

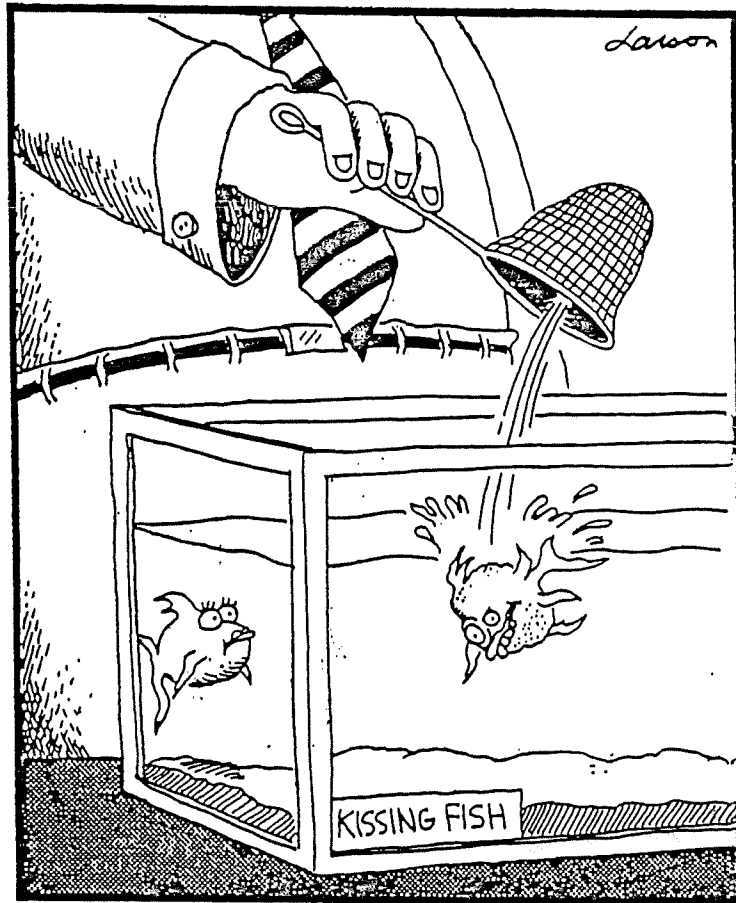
Columbia Region - Fish Division Annual Meeting

STATUS OF NATURALLY PRODUCING STOCKS

Tillamook Fishery District

Rick Klumph and Keith Braun

April 4-5, 1991



ATTITUDE

IT MAKES THE

DIFFERENCE

TABLE OF CONTENTS

STOCKS OF CONCERN

COHO.....	1
WINTER STEELHEAD.....	12
CHUM.....	28
COASTAL CUTTHROAT.....	40

FISH REVIEW SPECIES UPDATE - 1991

CHINOOK.....	49
SUMMER STEELHEAD.....	62
COASTAL STURGEON.....	70
WARMWATER.....	75

STOCK OF CONCERN

COHO 1991

TILLAMOOK DISTRICT

1. GENERAL ASSESSMENT FROM 1990.

- Spawning escapement is consistently below management goals.
1990: 5.5 fish/mile, (goal is 20 fish/mile).
- Fresh water habitat is stable, but generally is in poor condition for coho.
- Hatchery program is designed to contribute to ocean fishery. Hatchery releases are summarized in Exhibit 1.
- Tillamook Bay estimated escapement, naturally produced, 3,772 (goal 11,592).
- Nestucca Bay estimated escapement, naturally produced, 2,298 (goal 8,274).

2. WHAT DID WE LEARN IN THE LAST YEAR ?

- Spawning escapement is the second lowest on record.
1991: 1.6 fish/mile (goal of 20 fish/mile on standard surveys, see Exhibit 2).
- Escapement may be even lower, based on preliminary data from the random surveys. 1991: Random survey 0.7 fish/mile. This would give us a District escapement of only 661 adults (random survey preliminary data).
- Wild stocks may be falling below the 300 number to be in compliance with wild fish policy for 1990-91 spawning population.
- Coho spawning escapements appear to have been over estimated by a factor of 2.2 due to assumption that the coho habitat district wide is similar to that of index streams.
- Summary of historical gill net catches (1923-1964) indicate a shift in spawning timing (see Exhibit 3).
- The ChF statistical creel program collected some coho data, but is not available at this time.
- Scale analysis indicates straying of hatchery fish is occurring in the Trask River (see Exhibit 4).
- Population estimates from standard survey data (1990): Tillamook Bay systems, 552 adults (11,592 goal), Nestucca River, 591 adults (8,274 goal).

3. WHAT ACTION DID WE TAKE BASED ON THAT INFORMATION ?

- The District continues to protect (through review of DOF, DSC, DEQ permits) and enhance the fresh water environment. Nearly 10,000 feet of stream bank was

fenced to improve riparian habitat. Instream habitat improvement projects are scheduled for the summer of 1991 on three streams.

- Instream water rights were filed on 63 streams, many of which rear coho salmon. More streams are planned in the future as baseline flow data is obtained.
- Participated in the fish screening review for this District.
- Stream surveys and fish distribution surveys were conducted on the Trask and Wilson Rivers.

4. WHAT IS THE CURRENT OVERALL ASSESSMENT OF THE SITUATION AND WHERE ARE WE HEADED ?

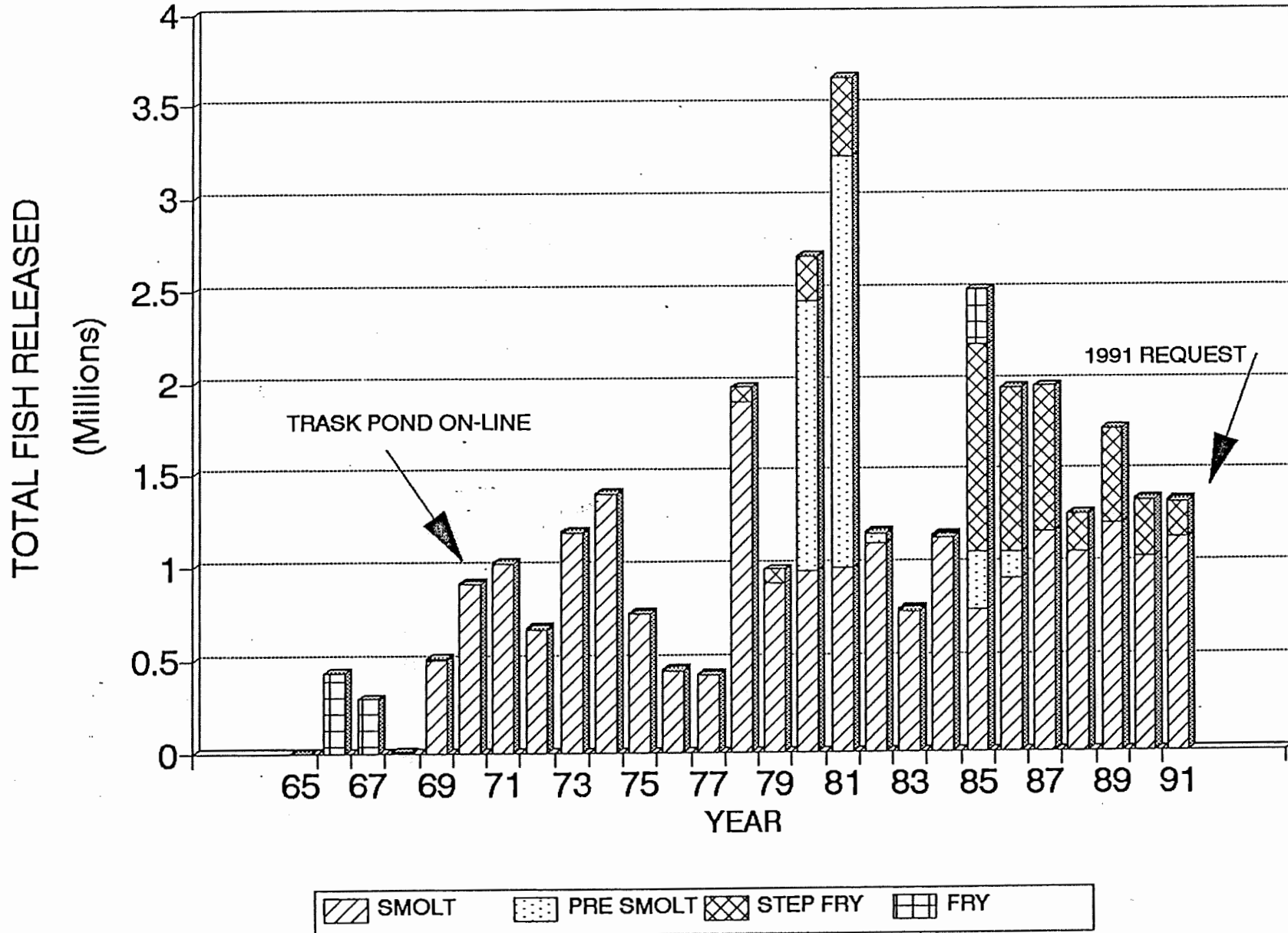
Conservative estimates of population size indicate historical levels of over 100,000 coho entering Tillamook Bay (see gillnet data, Table 1). Compare this to the 1990-91 spawning escapement of just over 1,000 naturally produced adults (standard surveys) and one can conclude we are at an alarming low population level. This stock is not in compliance with wild fish policy (300 fish pop. size), and may be so dangerously low that it cannot viably recover.

We need to continue to monitor and refine the spawning survey program, continue to maintain a high level of habitat protection, improve instream habitat as opportunities arise, collect further information on status of habitat and distribution of coho, and coordinate with species program leader and fish culture to assess hatchery program and its influence on wild fish.

5. STATUS OF LISTING.

The poor showing of the 1990-91 spawners combined with consistently low returns in past years is a clear indication this stock is in trouble. It deserves sensitive species status and may be candidate for T & E.

COHO RELEASES TILLAMOOK DISTRICT

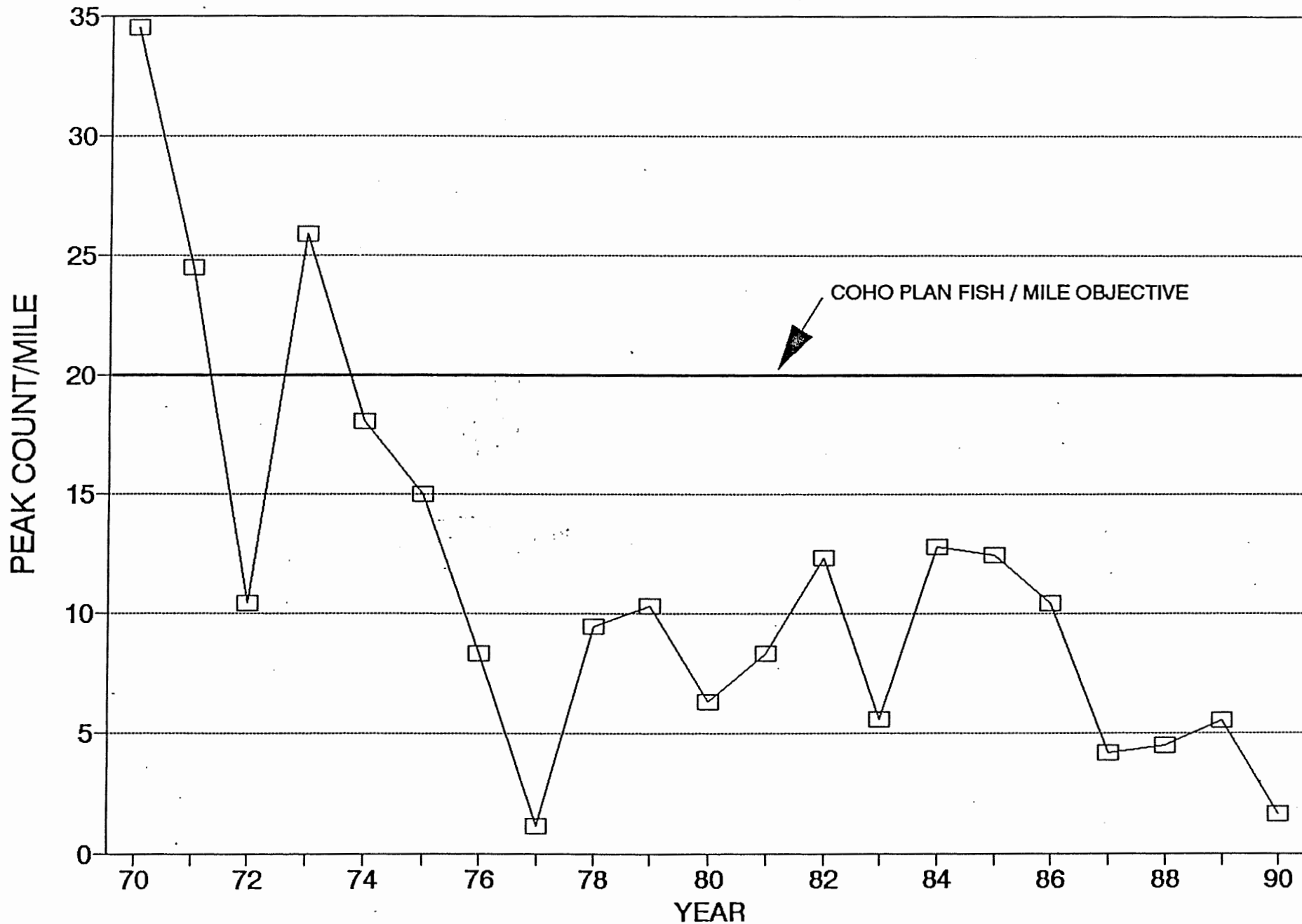


TILLAMOOK DISTRICT
COHO RELEASES

YEAR	SMOLT	PRE SMOLT	STEP	FRY ADULT	PS LAKE	TOTAL
48				181170	(469010)	181170
49		93457		52180	(66250)	145637
50		0		142790		142790
51		0		57910	(83990)	57910
52		0			(12680)	0
53		0		21920	ALL(0-6")	21920
54		0				0
55		6960				6960
56		34650				34650
57	36920	0				36920
58	0	0		6745		6745
59	0	0				0
60	0	0		27900		27900
61	0	0				0
62	0	0				0
63	0	0				0
64	0	0				0
65	0	0				0
	0	0		426460		426460
67	0	0		288960		288960
	0	0		7740	800	7740
69	498000	8760		1380		506760
	914000	0				914000
71	1029000	0			146220	1175220
	674000	0				674000
73	1194000	0		480		1194000
	1401600	0				1401600
75	750000	0				750000
	450000	0		240		450000
77	420000	0				420000
	1896170	0	80460			1976630
79	913100	0	85850	700		998950
	976150	1465340	244240	600		2685730
81	988180	2234710	432310			3655200
	1120280	64650	0			1184930
83	770140	0	0			770140
	1160620	0	0			1160620
85	754370	313240	1130810	307580	1120	2546040
	929990	142860	892780		31700	1997330
87	1190300	0	793850			1984150
	1075570	0	212570			1288140
89	1236630	0	513100			1749730
	1051870	0	312720			1364590
91	1160000 *		200000 *			1360000

