

Summary of the 2007-08 Pacific Herring Commercial Fisheries in San Francisco Bay



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Preliminary Report

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REVIEW OF THE 2007-2008 SAN FRANCISCO BAY PACIFIC HERRING FISHERIES

COSCO BUSAN FUEL OIL SPILL

On November 8, 2007, 58,000 gallons of fuel oil was accidentally released into San Francisco Bay resulting in a temporary closure of recreational and commercial fisheries within the spill area. To determine the health risks of consuming bay area marine life, California Department of Fish and Game Aquaculture and Bays Management Program and Bay Delta Region staff collected close to 1,000 crabs, mussels, herring and surfperch from a variety of locations and depths both inside and outside the spill zone for laboratory testing. Testing results showed that fish and shellfish (with the exception of mussels found in two bay locations) from the spill area were safe for human consumption. Following testing, all San Francisco Bay area fisheries were reopened on November 29, 2007. A natural resources damage assessment study is currently being conducted within the bay to determine if lingering contaminants from the spill are negatively impacting herring eggs and larvae. Results from this study will be released after analysis has been completed.

QUOTAS

The total quota for San Francisco Bay was set at 1,094 tons for the 2007-2008 season. The spawning biomass estimate is based on spawning ground surveys conducted from November 2007 through March 2008. The 1,094 ton quota is based on 10 percent of the biomass estimate from spawning ground surveys for the 2006-07 season. The Department provided the Fish and Game Commission quota options for the 2007-08 season ranging from 0 – 10 percent of 06-07 spawning biomass estimate.

HEOK: The total quota for the herring eggs-on-kelp fishery was 17 tons of herring-eggs-on-kelp, which was converted from 76 tons of whole fish from the total San Francisco Bay quota. All herring-eggs-on-kelp permittees must hold a herring permit (i.e., a regular gill net or a CH gill net), and each permittee's share of the herring quota (from the sac roe fishery) is transferred to the herring-eggs-on-kelp fishery. In 1994, the Fish and Game Commission determined that CH permittees who fish herring-eggs-on-kelp would be allocated a quota equal to the quota formerly received by round haul permittees (i.e., 0.79% of the sac roe quota). For each CH permit this season, this is equivalent to an individual quota of 1.9 tons herring eggs-on-kelp product. Regular gill net permittees that transferred to the herring-eggs-on-kelp fishery received a quota of 0.9 tons of herring-eggs-on-kelp.

SEASON DATES

GILL NET FISHERY: The opening and closing dates of the gill net seasons are adjusted each year to account for annual changes in the calendar. This season, the DH fishery began at 5 p.m. on Sunday, December 2, 2007 and closed at noon on Friday, December 21, 2007. The Odd or Even gill net fisheries traditionally open on the second of January or at sunset on the first Sunday in January. This season, the opening was set at 5:00 p.m. on Wednesday, January 2, 2008, and the closing was set at noon on Friday, March 21, 2008. Since 1974, the gill net fisheries have been closed each week from noon on Friday until 5:00 p.m. on Sunday. This weekend closure was instituted to reduce conflicts with recreational users of the bay.

HEOK FISHERY: The opening and closing dates for the herring-eggs-on-kelp fishery are not adjusted for holidays or weekends. The herring-eggs-on-kelp season ran from December 1, 2007 to March 31, 2008.

LANDINGS

Approximately 65 percent of the San Francisco Bay gillnet quota was landed by the three platoons combined, during the 2007-08 commercial herring season (Table 1). The December fishery (DH platoon) landed 0 tons of their quota and it did not fish either in December or after the Odd and Even platoons. The Odd platoon landed 114 percent of their quota, whereas the Even platoon landed 61 percent of their quota. The three gill net fisheries landed a combined total of 687 tons of herring.

A total of 15.1 tons of herring-eggs-on-kelp product has been landed.

TABLE 1. Herring quotas and landings, and roe percentage and fish count (as percents of total weight), for San Francisco Bay, 2007-2008 Season.

