for a cause that few Alaskans favor, as indicated by the House vote and the recent Senate hearing on HB 432. We hope that you will reconsider the opinions being expressed statewide, hear the bill and vote accordingly. Hopefully this has not come down to an issue of pride or fear of loosing face because, speaking for ATA, I'm certain that we will still respect you the morning after you agree to prohibit all forms of fish farming in Alaska!

Thank you for taking the time to consider our viewpoint.

Sincerely,



Dale A. Kelley
Executive Director

ISSUE 2: Oil Spill Legislation UCIDA strongly supports the following legislation:

CSHB 409
HB 565/SB 502
HB 566/SB 503
HB 567/SB 504
HB 578

The legislature is to be commended for the oil spill legislation they passed last session. Those bills essentially set state policy and direction. We feel the above bills are needed to supply state agencies the "tools" necessary to carry out state policy.

With respect to the current "DEC - DES" debate between the House and the Senate, UCIDA would like to remark that we clearly see DEC as the appropriate lead agency. We therefore oppose CSSB 503.

ISSUE 3: Forest Resources and Practices Act. UCIDA supports the passage of the Forest Resources and Practices Act presented to the Resource Committees- HB 331, SB 317- as presented. We are particularly concerned that the riparian buffer standards on state lands managed by DNR and "other public lands" not be reduced.

ISSUE 4: In Stream Flow. UCIDA supports HB 210. Adequate reservations of water are vital to the long term health of our fishery resources. If this legislation does not pass this session we shall certainly make it a campaign issue for the fall elections.

ISSUE 5: Mariculture. UCIDA supports SB 397 and HB 432 which would prohibit fin fish mariculture in Alaska.

Thank you for considering these positions as you near the end of this legislative session.

Sincerely,



Theo Matthews
President



UNITED COOK INLET DRIFT ASSOCIATION

BOX 4649 - KENAI, ALASKA 99611

April 20, 1990

Senator Dick Eliason
Alaska State Legislature
P.O. Box V (MS 3100)
Juneau, Alaska 99811

Dear Senator Eliason:

United Cook Inlet Drift Association (UCIDA) represents 400 Cook Inlet drift fishermen and is a member of United Fishermen of Alaska (UFA) and the Oil Reform Alliance (ORA). UCIDA supports these organizations' positions on current state legislation and would encourage your support also.

The following is a synopsis of UCIDA's position on those issues:

ISSUE 1: Subsistence. UCIDA opposes all current versions of constitutional amendments.

It is irresponsible for the legislature to ask us to amend our constitution when neither the Federal Government nor the Alaskan Legislature can supply the definition for "rural," "customary and traditional," "trade and barter." Even were an amendment to pass, Alaska would still find these terms "redefined" by federal courts as we saw in the Kenaitze decision. Until Congress provides the state and the courts with clear definitions of these terms, Alaska can not take any action with any certainty of its long term impact on the state and its citizens.

We would like to respond to those who cite the need for uniform management and fear a federal "takeover." These people should realize that the Federal government is and has always been in control of management on federal lands. All decisions by the Boards of Fish and Game and all actions by the Department of Fish and Game are subject to federal scrutiny and federal court action. The recent decision by Judge Holland in the Kwethluk caribou case should make this clear.

In conclusion, UCIDA opposes any state action that would call into question the current state definition of "rural" as established by the Alaska State Legislature and any action that will only serve to perpetuate the endless cycle of Federal court cases where, in effect, each case "opens ANILCA" and "redefines the rules of the game."

PUBLIC OPINION MESSAGE

DEAR: SENATOR ELIASON

NAME: RON BENNETT
TITLE:
ADDRESS: 4458 MELAN DR
CITY: FAIRBANKS
PHONE: 488-6940
BILL NO: HB 432
SUBJECT: PROHIBITION OF FINFISH FARMING
MESSAGE: I'M A COMMERICAL FISHERMAN AND I'M OPPOSED TO FINFISH FARMING AT THIS TIME. I'M OPPOSED TO HB432 AND SB397.