* indicates requests

COHO PEAK COUNTS 1970-1990 TILLAMOOK DISTRICT



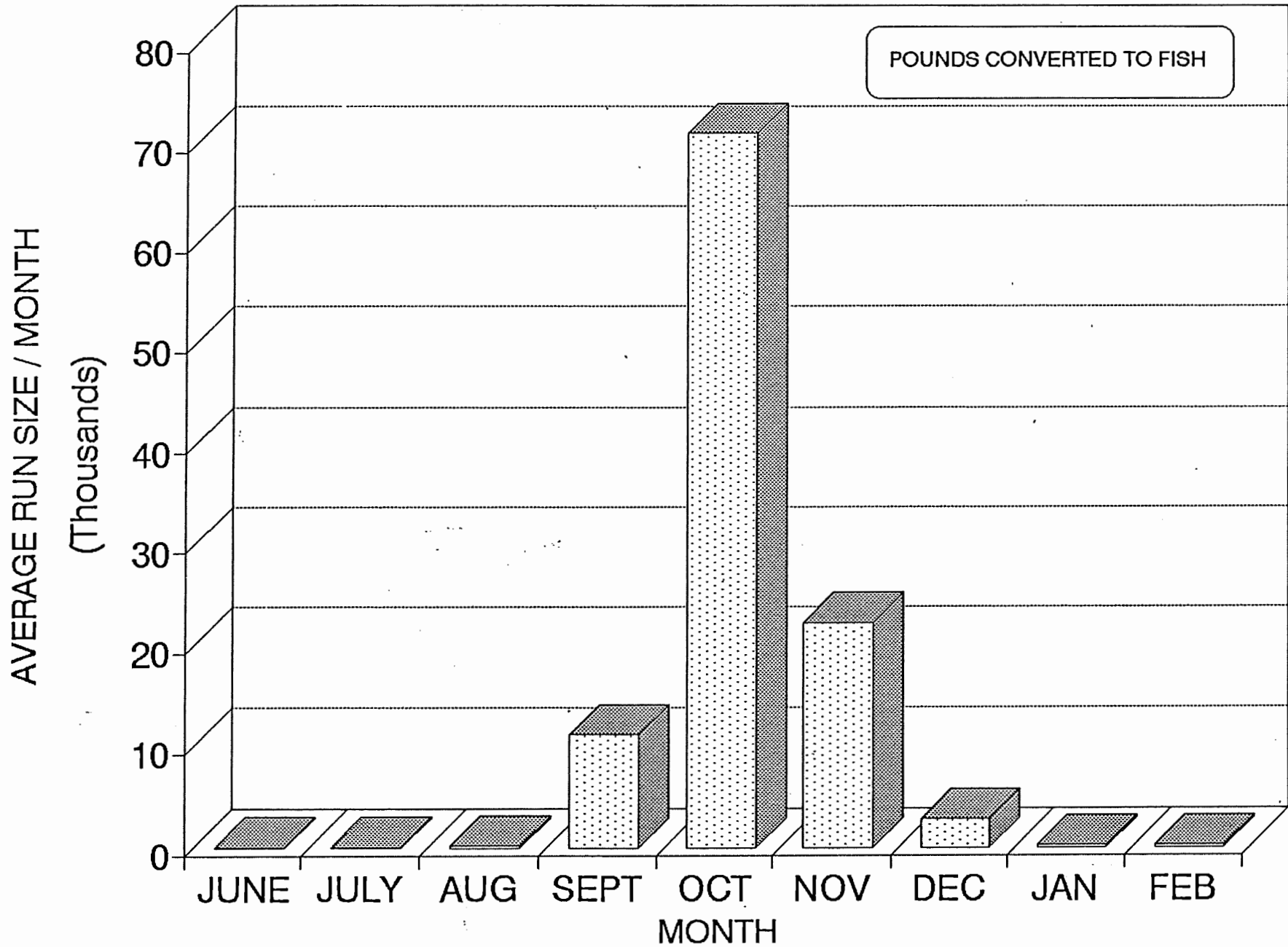
SPAWNING SURVEY PEAK COUNTS
TILLAMOOK DISTRICT

YEAR COHO

50	10.2
	41
52	28.6
	14.9
54	5.3
	9.6
56	6.1
	7.3
58	3.9
	6.9
60	9.6
	21
62	21.6
	16.5
64	24.7
	15.5
66	10
	32.2
68	14.7
	8.6
70	34.5
	24.5
72	10.4
	25.9
74	18
	15
76	8.3
	1.1
78	9.4
	10.3
80	6.3
	8.3
82	12.3
	5.6
84	12.8
	12.4
86	10.4
	4.2
88	4.5
	5.5
90	1.6

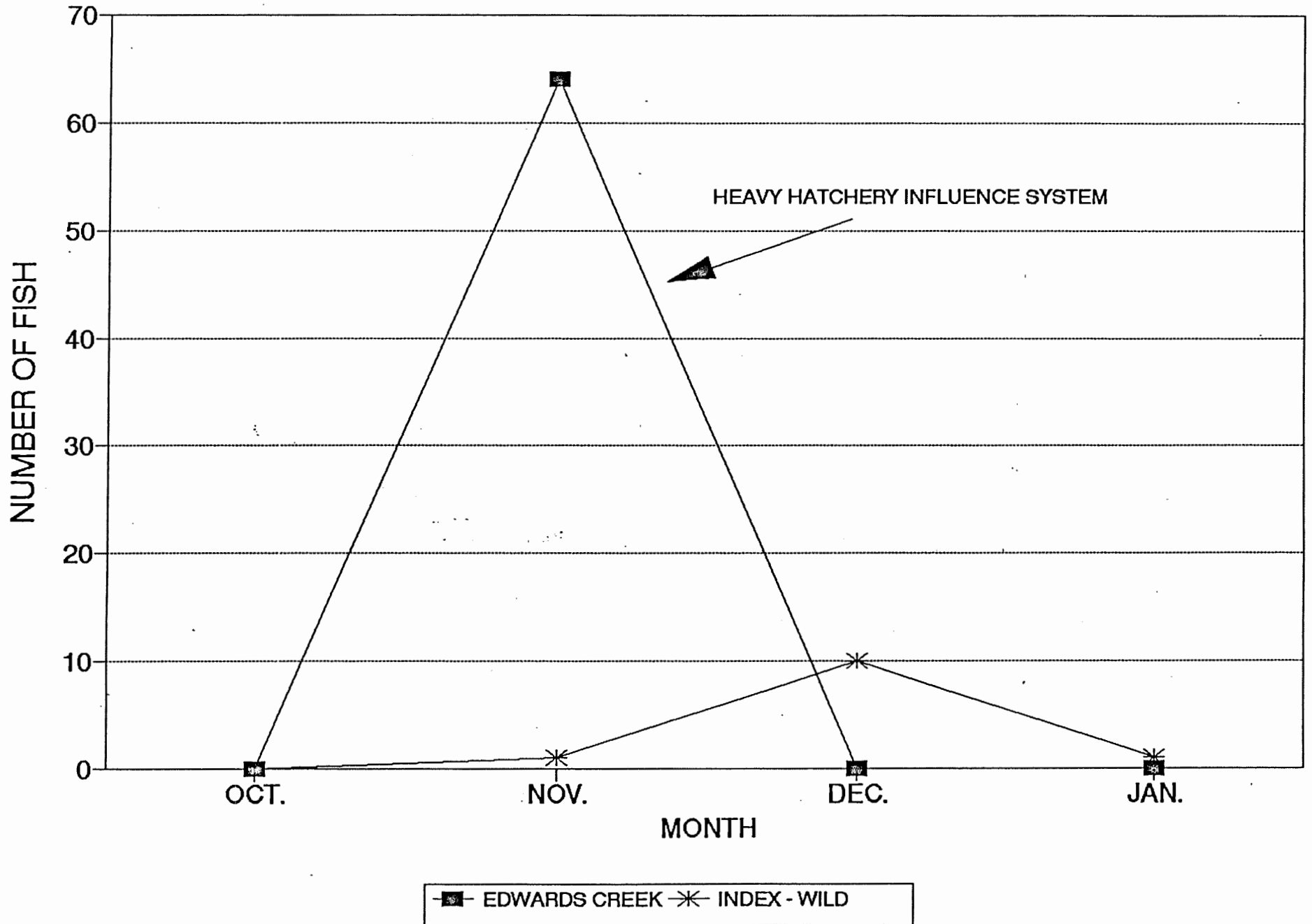
Index streams.
Peak counts/total survey miles

COHO GILLNET CATCH 1923-1961 TILLMAOOK BAY



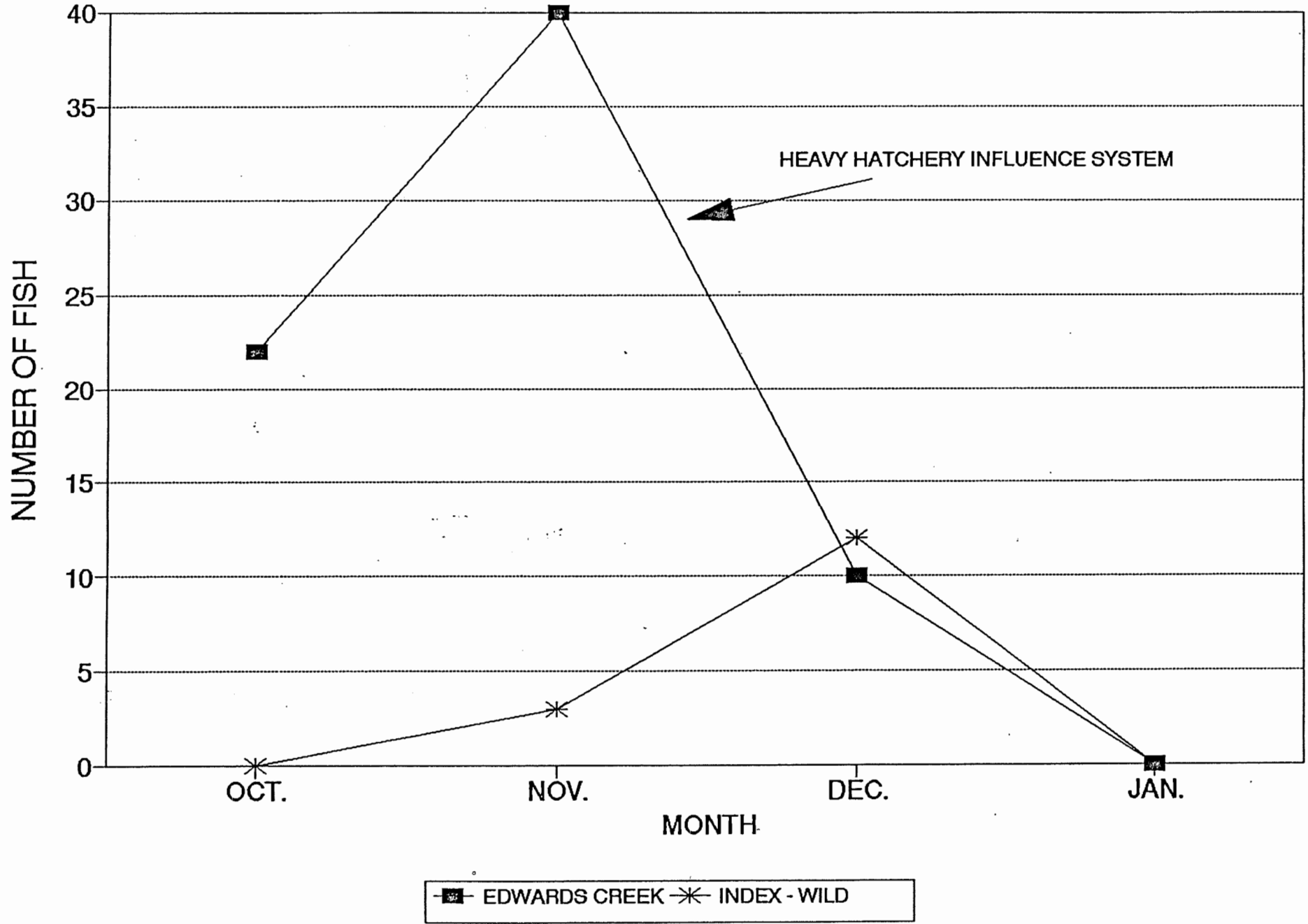
COHO SPAWNING TIMES HATCHERY vs WILD 1989