FISHERY (# PERMITS MADE LANDINGS / #PERMITS ASSIGNED)	QUOTA (TONS)	LANDINGS (TONS)	OVER QUOTA (+) UNDER QUOTA (-)	ROE (%)	FISH COUNT
DH GILL NET (0 OF 45)	280	0	-280 TONS	NA	NA
ODD GILL NET (38 OF 71*)	404	460	+ 56 TONS	13.5	100
EVEN GILL NET (40 OF 60*)	373	226	-147 TONS	17.6	100
TOTAL GILL NET	1,057	687	-370 (35% UNDER QUOTA)		
HERRING-EGGS-ON- KELP (10 ACTIVE)	17 (= 76.0 TONS WHOLE FISH)	15.1 (= 67.5 TONS IN WHOLE FISH)	-1.9 TONS (11% UNDER QUOTA)	NA	NA
SF BAY TOTAL	1,074	702	-372 TONS	NA	NA

* Permit count based on permits purchased as of December 27, 2007.

TABLE 2. Quotas and landings in tons for the herring **gill net sac roe fisheries** in San Francisco Bay, 1972-73 season through 2007-08 season.

SEASON	QUOTA (TONS)	LANDINGS (TONS)	SEASON	QUOTA (TONS)	LANDINGS (TONS)
1972-73	1,500	436	1990-91*	8,858	7,741
1973-74	500	1,938	1991-92*	7,134	7,417
1974-75	600	514	1992-93*	5,175	5,151
1975-76	3,000	1,719	1993-94*	1,996	2,302
1976-77	4,000	4,201	1994-95*	4,408	4,574
1977-78	5,000	4,987	1995-96*	5,524	6,165
1978-79	5,000	4,115	1996-97*	13,543	11,496
1979-80	6,000	6,430	1997-98*	9,793	1,981
1980-81	7,250	5,811	1998-99*	2,739	2,817
1981-82	10,000	10,415	1999-2000*	5,460	3,356
1982-83	10,399	9,699	2000-01*	2,499	2,991
1983-84	10,399	2,828	2001-02*	4,128	3,287
1984-85	6,500	7,740	2002-03*	3,262	2,097
1985-86	7,530	7,278	2003-04*	2,020	1,540
1986-87*	7,470	8,098	2004-05*	3,169	145
1987-88*	8,432	8,741	2005-06*	4,328	744
1988-89*	9,238	9,736	2006-07*	4,328	292
1989-90*	9,057	8,962	2007-08*	1,057	687
THIRTY-SIX YEAR AVERAGE (72-73 TO 07-08):				5,592	4,679
TWENTY-FOUR YEAR AVERAGE POST EL NINO (84-85 TO 07-08):				5,735	4,806
FIFTEEN YEAR AVERAGE POST EL NINO (93-94 TO 07-08):				4,550	2,965
ELEVEN YEAR AVERAGE POST EL NINO (97-98 TO 07-08):				3,889	1,812

* Quotas and landings after the 1985-86 season do *not* include HEOK or fresh fish allocation and landings

TABLE 3. Quotas, landings and number of permits for the **herring-eggs-on-kelp (HEOK)** fishery in San Francisco Bay, 1989-90 season through 2007-08 season.

SEASON	QUOTA (TONS)	TOTAL LANDINGS (TONS)	PERCENT OF QUOTA LANDED	NUMBER OF PERMITS
1989-90	110.0	107.1	97.4	8
1990-91	144.0	47.0	32.6	10
1991-92	114.0	84.2	73.8	10
1992-93	84.5	47.4	56.1	10
1993-94	35.1	35.0	99.7	10
1994-95	85.0	13.1	15.4	10
1995-96	106.5	106.8	100+	10
1996-97	286.0	185.7	64.9	11
1997-98	209.0	36.4	17.4	11
1998-99	54.4	31.7	58.3	11
1999-2000	99.2	31	31.3	11
2000-01	49.3	27.2	55.2	11
2001-02	73.2	45.3	62.0	10
2002-03	57.6	53.3	92.5	10
2003-04	38.9	6.3	71.0	10
2004-05	55.7	0	0	10
2005-06	34	0	0	4
2006-07	34	3.9	11	4
2007-08	17	15.1	88.6	10
AVERAGE	88.8	46.1	48.8	9.5

REVIEW OF EACH FISHERY

DH (DECEMBER) GILL NET PLATOON:

The DH herring gill net fishery opened on Sunday, December 2, 2007 at 5 p.m. By the closure of the DH platoon at noon on Friday, December 21, there was no fishing effort so zero tons of herring had been landed. Regulations provide an opportunity for the DH platoon to re-open after both January platoons have reached their quota. However, the DH platoon never re-opened because the Even platoon did not reach their quota. The DH platoon did not fish during the 2007-08 season, in part because there were concerns about the recent fuel oil spill contaminating the catch. Herring buyers did not set up their fish pumps until January 2008.