ZIP: 99712

POMID: 07104410
DATE: 04/17/90
TIME: 10:44:10
LIONAME: FAIRBANKS LIO

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	SHULTZ	SWACKHAMMER	UEHLING
	TAYLOR	ULMER	ZHAROFF
	WALLIS	ZAWACKI	

A few examples
of correspondence
Supporting HB432/SB397

Chugiak-Eagle River
Chamber of Commerce
(907) 694-4702

P.O. Box 770353
Eagle River, Alaska 99577

12110 Business Blvd.
Eagle River, Alaska 99577

April 4, 1990

SUBJECT: POSITION ON FIN FISH FARMING IN ALASKA

(PLEASE NOTE: For your convenience, no written response to this correspondence is necessary).

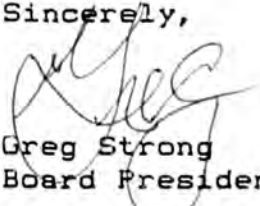
Dear *Senator Eliason*

At our March 22, 1990 regular Board of Directors meeting for the Chugiak-Eagle River Chamber of Commerce, the Board took a position relative to fin-fish farming in Alaska. Despite the fact that the Chamber generally endorses projects which conform to economic development standards appropriate for an arctic environment, it was decided that fin fish farming had some inherent drawbacks. These include the possibility for contamination of wild salmon stocks as well as the possibility of long-term government subsidies necessary to create a viable investment. Certain aquaculture, however, may be demonstrated, to be in the best interests of the state. As a result, the Board passed the following statement regarding fish farming in Alaska:

We, the Chugiak-Eagle River Chamber of Commerce Board of Directors supports the development of the aquaculture industry not including the development of fin-fish - more specifically salmon farming.

If I can answer questions regarding the above position, please feel free to call the Chamber at 694-4702.

Sincerely,


Greg Strong
Board President

sg

COOK INLET COALITION

C/O Susie Kaiser
P.O. Box 110381
Anchorage, AK 99511

April 2, 1990

The Honorable Steve Cowper
P.O. Box A
Juneau, AK 99811

Dear Governor Cowper:

The Cook Inlet Coalition, an organization consisting of Southcentral Alaskan sport and commercial fishermen, would like to bring to your attention our views regarding the mariculture issue in the State of Alaska. We would also like to make the following recommendations:

The Coalition recommends the support of Senate Bill #397, Senator Eliason's Bill banning finfish farming.

We further recommend that the current policies prohibiting importation of live salmonoids, including gametes, should be placed into statute and rigorously enforced.

After reviewing the "**Finfish Farming Task Force Report to the Alaska Legislature**" we find that we agree with Senator Eliason's assessment and support a total ban on commercial finfish farming.

Some of our concerns, both environmental and economic, are listed below.

A) **ENVIRONMENT**

1) Salt water finfish farming (FFF).

a) **POLLUTION**

- 1) Disease introduction and/or transmission.
- 2) Bacterial (concentrations due to densities of fish, enzyme action of fecal matter, etc.).
- 3) Fecal build-up on seabed.
- 4) Chemical (treatments for skin ailments, antibiotics in feed, etc.).

2) UPLAND TANK AND POND FFF

a) POLLUTION

- 1) Disease transmission to nearby watershed and/or ground water.
- 2) Fecal matter (tanks could possibly dry and treat, this however, is an expensive process. Ponds tend to concentrate and exasperate problem).
- 3) Chemical (economically untreatable).
- 4) Bacterial (again possibly treatable in tands with UV radiation, but build-up in ponds likely due to absence of flushing action).

3) SITING

a) OCEAN SITING

- 1) Conflicting need for flushing action vs. feed for protection from weather and marine predators).
- 2) Conflict with sport, subsistence, and commercial use.
- 3) Conflict with land owners/developers.
- 4) Need for separation of farms from anadromous streams to prevent intermingling of wild stocks with escaped farmed salmon, thus diluting the wild gene bank and promoting disease transfer (Norway disallows siting within 20 kilometers of anadromous streams).
- 5) Disease transmission to stocks migrating near pens.
- 6) Lack of transportation infrastructure where siting possible.

b) LAND SITING

- 1) Ponds must have no inlet or outlet and must be far enough removed from streams to protect from streams to protect from seepage of pollutants (and disease) to ground water and then streams.