EXHIBIT 4 a



COHO SPAWNING TIMES HATCHERY vs WILD 1988

EXHIBIT 4 b



COHO SCALE DATA
TILLAMOOK DISTRICT
SPAWNING SURVEY COLLECTIONS

1988 MONTH	EDWARDS CR		REMAINING INDEX		TOTALS		HATCHERY RETURNS BY MONTH (TRAP)
	HATCH	WILD	HATCH	WILD	HATCH	WILD	
OCT.	22	3	0	0	22	3	2511
NOV.	40	2	4	3	44	5	3105
DEC.	10	1	2	12	12	13	1
JAN.	0	0	0	0	0	0	0

1989 MONTH	EDWARDS CR		REMAINING INDEX		TOTALS		HATCHERY RETURNS BY MONTH (TRAP)
	HATCH	WILD	HATCH	WILD	HATCH	WILD	
OCT.	0	0	0	0	0	0	5497
NOV.	64	6	2	1	66	7	4609
DEC.	0	0	0	10	0	10	0
JAN.	0	0	0	1	0	1	5

Table 1

COHO LANDINGS BY MONTH IN POUNDS
TILLAMOOK BAY

YEAR	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	TOTAL
23			71	57890	213831	231537	25913	1158	47	530447
24			17	67231	446479	160484	20585	339		695135
25			258	53999	213192	211660	19383	370	8	498870
26		18	1946	68747	145444	112784	19021	516	13	348489
27			8357	37192	219503	101407	4024	210	5	370698
28		316	713	33988	214148	118830	17330	869		386194
29			2099	61259	294829	164773	37878	638	431	561907
30	69	107	340	59489	339340	129215	7857	322	2135	538874
31		1430	130	115322	177124	45632	9608	4637		353883
32			1187	41345	199062	38657	10014	51	10	290326
33	18	217	338	42128	136729	54753	10141	1586		245910
34			95	57716	438398	57536	1703	1177		556625
35				67192	403828	229089	35171	318	4138	739736
36		32	55	4837	173028	56693	143	2425		237213
37	14	57	43	18519	385167	76192	3026	35	278	483331
38			598	81888	358495	57423	6127	464	3031	508026
39			258	40474	309649	115808	23504	167	1249	491109
40			77	48990	1666667	30153	4069	81	1588	1751625
41		21	23	40233	70699	67373	3604	426	387	182766
42			34	7022	99682	57958	2161	26	1317	168200
43				12185	68543	11108	1973	69	722	94600
44		32	12	34422	176897	62907	10240	1411	470	286391
45			207	1546	217544	113034	8142	4466	222	345161
46			112	14527	116440	23455	3523			158057
47			2041	9565	131668	49118	2693			195085
48			17	18006	85003	73237	8765			185028
49			378	28379	88920	39370	1210			158257
50			70	14204	39938	25691	4886			84789
51			20	15479	90865	31446	3476			141286
52			457	10943	111060	67265	3491			193216
53			137	10572	38052	23867	758			73386
54			569	32670	33223	17919	2023			86404
55			14	11303	53670	11378	1034			77399
56			154	16286	85513	13386	1522			116861
57						9536				9536
58						12902				12902
59						9896				9896
60						4406				4406
61						11911				11911
TOTAL	101	2230	20827	1235548	7842630	2729789	314998	21761	16051	12183935
AVG/ MONTH	34	248	631	35301	224075	69995	9000	946	944	312409
# FISH	3	24	60	3362	21340	6666	857	90	90	29753
RUN SIZE/MO	11	79	200	11207	71135	22221	2857	300	300	99177

STOCK OF CONCERN

WINTER STEELHEAD 1991

TILLAMOOK DISTRICT

1. GENERAL ASSESSMENT FROM 1990 MEETING.

- Long-term trends for winter steelhead show wide variations in catch. Recent trends are well below long-term averages (1963-1981 average catch = 25,000; 1982-1987 average catch = 14,000).
- Catch trends between wild and hatchery stocks are similar.
- Smolt stocking levels have been fairly constant over time (see exhibit 1).
- We believe that Tillamook District steelhead populations are driven largely by ocean survival.
- Current broodstock (Alsea) may not be the best product for District hatchery program.

2. WHAT DID WE LEARN IN THE LAST YEAR ?

- Recent trend in average catch continues to decline compared to long-term averages: 1963-1981 \bar{x} catch = 25,000, 1982-1988 \bar{x} catch = 13,400 (see Exhibit 2)
- The 1988 catch of 8,995 fish is the lowest recorded catch from 1963-1988.
- Estimates of wild population for each District stream indicate some streams are not in compliance with part of the wild fish policy (less than 300 spawners, see Exhibits 3 - 10)
- We summarized scale data by river from 1984-1990 (see Table 1).
- IHN showed up at Cedar Creek Hatchery and caused numerous problems for hatchery and District personnel.
- 100% of the 1991 STW smolt released are fin marked (Ad).
- In 1990 Cedar Creek Hatchery documented 35% seal marks and 65% gillnet marks. In 1991 these figures were 32% seal marked and 29% gillnet marked (see Table 1).

3. WHAT ACTION DID WE TAKE BASED ON THIS INFORMATION ?

- District supports angling regulations which protect wild steelhead, i.e. upper deadline on Nestucca River, catch and release of unmarked steelhead, reduction of trout season to reduce mortality on age one and two year steelhead.
- District is investigating the possibilities of an acclimation pond (Wilson River). We tentatively have a site and funding. The purpose of an acclimation

- pond would be to reduce straying, improve catch, and as a potential broodstock collection site.
- We continue our habitat protection efforts through permit reviews of other State agencies (DOF, DSL, DEQ, etc.).
 - Instream habitat projects are planned on three District streams.
 - Instream water rights were applied for on 63 streams.
 - Review of District fish screening needs was conducted.
 - Shifts toward lower river releases of hatchery smolts were made in an attempt to reduce upriver influence on wild stocks and target adults to hold longer in the high intensity fishery area.
 - The District investigated, with Cedar Creek Hatchery personnel, long-term planning for hatchery modifications necessary to become a "conservation" hatchery.
 - Doubled smolt release at Cedar Creek from 25,000 to 50,000 to ensure egg take.

4. WHAT IS THE CURRENT OVERALL ASSESSMENT OF THE SITUATION AND WHERE ARE WE HEADED ?

The overall assessment is that lots of things like to eat winter steelhead. From bird and seal predation on juvenile and adult fish, to ocean predation, including drift nets. It appears that a combination of natural and manmade events are severely limiting production of winter steelhead in the Tillamook District. Catch and escapement have steadily declined the last few years. What fish are observed in the creel or at hatcheries are in poor condition. Net marks, seal marks, healed over and open wounds, are not uncommon.

The District plans to continue our efforts of habitat protection and enhancement, continue to probe possibilities of an acclimation pond, work with Cedar Creek Hatchery to develop a more localized broodstock, support angling proposals dealing with catch and release, and juvenile protection. We hope to refine hatchery/wild ratios by river systems to more accurately determine wild fish compliance and status of wild fish populations.

The District intends to utilize OSP and conduct spot checks on the Wilson River to gather data relevant to direct or incidental mortality of juvenile steelhead in the "coastal" trout fishery.

We also plan to work closely with fish culture and pathology in an effort to curb the IHN problem at Cedar Creek Hatchery.

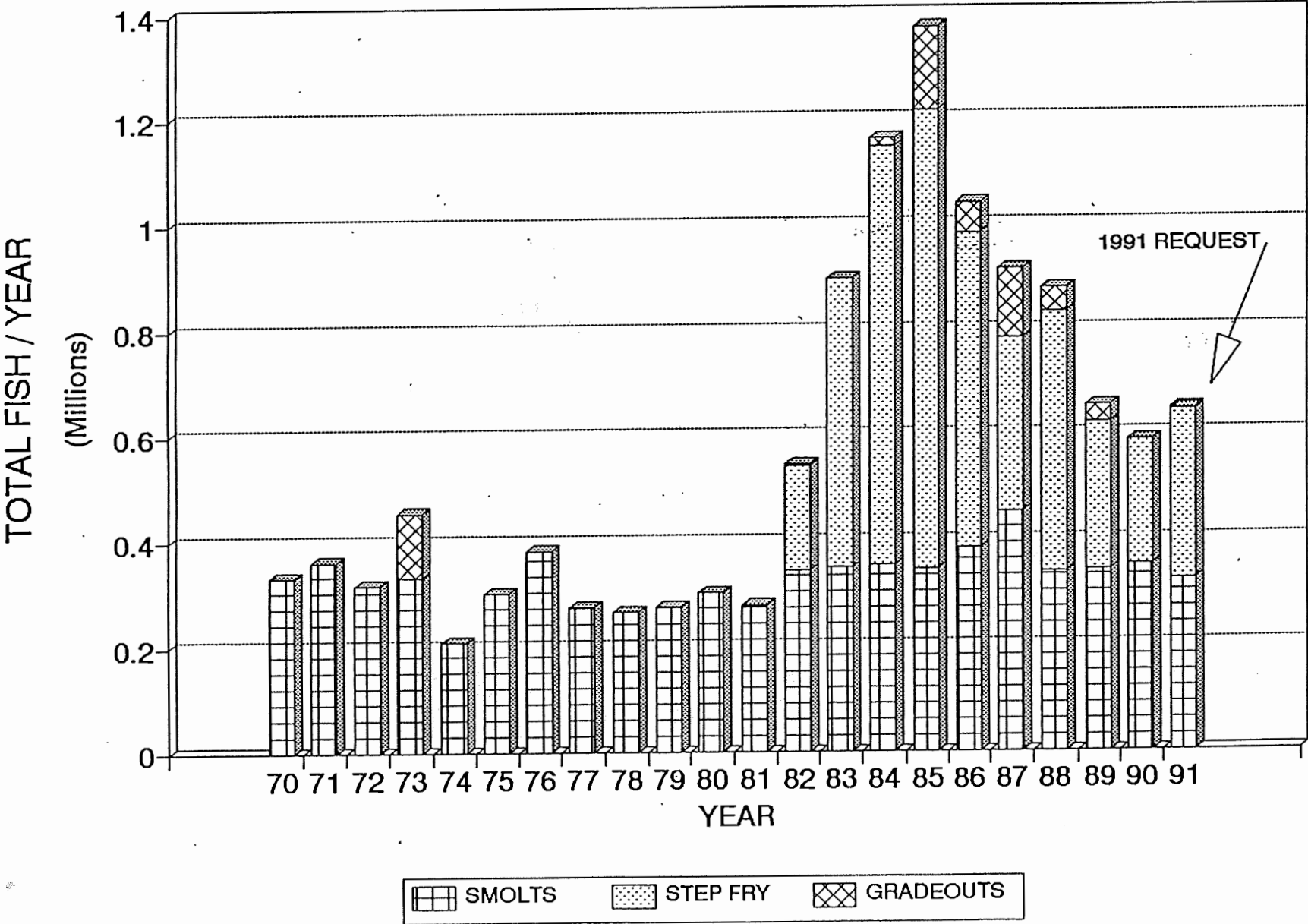
The District also needs to work closely with the species coordinator to evaluate hatchery program and compliance with WFMP.

5. STATUS OF LISTING.

- Continue as species of concern. Monitor populations and refine inventory methods where possible (catch estimates and W vs. H ratio's).