TABLE 4. There were no DH landings during the 2007-08 commercial herring season.

DH Landings	Effort: (based on boats declared by permit)
Quota: 280	0 Boats used in the DH Platoon
Catch: 0	0 Permits fished in the DH Platoon
Under Quota: 280	45 Permits assigned to the DH Platoon

ODD AND EVEN GILL NET PLATOONS:

The Odd and Even fishery is divided into two separate platoons grouped by permit numbers that are odd and even. Platoons rotate fishing weeks with the first platoon designated by whether the season year is odd or even, therefore for the 2007-08 season, the Odd platoon was designated to fish first.

ODD GILL NET FISHERY

The Odd platoon opened on Wednesday January 2, 2007, at 5:00 p.m. The Odd platoon made landings during each of their fishing weeks through January 18, when the quota was reached and the platoon was closed. The average roe count for all Odd platoon landings was 13.5 percent. Forty-nine percent of the permits assigned to this platoon were not used this season.

TABLE 5. Daily landings for the Odd gill net platoon.

Date	Pounds	Tons	# Receipts	Tons/Receipt	Fish Count	Roe Count
1/3/2008	43800	21.9	9	2.43	101	11.89
1/15/2008	403	0.20	2	0.10	107	13.40
1/16/2008	273,640	136.82	31	4.41	100	12.17
1/17/2008	420,566	210.28	33	6.37	100	13.57
1/18/2009	183,251	91.63	35	2.62	99	14.68
<i>Totals and averages</i>	<i>921,660</i>	<i>460.36</i>	<i>110</i>	<i>3.19</i>	<i>101</i>	<i>13.14</i>

Odd Landings	Effort: (based on boats active)
Quota: 404	18 Boats used in the Odd Platoon
Catch: 460	36 Permits fished in the Odd Platoon
Over Quota: 56	71* Permits assigned to the Odd Platoon
	49 % of the Odd permits were not fished this season.

* Permit count based on permits purchased as of December 27, 2007.

EVEN GILL NET FISHERY

The Even platoon opened on Sunday, January 6, 2007, at 5:00 p.m. and made the bulk of their landings during the sixth Even fishing week - in February. Average roe percentage for the Even platoon landings was 16.3 percent. The Even platoon did not reach their quota. Thirty-three percent of the permits assigned to this platoon were not used this season.

TABLE 6. Daily landings for the **Even** gill net platoon.

Date	Pounds	Tons	# Receipts	Tons/Receipt	Fish Count	Roe Count
1/09/2008	405	0.20	2	0.10	97	12.40
2/12/2008	742	0.37	2	0.19	103	17.70
2/18/2008	277,938	138.99	29	4.79	100	18.08
2/19/2008	170,743	85.37	37	2.31	100	17.76
2/20/2008	2,932	1.47	4	0.37	99	15.80
<i>Totals and averages</i>	<i>452,760</i>	<i>226.38</i>	<i>74</i>	<i>1.55</i>	<i>100</i>	<i>16.35</i>

Even Landings	Effort: (based on boats active)
Quota: 373	21 Boats used in the Even Platoon 40 Permits fished in the Even Platoon 60* Permits assigned to the Even Platoon 33 % of the Even permits were not fished this season.
Catch: 226	
Under Quota: 147	

* Permit count based on permits purchased as of December 27, 2007.

HERRING EGGS ON KELP (HEOK) FISHERY

The season opened on December 1st, 2007 and closed on March 31st, 2008. Ten permittees suspended kelp this season and 15.1 tons of HEOK product were landed.

TABLE 6. Daily landings for the **HOEK** platoon.

Date	Pounds	Tons	# Receipts	Tons/Receipt
1/18/2008	965	0.48	1	0.48
1/19/2008	7,880	3.94	3	1.31
1/20/2008	6004	3.00	5	0.60
2/21/2008	15,274	7.64	6	1.27
<i>Totals and averages</i>	<i>30,123</i>	<i>15.06</i>	<i>15</i>	<i>0.92</i>

HOEK Landings	Effort: (based on boats active)
Quota: 17	1 Boat was used in the HOEK Platoon 10 Permits fished in the HOEK Platoon
Catch: 15.1	
Under Quota: 1.9	

SPECIAL EDUCATION PERMITS

No Special Education Permit was issued to the City of Oakland Maritime Training Program for the 2007-08 season.