B) ECONOMICS

1) COSTS TO STATE

- a) Cost of setting up regulatory infrastructure.
- b) Cost of additional personnel.
 - 1) Scientific people.
 - 2) Veterinarians.
 - 3) Enforcement.
 - 4) Staff for permitting and regulating.
- c) Cost of transportation infrastructure.

- d) Potential cost to set up, operate, and fund loan programs. (If this is not done, with a start up cost of approximately \$500,000/farm, most investment will necessarily come from outside Alaska, with most profits also leaving.)

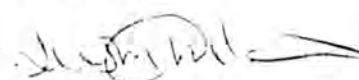
2) OTHER ECONOMIC FACTORS

- a) Few people are actually employed and most of those at minimal wages.
- b) There is a glut of farmed salmon on the world market forcing farmers to sell below cost.
- c) Although there is occasionally a surplus of eggs available it is rare and unpredictable, virtually all eggs are used for sport and commercial projects. In both Washington State and British Columbia the introduction of finfish farming has created vicious competition for eggs with sometime disastrous results to existing industries.

Alaska has the healthiest wild salmon and other finfish stocks in the world, supporting the sport, subsistence, commercial and tourism interest of this State, we feel finfish farming poses unnecessary risks to all parties. As Senator Eliason states, these risks can only be minimized and only then at a substantial cost.

Thank you for your consideration in this important issue.

Sincerely,

 For Coalition Members

The Cook Inlet Coalition
C/O Susie Kaiser

cc: All Members of the 16th Alaska State Legislature
House and Senate Resources Committee
Coalition Members
Don Collinsworth
Brian Allee



ALASKA COUNCIL TROUT UNLIMITED
P.O. BOX 2391, SITKA, ALASKA 99835

March 17, 1990

Senator Dick Eliason
Senate
P.O. Box V
Juneau, AK 99811

Dear Senator Eliason,

The Alaska Council Trout Unlimited (ACTU) would like to express our utmost support for Committee Substitute version of House Bill 432 and Senate Bill 397. We would also like to take this time and thank you personally for your stand on this issue. We feel that any mariculture of finfish poses a disease and allocation problem for the states fishery resources. At this time there has been another bill proposed by the Resources and Finance Committee SB No. 195. We are adamantly opposed to this bill also for the same reasons as stated above. We feel that the resources are too valuable to be used in this manner.

We only have to look at the two out breaks in 1990 of VHS (Viral Hemorrhagic Septicemia) recently in Washington to see the detrimental effects that can be had on our resources. The Lummi Fisheries Program just had to destroy 6.2 million coho eggs and smolts because of this virus. Also, the Washington Department of Fisheries found two cases in the Quillayute River system. One wild coho in the Bogachiel River and one wild coho in the Sol Duc River. This closes down both hatcheries to planting fish anywhere else in the state, causing a major disruption of the hatchery programs for both salmon and steelhead. The Lummi Fisheries Program is in inner Puget Sound near Everett and the Quillayute is on the outer coast of Washington. All three of river systems in the Quillayute drainage produce salmon that come to Alaska. There were also two outbreaks in Washington in 1989, one at the Makah Indian Hatchery on Suez River at the Northwest tip of the Olympic Peninsula and one at a hatchery in the San Juan Islands. So you can see that this disease is not controllable nor stoppable when it gets going.

Can we afford to loose our multimillion dollar fisheries that employs one of the largest segments of the Alaskan population in both the sport and commercial fisheries, for a few?

And would it be Alaskan's or the multinational corporation's taking over wherever there are net pens? As they are in Washington, British Columbia and now are trying to do in Maine. If you want some reading look at the most recent National Fisherman and see what the scientist have to say about the net pens and the pollution they produce.

Also, one of the types of egg takes recommended from the Fishfish Task Force was from wild stocks and this is totally unacceptable to the ACTU.

Senator Dick Eliason

March 17, 1990

As a conservation and resource oriented association I would hope you would consider the total resource user population and not just a few who want to make a buck at the expense of the majority.

Sincerely,

Jack Willis by OSK

Jack Willis
President