ST91DR

WINTER STEELHEAD RELEASES TILLAMOOK DISTRICT 1970-1991

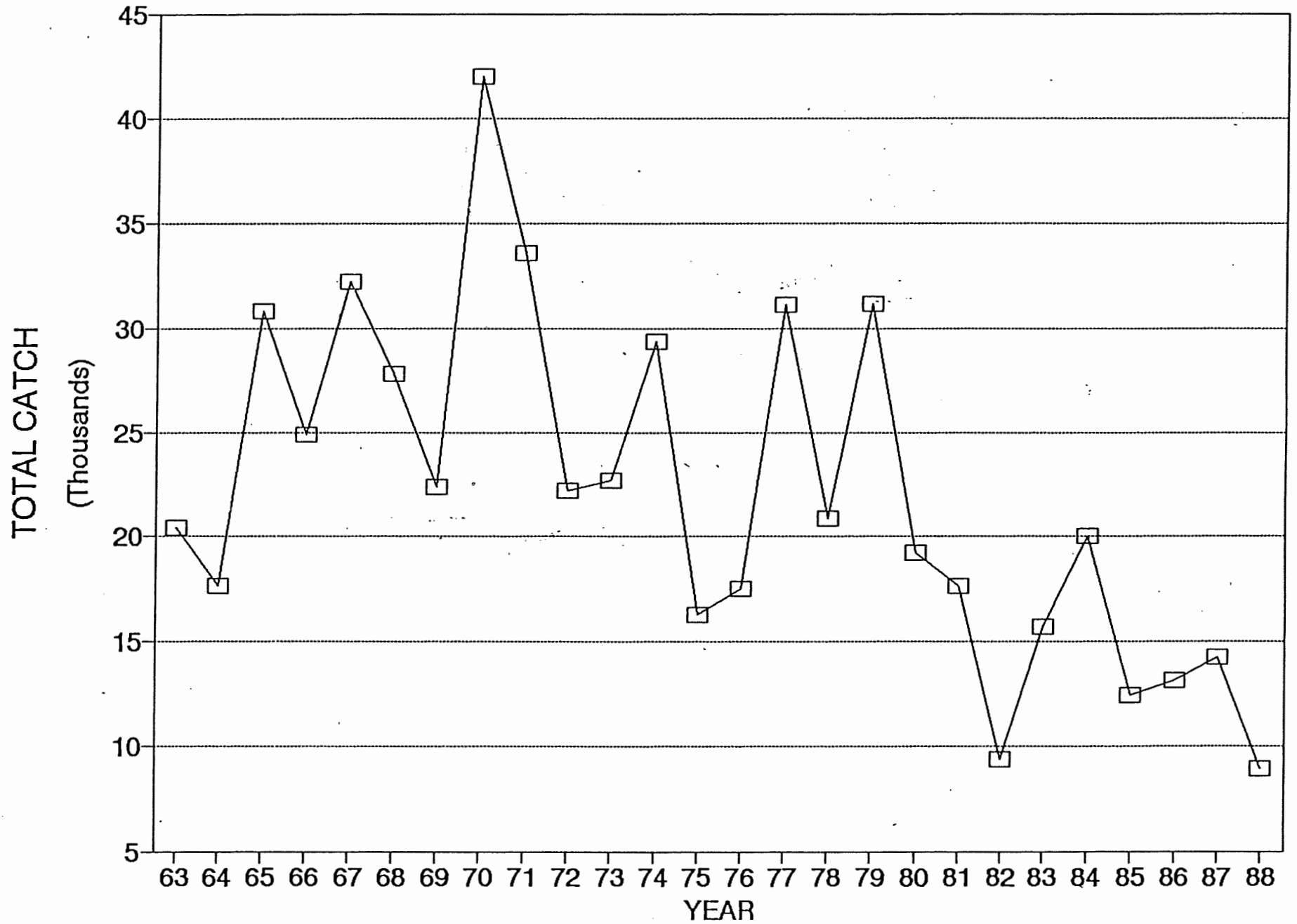


WINTER STEELHEAD RELEASE DATA
TILLAMOOK DISTRICT

YEAR	SMOLT	GRADE	STEP	TOTAL
48	330540	9720		340260
49	307105	11016		318121
50	46520			46520
51				0
52	38590			38590
53	18050			18050
54	62220			62220
55	19500			19500
56	36640			36640
57	33900			33900
58	78460			78460
59	140580			140580
60	115850			115850
61	141640			141640
62	166340			166340
63	190400			190400
64	297250			297250
65	273750	59350		333100
66	378760			378760
67	183750			183750
68	267970			267970
69	269640			269640
70	330780			330780
71	359890			359890
72	314480			314480
73	331370	123750		455120
74	207240			207240
75	299650			299650
76	380940			380940
77	273470			273470
78	263810			263810
79	275110			275110
80	300490			300490
81	276460			276460
82	341400	3080	200050	544530
83	349270		548110	897380
84	350130	15300	797830	1163260
85	344460	156770	871440	1372670
86	384280	59790	599950	1044020
87	452370	134380	331190	917940
88	339540	45110	496560	881210
89	343560	35840	280770	660170
90	350030		236720	586750
91	325000 *		325000 *	650000

* indicates requests

WINTER STEELHEAD CATCH TILLAMOOK DISTRICT



CATCH STATISTICS
TILLAMOOK DISTRICT

WINTER STEELHEAD (OCT.-MAY)

YEAR MIAMI KILCHIS WILSON TRASK TILL. R. NEST. R. THREE R. L. NEST. NESKOWIN T. BAY TOTAL

YEAR	MIAMI	KILCHIS	WILSON	TRASK	TILL. R.	NEST. R.	THREE R.	L. NEST.	NESKOWIN	T. BAY	TOTAL
63	117	418	9625	4040	46	5947	*	*	42	205	20440
64	194	415	9814	2410	61	4466	*	*	78	195	17633
65	180	414	15870	3682	101	10103	*	*	189	297	30836
66	311	798	10493	3617	87	9178	*	*	196	235	24915
67	136	1554	13090	3567	63	13495	*	*	132	152	32189
68	248	1505	7271	4479	114	13277	*	477	170	270	27811
69	133	936	6713	4510	178	9403	*	254	139	109	22375
70	160	2302	14256	7388	502	16702	*	360	165	112	41947
71	272	1748	11911	4218	413	14267	*	482	177	146	33634
72	545	878	6261	3186	302	10453	*	505	42	30	22202
73	628	1683	6846	1739	857	10281	*	485	113	58	22690
74	708	2194	8221	3000	1197	13454	*	517	61	12	29364
75	307	1029	4746	1790	438	7472	*	403	37	0	16222
76	312	790	5429	2470	224	7594	177	531	12	0	17539
77	1085	1431	7132	2712	886	11598	3887	2326	51	0	31108
78	448	1454	5944	2282	458	7969	1504	754	68	0	20881
79	1024	1568	8057	3213	728	12370	2950	1184	49	0	31143
80	365	657	4559	2360	241	8265	1866	840	76	0	19229
81	363	465	4180	1853	270	7591	2178	718	34	17	17669
82	148	425	2950	1066	177	2921	1069	522	0	14	9362
83	511	659	3506	1980	544	5869	1752	855	#	31	15707
84	691	1143	3882	2184	724	7572	2694	1067	#	59	20016
85	255	546	2690	1390	248	5174	1473	624	#	4	12404
86	379	666	3746	1693	206	5234	709	498	#	0	13131
87	449	605	4384	2050	252	4972	1025	455	#	33	14225
88	316	586	2981	877	196	2811	932	231	#	25	8955
89 (\$)	55	110	975	174	59	992	314	71	#	0	2750
90											

(\$) preliminary 1/2 year data, 12/90
 (#) indicates catch & release only

LITTLE NESTUCCA ESTIMATED WINTER STEELHEAD RUN SIZE
SCALE DATA COMPUTATION

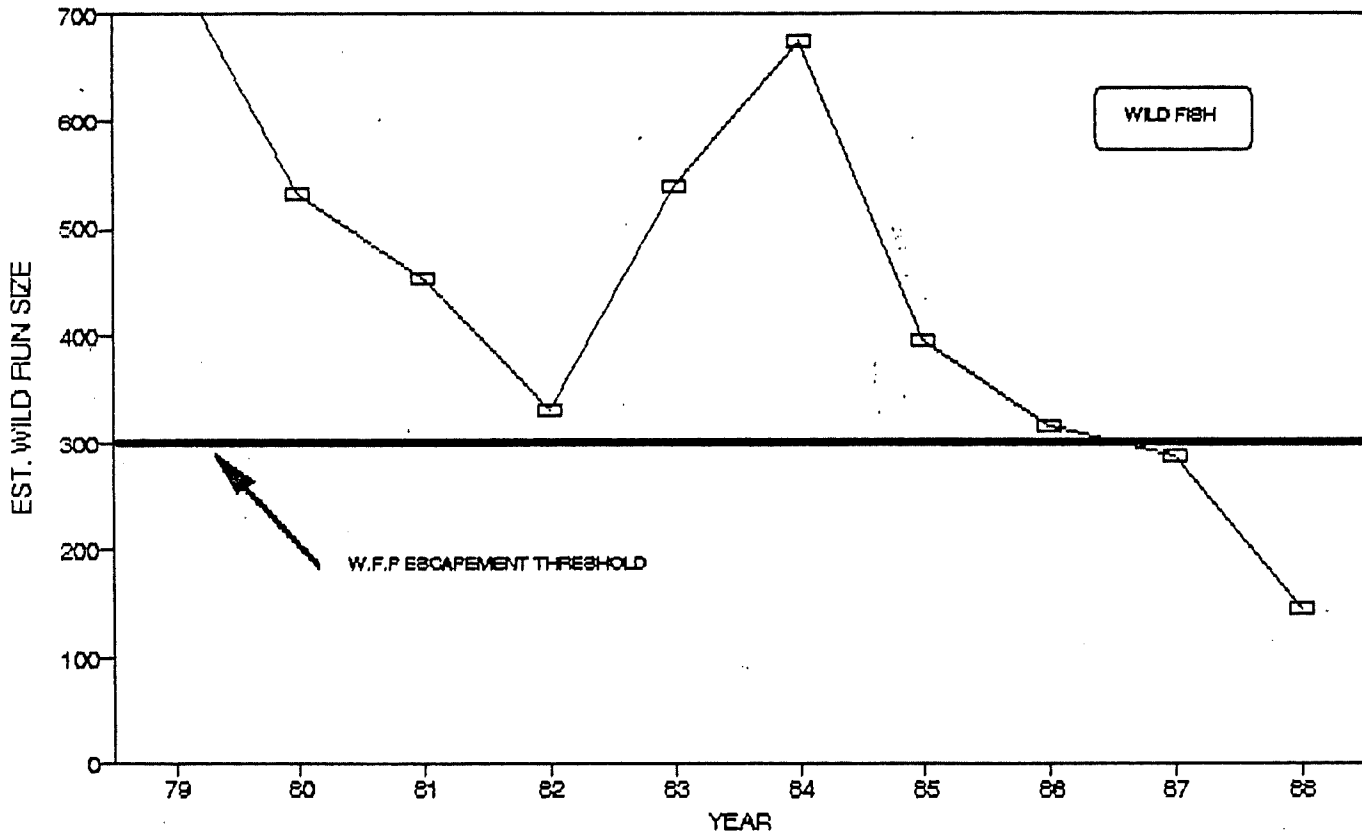
EXHIBIT 3

YEAR	CATCH	RUN SIZE	H RUN	W RUN
79	1184	6232	5484	748
80	840	4421	3891	531
81	718	3779	3325	453
82	522	2747	2418	330
83	855	4500	3960	540
84	1067	5616	4942	674
85	624	3284	2890	394
86	498	2621	2307	315
87	455	2395	2107	287
88	231	1216	1070	146

.19 EXPLOITATION RATE
88% HATCHERY
12% WILD

79-83				
AVG	824	4336	3815	520
84-88				
AVG	575	3026	2663	363

WINTER STEELHEAD RUN SIZE
LITTLE NESTUCCA RIVER



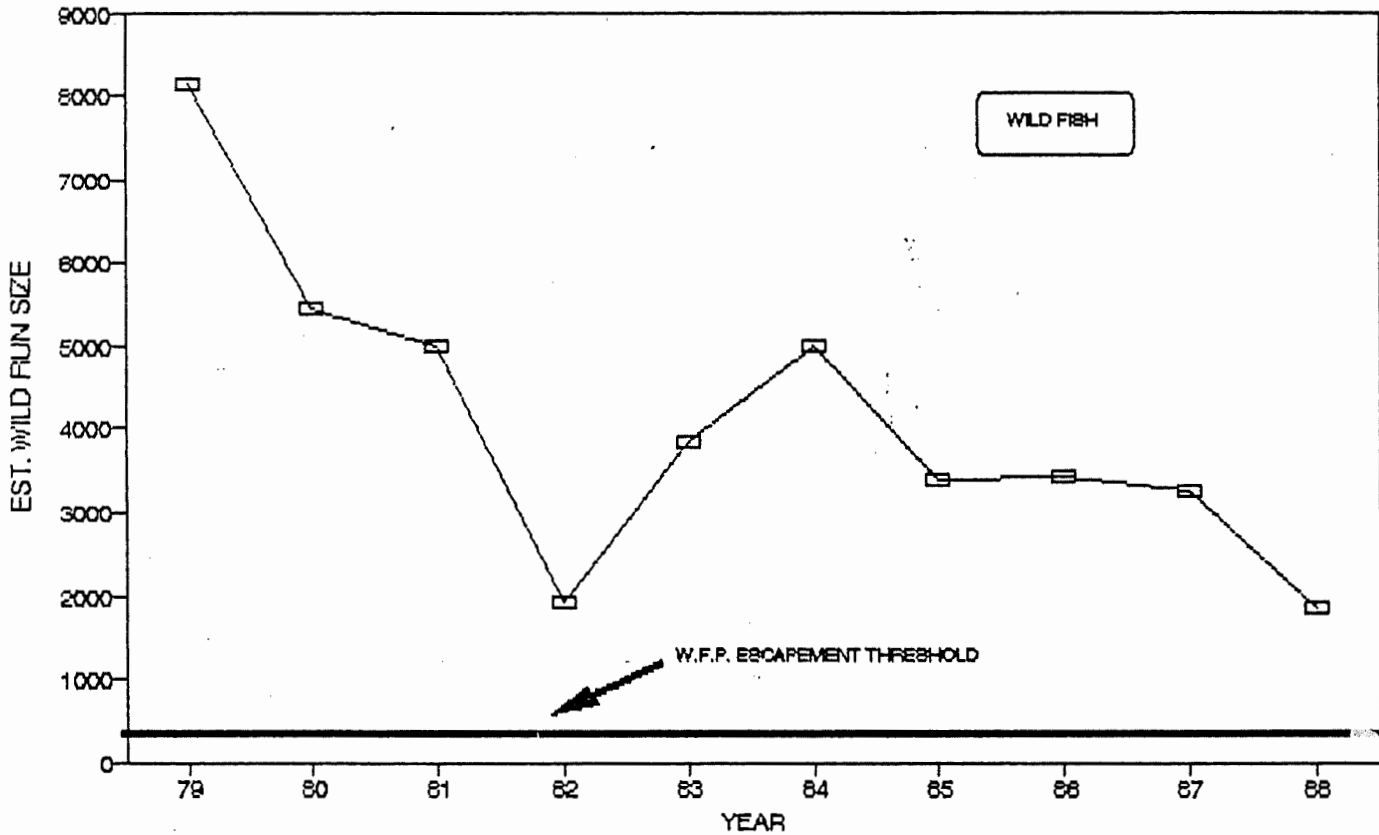
NESTUCCA RIVER ESTIMATED WINTER STEELHEAD RUN SIZE
SCALE DATA COMPUTATIONS

EXHIBIT 4

YEAR	CATCH	RUN SIZE	H RUN	W RUN
79	12370	30171	22025	8146
80	8265	20159	14716	5443
81	7591	18515	13516	4999
82	2921	7124	5201	1924
83	5869	14315	10450	3865
84	7572	18468	13482	4986
85	5174	12620	9212	3407
86	5234	12766	9319	3447
87	4972	12127	8853	3274
88	2811	6856	5005	1851
79-83				
AVG	7403	18057	13181	4875
84-88				
AVG	5153	12567	9174	3393