APENDICES

APPENDIX 1. Average roe count (as percent of total weight) in the San Francisco Bay gill net fisheries, 1983-84 season (24 year average) through 2007-08 season.

SEASON	DECEMBER GILL NET PLATOON	1ST JANUARY GILL NET PLATOON	2ND JANUARY GILL NET PLATOON
1983-84	13.5	13.1 ODD	13.4 EVEN
1984-85	10.1	10.8 EVEN	13.4 ODD
1985-86	11.2	11.9 ODD	13.4 EVEN
1986-87	10.9	11.4 EVEN	12.7 ODD
1987-88	11.9	13.5 ODD	15.0 EVEN
1988-89	9.7	11.6 EVEN	13.1 ODD
1989-90	11.6	13.0 ODD	14.3 EVEN
1990-91	11.7	13.4 ODD	15.8 ODD
1991-92	11.7	11.7 EVEN	15.5 ODD
1992-93	9.7	14.0 EVEN	14.8 ODD
1993-94	10.2	11.5 ODD	13.3 EVEN
1994-95	11.1	13.8 EVEN	12.0 ODD
1995-96	12.0	14.4 ODD	14.6 EVEN
1996-97	10.3	14.1 EVEN	13.9 ODD
1997-98	14.1	14.9 ODD	NO LANDINGS
1998-99	13.4	14.8 EVEN	17.2 ODD
1999-2000	12.1	13.3 ODD	15.6 EVEN
2000-01	12.2	14.5 EVEN	13.6 ODD
2001-02	15.0	14.6 ODD	17.5 EVEN
2002-03	11.2	15.0 EVEN	15.8 ODD
2003-04	14.3	11.9 ODD	14.5 EVEN
2004-05	NO LANDINGS	15.8 EVEN	16.8 ODD
2005-06	NO LANDINGS	14.2 ODD	13.9 EVEN
2006-07	10.8	15.7 EVEN	16.1 ODD
2007-08	NO LANDINGS	13.1 ODD	16.3 EVEN
AVERAGE	11.76	13.44	14.69

APPENDIX 2. 2007-08 SF Bay Herring Commercial Catch Data. (Length measurements in standard length).

Date	Mean Length (mm SL)	Min Length (mm SL)	Max Length (mm SL)	n
03-Jan-08	185	174	197	41
07-Jan-08	186	177	201	19
16-Jan-08	187	170	211	41
18-Jan-08	186	169	204	172
19-Feb-08	187	172	201	68
Date	Mean Weight (g)	Min Weight (g)	Max Weight (g)	n
03-Jan-08	96.3	80.5	119.3	29
07-Jan-08	97.2	84.8	109.0	11
16-Jan-08	101.9	78.9	124.2	37
18-Jan-08	95.9	70.0	123.5	162
19-Feb-08	95.3	74.3	118.2	51

APPENDIX 3. SF Bay Historic Commercial Gill Net Sample Data
(Length measurements in standard length).

Season	Mean Length (mm SL)	Length Range (mm SL)
1976-1977	212	192-236
1977-1978	211	178-236
1978-1979	203	164-234
1979-1980	208	184-230
1980-1981	205	170-236
1981-1982	201	160-228
1982-1983	203	170-230
1983-1984	205	182-232
1984-1985	196	158-238
1985-1986	196	166-226
1986-1987	194	168-222
1987-1988	195	160-230
1988-1989	195	164-226
1989-1990	196	172-226
1990-1991	192	162-226
1991-1992	189	168-220
1992-1993	192	162-220
1993-1994	188	152-212
1994-1995	196	172-235
1995-1996	193	158-231
1996-1997	194	166-226
1997-1998	200	176-224
1998-1999	190	156-220
1999-2000	187	155-210
2000-2001	185	155-209
2001-2002	183	160-207
2002-2003	188	156-211
2003-2004	187	147-203
2004-2005	191	146-209
2005-2006	188	169-207
2006-2007	186	166-209
2007-2008	186	169-211
Mean Standard Length	195	