.41 EXPLOITATION RATE
73% HATCHERY
27% WILD

WINTER STEELHEAD RUN SIZE
NESTUCCA RIVER



THREE RIVERS ESTIMATED WINTER STEELHEAD RUN SIZE
SCALE DATA COMPUTATION

EXHIBIT 5

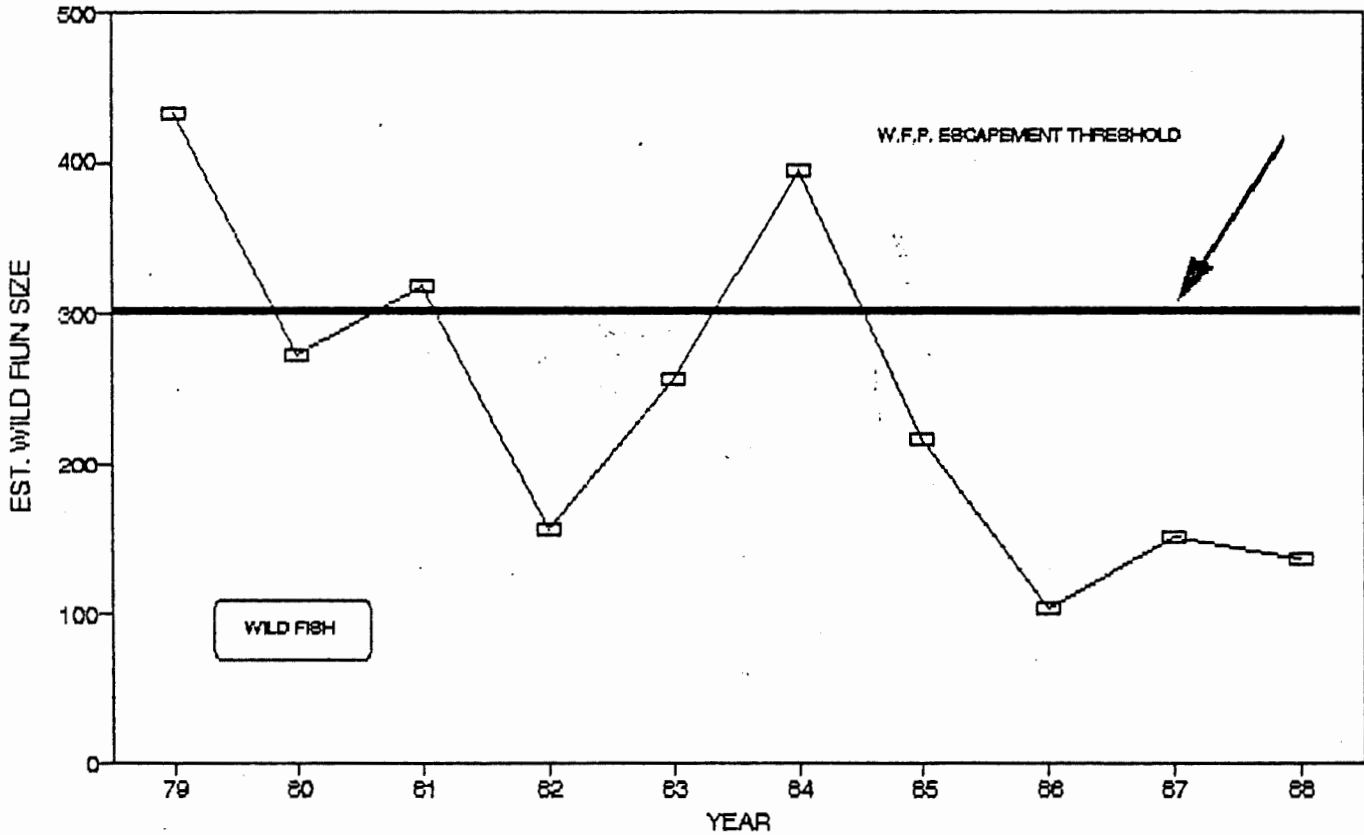
YEAR	CATCH	RUN SIZE	H RUN	W RUN
79	2950	7195	6763	432
80	1866	4551	4278	273
81	2178	5312	4993	319
82	1069	2607	2451	156
83	1752	4273	4017	256
84	2694	6571	6176	394
85	1473	3593	3377	216
86	709	1729	1626	104
87	1025	2500	2350	150
88	932	2273	2137	136

.41 EXPLOITATION RATE
94% HATCHERY
6% WILD

79-83	AVG	RUN SIZE	H RUN	W RUN	
79-83	AVG	1963	4788	4501	287

84-88	AVG	RUN SIZE	H RUN	W RUN	
84-88	AVG	1367	3333	3133	200

WINTER STEELHEAD RUN SIZE
THREE RIVERS

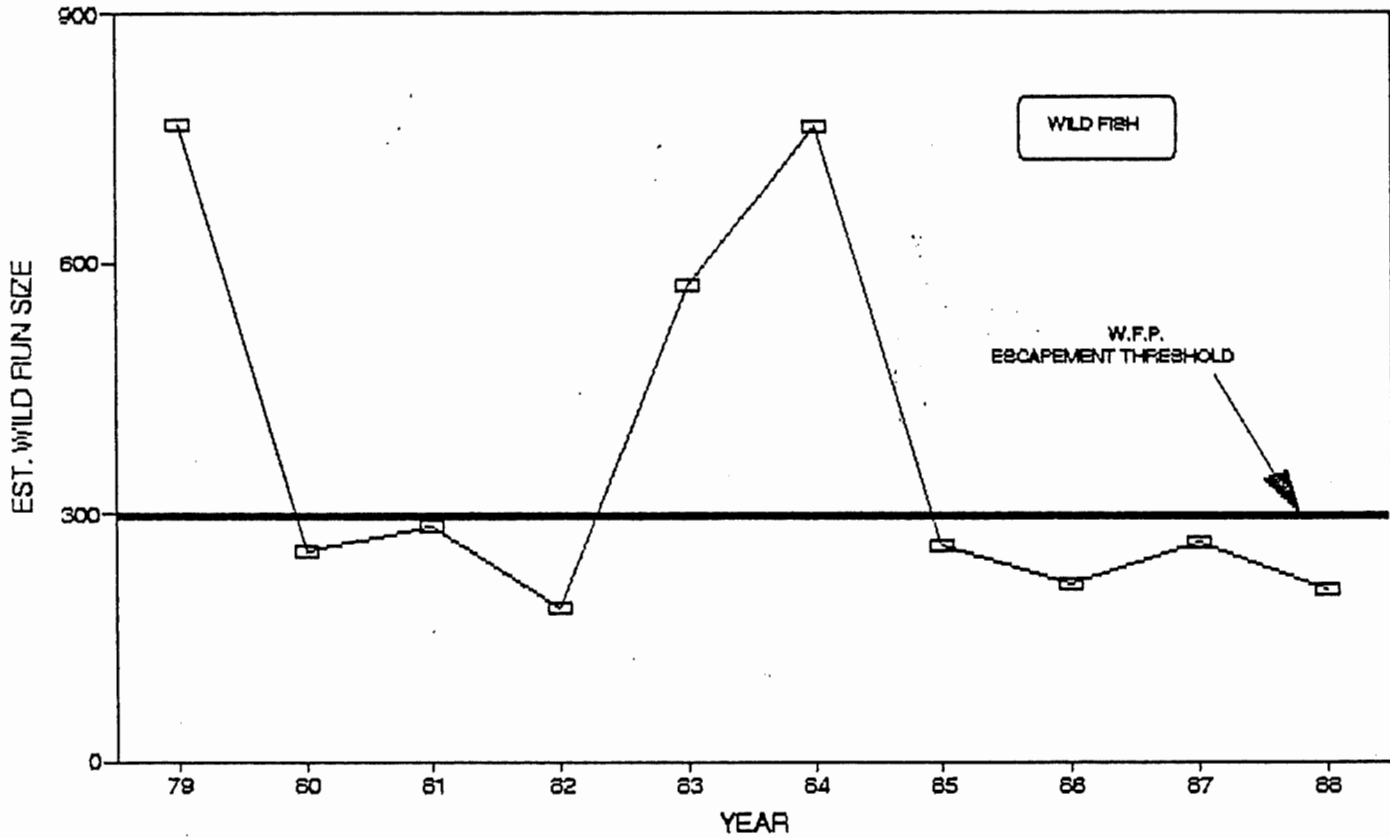


TILLAMOOK RIVER ESTIMATED WINTER STEELHEAD RUN SIZE
SCALE DATA COMPUTATION

EXHIBIT 6

YEAR	CATCH	RUN SIZE	H RUN	W RUN	
79	728	3832	3065	766	
80	241	1268	1015	254	
81	270	1421	1137	284	
82	177	932	745	186	
83	544	2863	2291	573	.19 EXPLOITATION RATE
84	724	3811	3048	762	80% HATCHERY
85	248	1305	1044	261	20% WILD
86	206	1084	867	217	
87	252	1326	1061	265	
88	196	1032	825	206	
79-83					
AVG	392	2063	1651	413	
84-88					
AVG	325	1712	1369	342	

WINTER STEELHEAD RUN SIZE
TILLAMOOK RIVER



TRASK RIVER ESTIMATED WINTER STEELHEAD RUN SIZE
SCALE DATA COMPUTATION

EXHIBIT 7

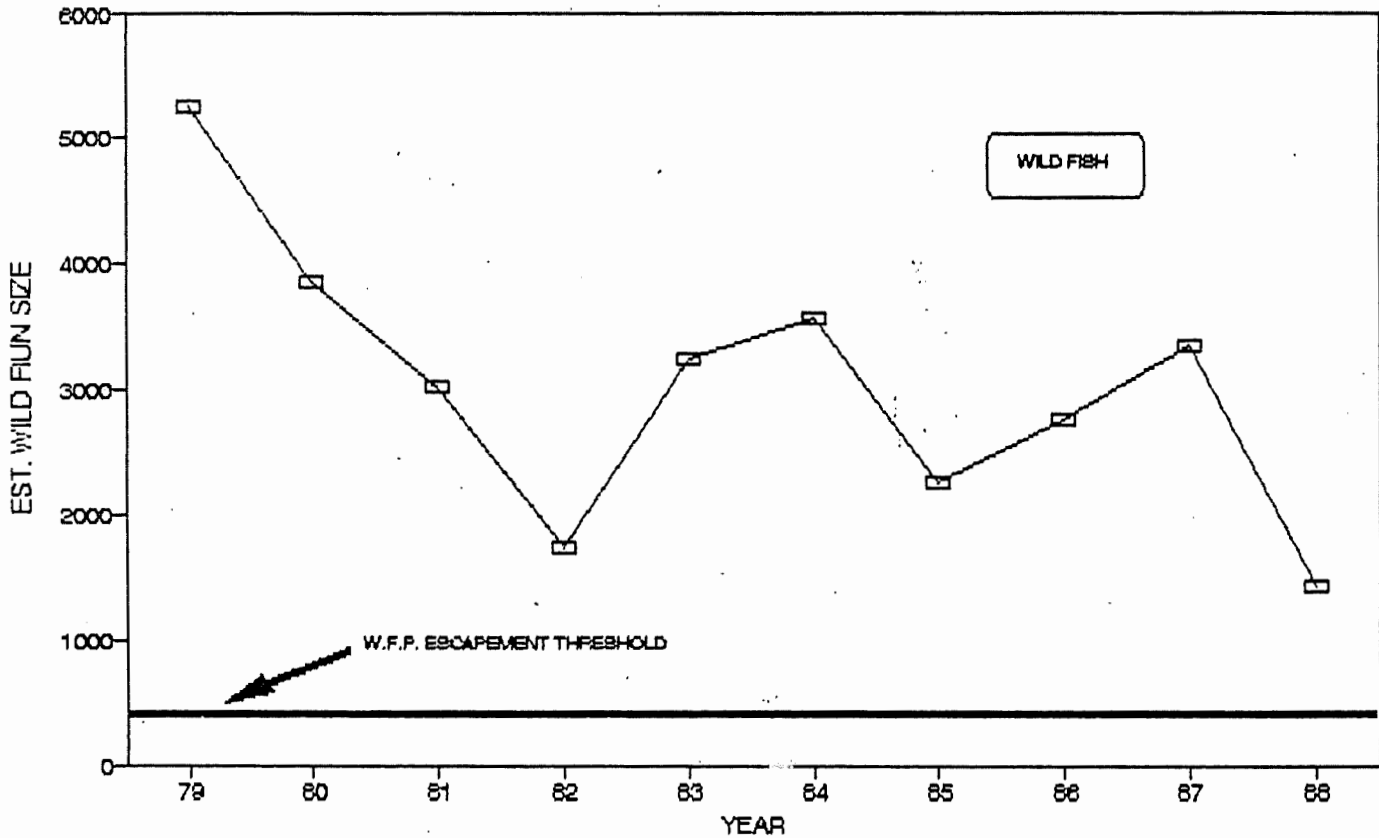
YEAR	CATCH	RUN SIZE	H RUN	W RUN
79	3213	7837	2586	5251
80	2360	5756	1900	3857
81	1853	4520	1491	3028
82	1066	2600	858	1742
83	1980	4829	1594	3236
84	2184	5327	1758	3569
85	1390	3390	1119	2271
86	1693	4129	1363	2767
87	2050	5000	1650	3350
88	877	2139	706	1433

.41 EXPLOITATION RATE
33% HATCHERY (STRAYS)
67% WILD

79-83	AVG	2094	5108	1686	3423
-------	-----	------	------	------	------

84-88	AVG	1639	3997	1319	2678
-------	-----	------	------	------	------

WINTER STEELHEAD RUN SIZE
TRASK RIVER



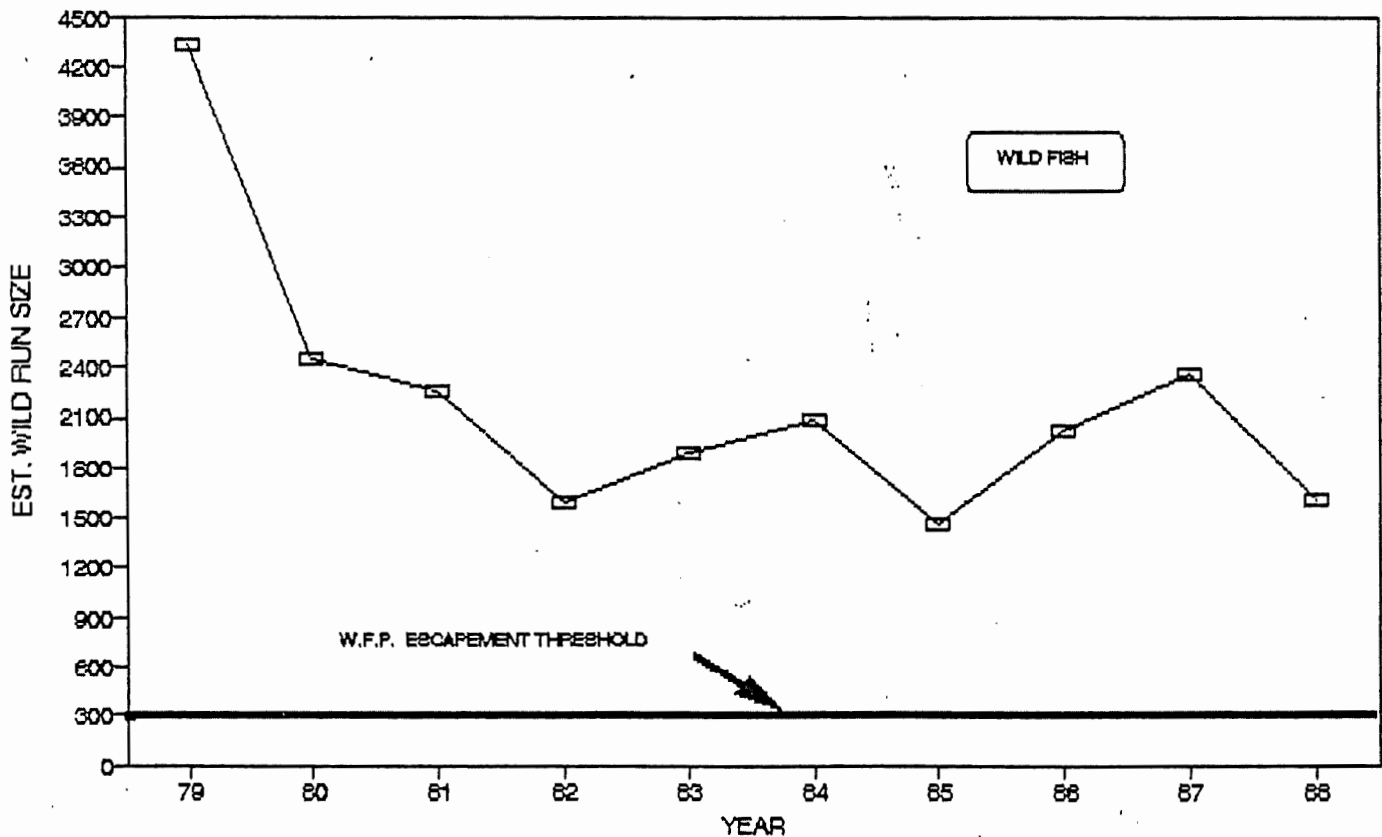
WILSON RIVER ESTIMATED WINTER STEELHEAD RUN SIZES
SCALE DATA COMPUTATIONS

EXHIBIT 8

YEAR	CATCH	RUN SIZE	H RUN	W RUN
79	8057	19651	15328	4323
80	4559	11120	8673	2446
81	4180	10195	7952	2243
82	2950	7195	5612	1583
83	3506	8551	6670	1881
84	3882	9468	7385	2083
85	2690	6561	5118	1443
86	3746	9137	7127	2010
87	4384	10693	8340	2352
88	2981	7271	5671	1600
79-83				
AVG	4650	11342	8847	2495
84-88				
AVG	3537	8626	6728	1898

.41 EXPLOITATION RATE
78% HATCHERY
22% WILD

WINTER STEELHEAD RUN SIZE
WILSON RIVER



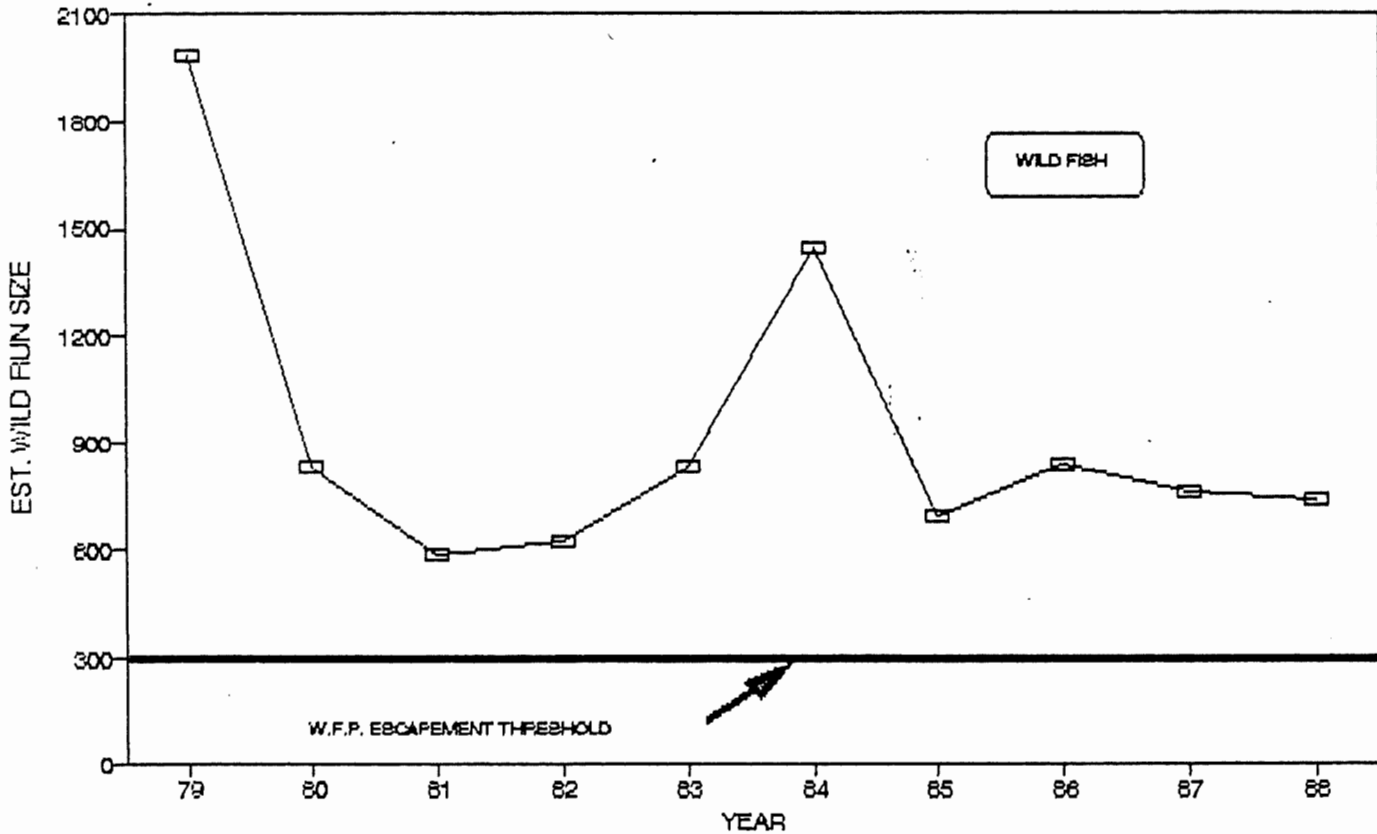
KILCHIS RIVER ESTIMATED WINTER STEELHEAD RUN SIZES
SCALE DATA COMPUTATION

EXHIBIT 9

YEAR	CATCH	RUN SIZE	H RUN	W RUN
79	1568	8253	6272	1981
80	657	3458	2628	830
81	465	2447	1860	587
82	495	2605	1980	625
83	659	3468	2636	832
84	1143	6016	4572	1444
85	546	2874	2184	690
86	666	3505	2664	841
87	605	3184	2420	764
88	586	3084	2344	740
79-83				
AVG	769	4046	3075	971
84-88				
AVG	709	3733	2837	896

.19 EXPLOITATION RATE
76% HATCHERY
24% WILD

WINTER STEELHEAD RUN SIZE
KILCHIS RIVER



MIAMI RIVER ESTIMATED WINTER STEELHEAD RUN SIZES
SCALE DATA COMPUTATION

EXHIBIT 10

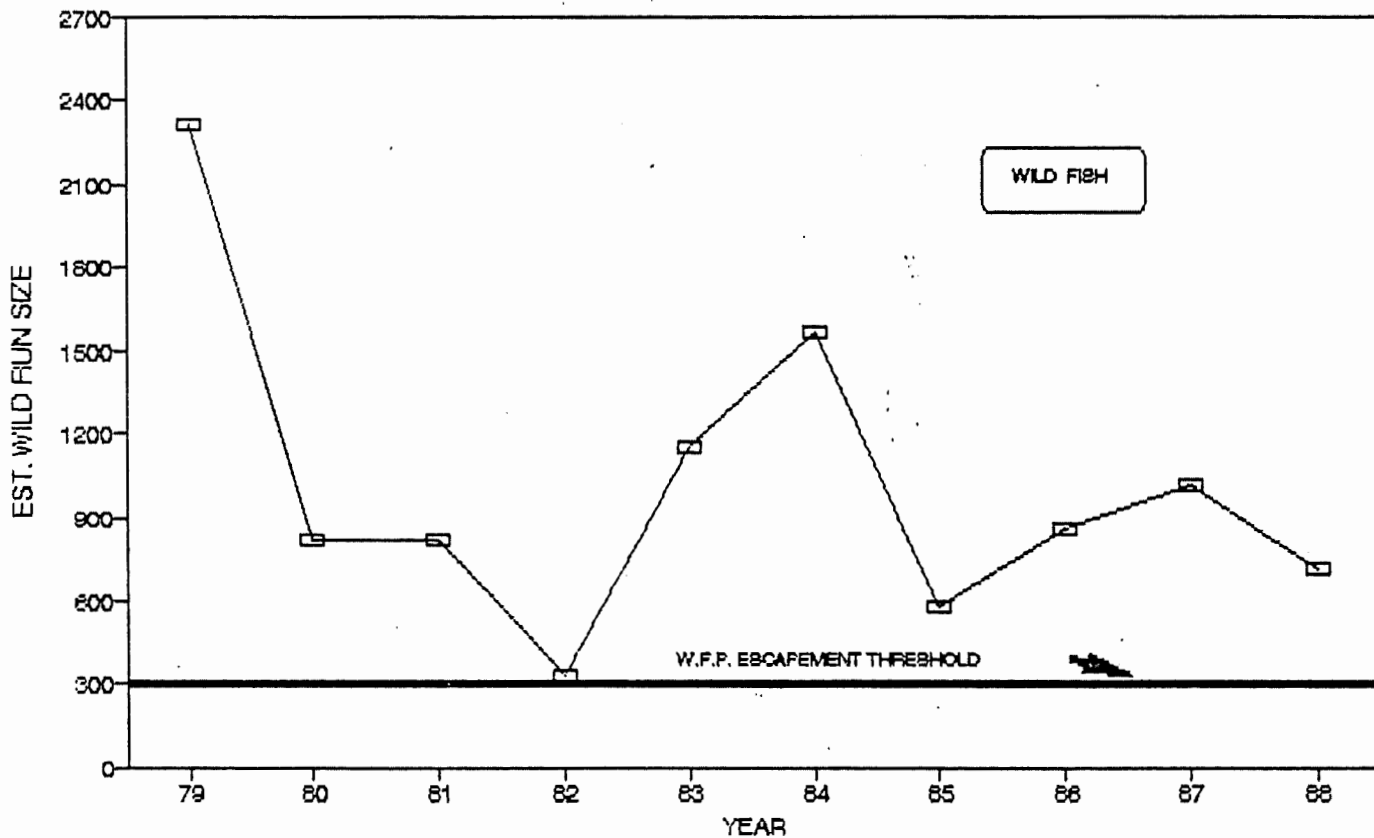
YEAR	CATCH	RUN SIZE	H RUN	W RUN
79	1024	5389	3072	2317
80	365	1921	1095	826
81	363	1911	1089	822
82	148	779	444	335
83	511	2689	1533	1156
84	691	3637	2073	1564
85	255	1342	765	577
86	379	1995	1137	858
87	449	2363	1347	1016
88	316	1663	948	715

.19 EXPLOITATION RATE
57% HATCHERY
43% WILD

79-83	AVG	CATCH	RUN SIZE	H RUN	W RUN
79-83	AVG	482	2538	1447	1091

84-88	AVG	CATCH	RUN SIZE	H RUN	W RUN
84-88	AVG	418	2200	1254	946

WINTER STEELHEAD RUN SIZE
MIAMI RIVER



SUMMER STEELHEAD SCALE INTERPERTATIONS
MAY 1985 - NOVEMBER 1990

RIVER	# FISH	% H	% W
Kilchis	22	100%	
Wilson	45	89%	11%
Trask	48	83%	17%
Nestucca	126	94%	6%
Three Rivers (Cedar Creek Hatchery)	90	91%	9%

WINTER STEELHEAD SCALE INTERPRETATIONS
NOVEMBER 1984 - NOVEMBER 1990

RIVER	# FISH	% H	% W
Miami	7	57%	43%
Kilchis	101	76%	24%
Wilson	362	78%	22%
Trask	482	33%	67%
Tillamook	15	80%	20%
Nestucca	236	73%	27%
Three Rivers	77	94%	6%
Little Nestucca	16	88%	12%

SEAL & NET MARKS
CEDAR CREEK HATCHERY

YEAR	FISH	SEAL	%	NET	%
1990	307	107	35%	200	65%
1991	578	185	32%	166	28%

Note: 1991 trapping still in progress.

STOCKS OF CONCERN

COASTAL CHUM SALMON - 1991

TILLAMOOK DISTRICT

1. GENERAL ASSESSMENT FROM LAST YEARS REPORT.

- Populations thought to be depressed compared to 40's & 50's.
- 1988 peak count 5th highest on record.
- 1989 peak count among lowest on record.
- Unknown if low escapement is precursor to sustained low populations.
- Lack of limiting factor information related to production potential.

2. WHAT DID WE LEARN IN THE LAST YEAR ?


Review of gillnet catch data for Tillamook Bay (1927-1961) shows similar stock "trends" to the current populations (exhibit 1). High catches followed by dramatic crashes were evident early on with random fluctuations between peaks; similar to the pattern exhibited in current spawning ground counts, trap counts, and sport catch (exhibit 2).

1990 trap data from Whiskey Creek hatchery (exhibit 3) indicated a slight increase in fish passed above the weir, while spawning ground counts (exhibit 4) indicated a slight decrease; however, this may be a result of high flow conditions limiting visibility during peak spawning times.

Gravel removal operations (bar scalping) may be having detrimental effects on spawning habitat utilization. Chum tend to avoid areas that are repeatedly scalped. Hydraulics and bedload movement on adjacent areas, as a result of the scalping, may have negative impacts on eggs and fry in the gravel at these locations.

Angler ethics, though improving, continues to be an area of concern particularly in low return years. A segment of anglers is taking advantage of the defacto "catch and release" on chum under the guise of angling for other salmon ie. chinook and steelhead.

3. WHAT ACTIONS DID WE TAKE BASED ON THAT INFORMATION ?

 - Review of historical data appears to indicate sporadic population fluctuations of unknown origin. Based on this information we retained status quo with regards to current regulations (reduced bag and season closure).

- Evaluated options available to reduce or eliminate the "catch & release" harassment factor.

- Began working through HCD with DSL and DOGAMI to establish data that will provide eventual cessation of gravel removal from river systems based upon habitat protection needs (multiple species benefit).

4. CURRENT OVERALL ASSESSMENT AND WHERE ARE WE HEADED ?

Chum populations are currently at low levels, but appear to be exhibiting "trends" reasonably consistent with the historical data available for the district. Factors affecting stock status are not well documented, and limited opportunity exists to enhance the population. Reduce bag limits and seasons appear to have been accepted by most anglers and are doubtless allowing additional escapement that is needed in low return years. The issue of catch and release will be dealt with initially with an inexpensive signing program (exhibit 5), educational efforts, and increased enforcement efforts by OSP during the closure period. If these efforts do not result in substantial "compliance" district will take appropriate actions to ensure protection of spawning stocks.

Efforts will continue toward the district objective of reducing or eliminating gravel removal from river systems to protect spawning habitat.

Chum production at Whiskey Creek hatchery has discontinued, but district still requires that the weir be kept operational and all chum enumerated and passed to maintain natural production and the continuation of a historical data base.

Wild Fish Compliance: There are no hatchery programs in the district that operate for chum. Compliance with hatchery fish provisions are therefor not applicable. Tillamook Bay stocks appear to meet the 300 fish criteria even in low return years. Nestucca and Neskowin also have chum stocks, data is extremely limited but it appears that even in high return years these systems quite likely may fall below the 300 fish criteria. Neskowin stocks, are protected by seasonal and catch and release regulations for other species. This is an extremely small system with a limited amount of spawning habitat and no true estuary. Assistance is required to determine if chum stocks still are present and to what extent. The Nestucca system produces a few fish to the creel as a result of incidental catch. There is a general lack of information on available spawning habitat and overall escapement numbers. Assistance is required to determine compliance status on this system.

5. POSSIBLE ADDITIONS TO THE SENSITIVE SPECIES OR STOCKS OF CONCERN LIST.

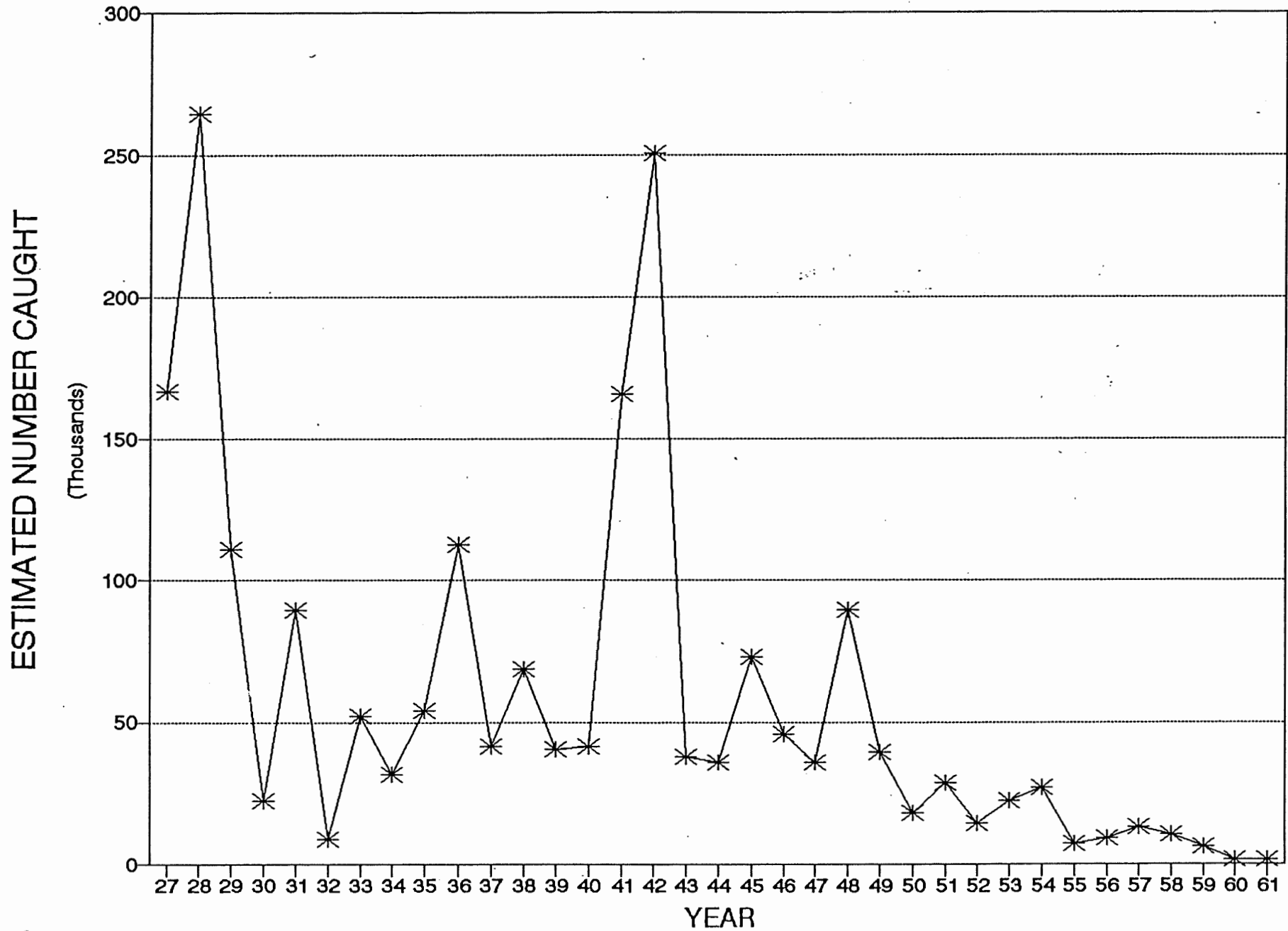
Chum are presently listed as an interregional sensitive species. After review of the criteria, district feels it more applicable to list the Tillamook Bay stocks as a Species of Concern, category 3. This decision is based on present and historical data and recent regulation changes designed to increase escapement and provide spawning stock protection while still allowing a limited recreational fishery.

Nestucca and Neskowin stocks should be placed in the Species of Concern category 2, and given a high priority for data collection, evaluation and WFP compliance status and necessary protection measures.

The overall nature of these stocks will likely keep them in the Sensitive Species or Species of Concern groups now available. Continual monitoring will be necessary to insure the objectives of its group placement are being met and that protection measures are applied as required.

CHUM GILLNET CATCH 1927-1961 TILLAMOOK BAY

EXHIBIT 1

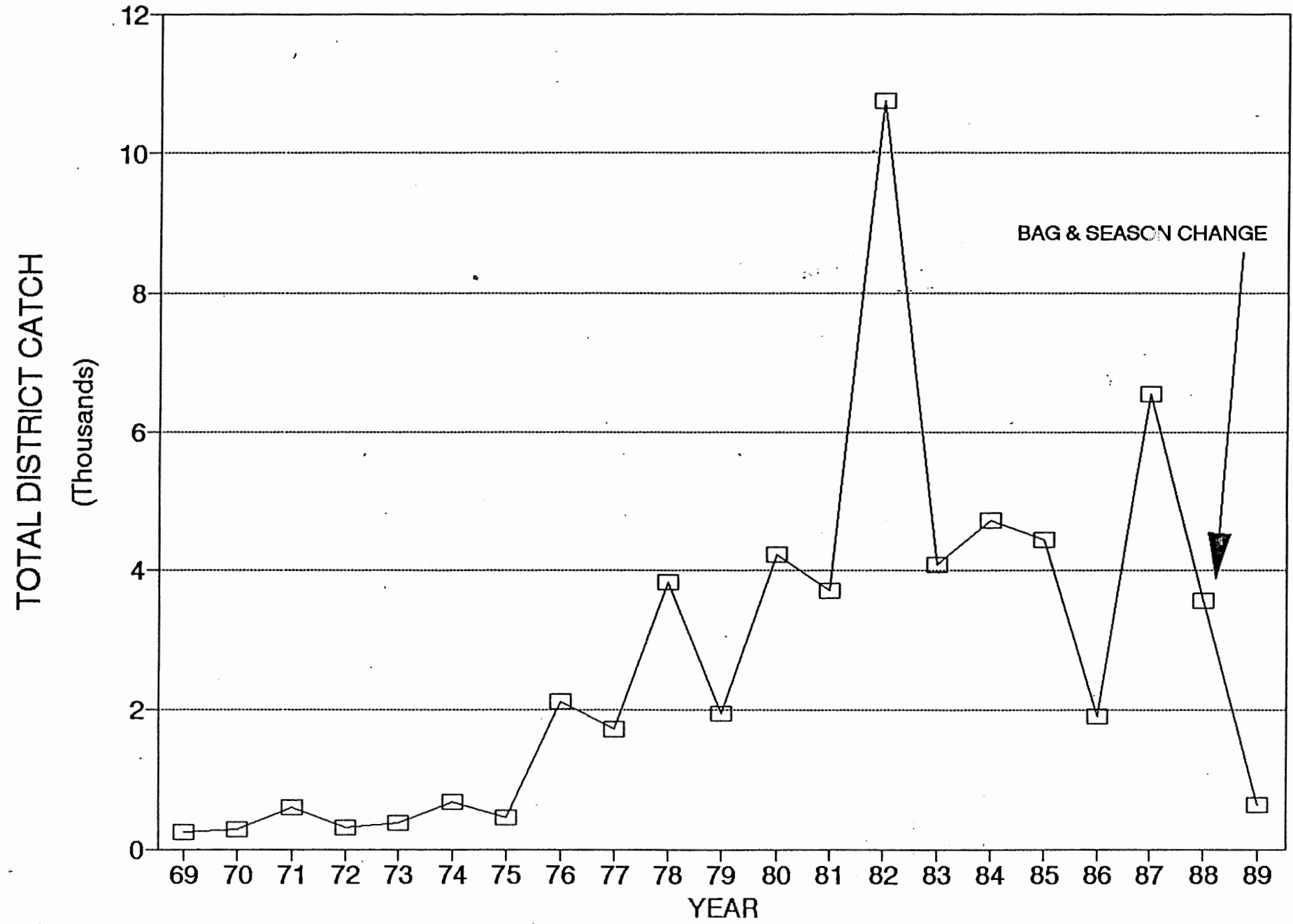


COMMERCIAL CHUM SALMON LANDINGS
TILLAMOOK BAY
ESTIMATED NO. FROM LANDING POUND

YEAR CATCH

27	166460
28	264570
29	110440
30	22070
31	89320
32	8370
33	52070
34	31710
35	53930
36	112190
37	41340
38	68370
39	40260
40	41410
41	165620
42	250110
43	37610
44	35850
45	72640
46	45420
47	35830
48	89320
49	39190
50	18200
51	28310
52	14390
53	22120
54	26990
55	7130
56	9330
57	12670
58	9930
59	6180
60	1150
61	1530

CHUM CATCH TILLAMOOK DISTRICT



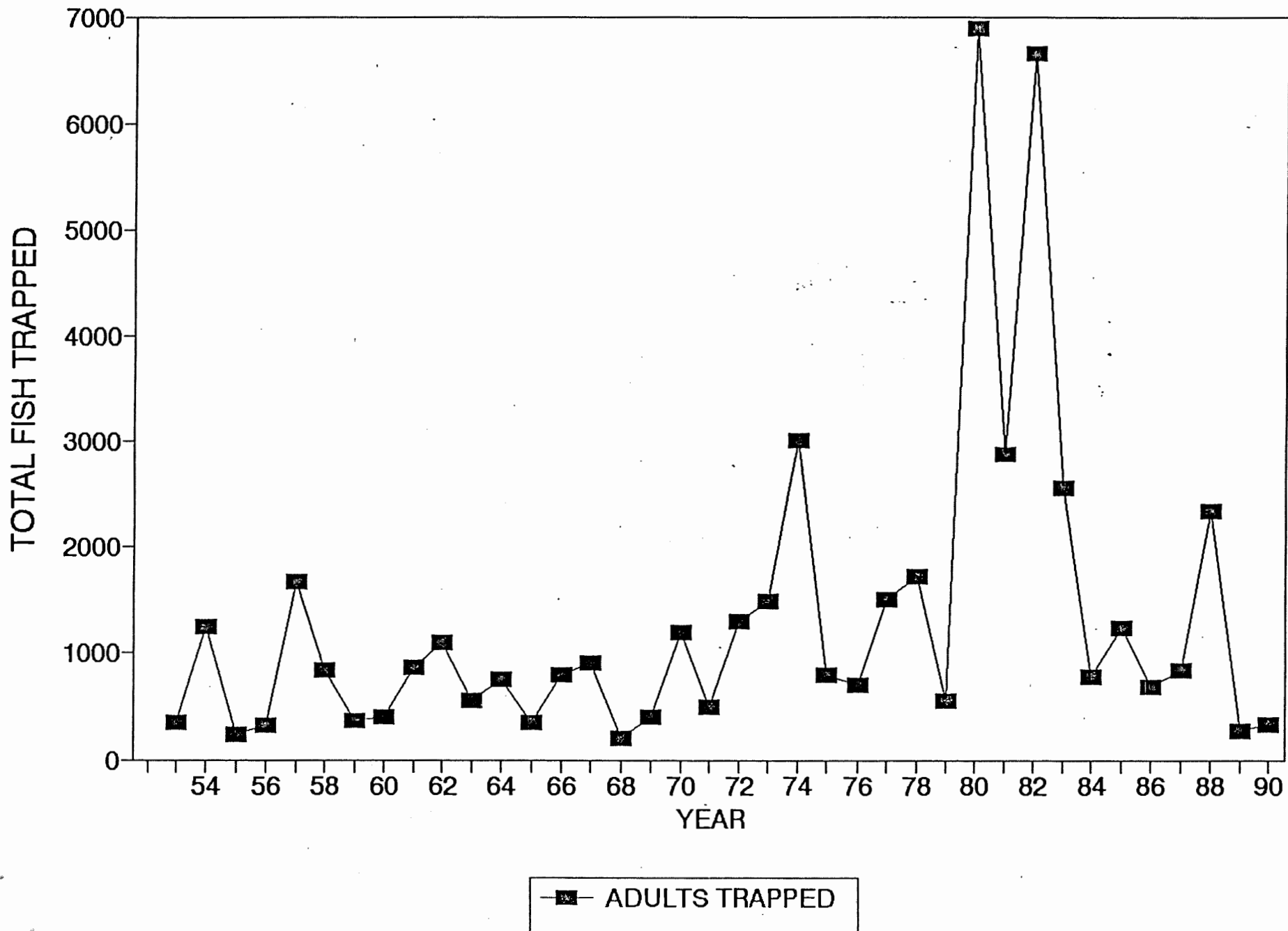
TILLAMOOK DISTRICT
CHUM CATCH STATISTICS

YEAR MIAMI KILCHIS WILSON TRASK TILL. R. NESTUCCA THREE R. L. NEST. T. BAY NESKOWIN TOTAL

YEAR	MIAMI	KILCHIS	WILSON	TRASK	TILL. R.	NESTUCCA	THREE R.	L. NEST.	T. BAY	NESKOWIN	TOTAL
69	9	126	53	24	0	0	0	0	2	30	244
70	3	97	100	54	0	0	0	13	3	2	272
71	48	266	148	99	5	0	0	6	18	10	600
72	98	100	6	64	7	11	0	8	0	2	296
73	14	266	7	44	9	0	0	21	0	0	361
74	202	206	162	66	5	12	0	11	4	6	674
75	99	223	64	66	1	0	0	0	4	0	457
76	1345	260	485	0	12	0	0	25	0	3	2130
77	776	331	540	0	24	0	16	25	0	8	1720
78	2993	312	415	6	28	37	0	38	16	0	3845
79	1211	608	120	0	0	12	0	6	0	0	1957
80	2845	1044	240	0	12	34	0	18	40	3	4236
81	2430	1098	136	0	4	0	0	12	24	0	3704
82	6594	3688	323	39	26	19	0	17	53	0	10759
83	1585	2239	161	25	6	18	0	38	25	0	4097
84	2173	2213	187	25	32	45	6	20	22	0	4723
85	2282	1933	145	28	16	16	8	4	16	0	4448
86	887	847	47	29	7	4	4	11	77	0	1913
87	4108	2246	93	24	15	30	0	5	25	0	6546
88	2004	1264	183	28	12	8	0	8	58	0	3565
89	205	287	44	18	11	11	4	22	30	0	632
90											

1988: Chum bag reduced to 1 fish/day and seasonal closure.

ADULT RETURNS - WHISKEY CR. TILLAMOOK DISTRICT



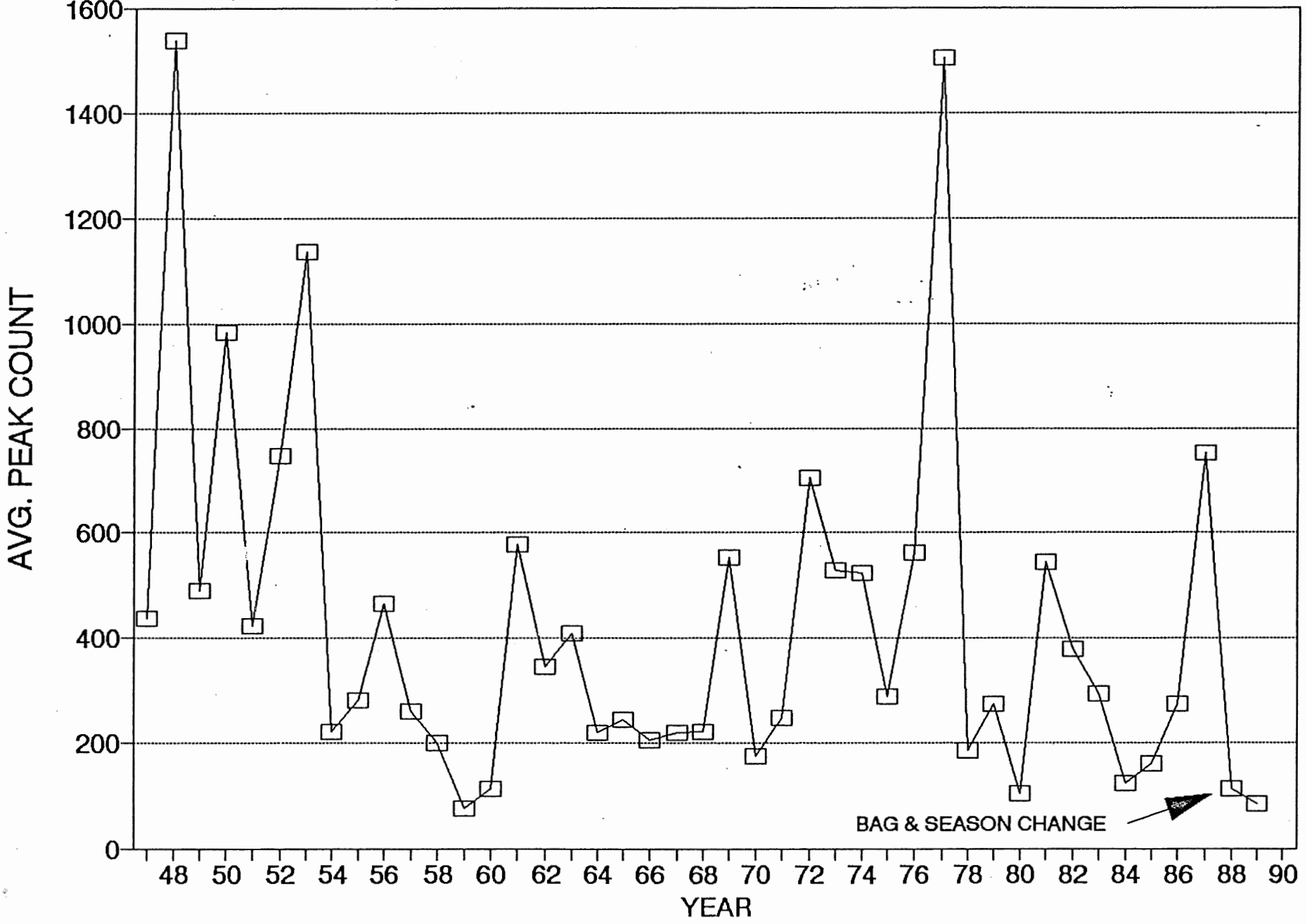
CHUM - WHISKEY CR. TRAPPING

YEAR TRAP

	343
54	1255
	240
56	328
	1680
58	843
	368
60	398
	875
62	1100
	552
64	753
	353
66	793
	913
68	197
	400
70	1200
	500
72	1300
	1500
74	3012
	800
76	707
	1506
78	1724
	548
80	6878
	2879
82	6646
	2569
84	791
	1238
86	686
	834
88	2343
	266
90	333 TRAP CLOSED LATE NOV

CHUM PEAK COUNTS TILLAMOOK DISTRICT

Fires from 1933 - 1952



SPAWNING SURVEY PEAK COUNTS
TILLAMOOK DISTRICT

YEAR CHUM

	91905
48	437
	1536.5
50	490
	981.2
52	422.6
	744.4
54	1136
	221.5
56	279
	464.5
58	261.4
	199
60	78
	113
62	577.8
	343.1
64	408
	220
66	244
	204
68	217.7
	222
70	553.7
	175
72	248
	704
74	527
	522
76	289.8
	562.7
78	1505.2
	184.8
80	275
	104
82	545
	379
84	295
	125
86	159
	275
88	751
	112
90	86

Total peak count/total survey miles

ANGLERS

**CHUM ANGLING CLOSES ON NOVEMBER 15.
NO CATCH AND RELEASE AFTER THIS DATE.
Continued chum angling after NOVEMBER 15
may result in a total angling closure
to protect spawning fish.**



SPECIES OF CONCERN

COASTAL CUTTHROAT TROUT 1991

TILLAMOOK DISTRICT

1. GENERAL ASSESSMENT FROM LAST YEARS REPORT.

- Switched back to Alsea stock to attain desired size.
- Opening weekend and searun program from same stock.
- Lack of adequate life history data.
- Public perceives a decline in searun cutthroat trout populations.

2. WHAT DID WE LEARN FROM LAST YEARS REPORT ?

Alsea stock attained the desired size for opening weekend stocking (3/lb), but K-factors indicate that our "smolt" stock was not attaining the standard K-factor for smolts ("1") by their release date (1990 K = 1.28).

There appears to be only a very limited "target" fishery for searuns. Attempts to generate searun creel data have been largely unsuccessful; a review of the literature infers that it tends to be a rather site and time specific event on a daily basis.

Limited creel and angler information indicate cutthroat to be in-system virtually year round. It is unknown in most cases if these are "fresh" fish; however, there are indications of in-migrants in late spring, late summer and winter.

3. WHAT ACTIONS DID WE TAKE BASED ON THAT INFORMATION ?

- Continue use of Alsea stock with smolt release size and timing consistent with Giger's data until better data is obtained.
- Habitat, as understood, is protected as possible via input into various agency permitting processes such as DSL, ODF, DEQ, etc.
- Continue to collect K-factors for 1991 smolts.

4. WHAT IS THE CURRENT OVERALL ASSESSMENT, AND WHERE DO WE GO FROM HERE ?

Current assessment of cutthroat stocks is complicated at best because of the lack of inventory. Fish produced for opening weekend trout anglers appear to be a desirable and well utilized product. Data is so limited on "searun" stocks that it is impossible to determine if the occurrence of in-system fish are of hatchery or wild origin. The cutthroat fishery outside of the trout opener seems to be the result of incidental catch rather than a traditional target fishery and tends to be rapidly overwhelmed by salmon and steelhead fisheries present in the district.

Some of the issues that need to be addressed in the future include: Hatchery vs. wild stock conditions; lengths and scales need to be collected from all possible sources. Giger indicated most angling pressure (catch) on the Nestucca was in the spring with a heavy catch of hatchery stocks. Present objectives have us trying to "supplement" a fall fishery that had limited historical use and appears to have limited target interest today. District needs to work with the species coordinator to re-evaluated district objectives, and determine the suitability of the present stock based on that evaluation. Predation may play a larger role in the declines of searun populations now than historically in light of the Marine Mammals Act and the importance of estuaries in the life history of this species.

The bottom line: we have many more questions than answers. For the most part cutthroat have taken a backseat to the other fish resources and received little attention. Assistance is needed to fill in the blanks to properly manage this resource regardless of its status as a fishery.

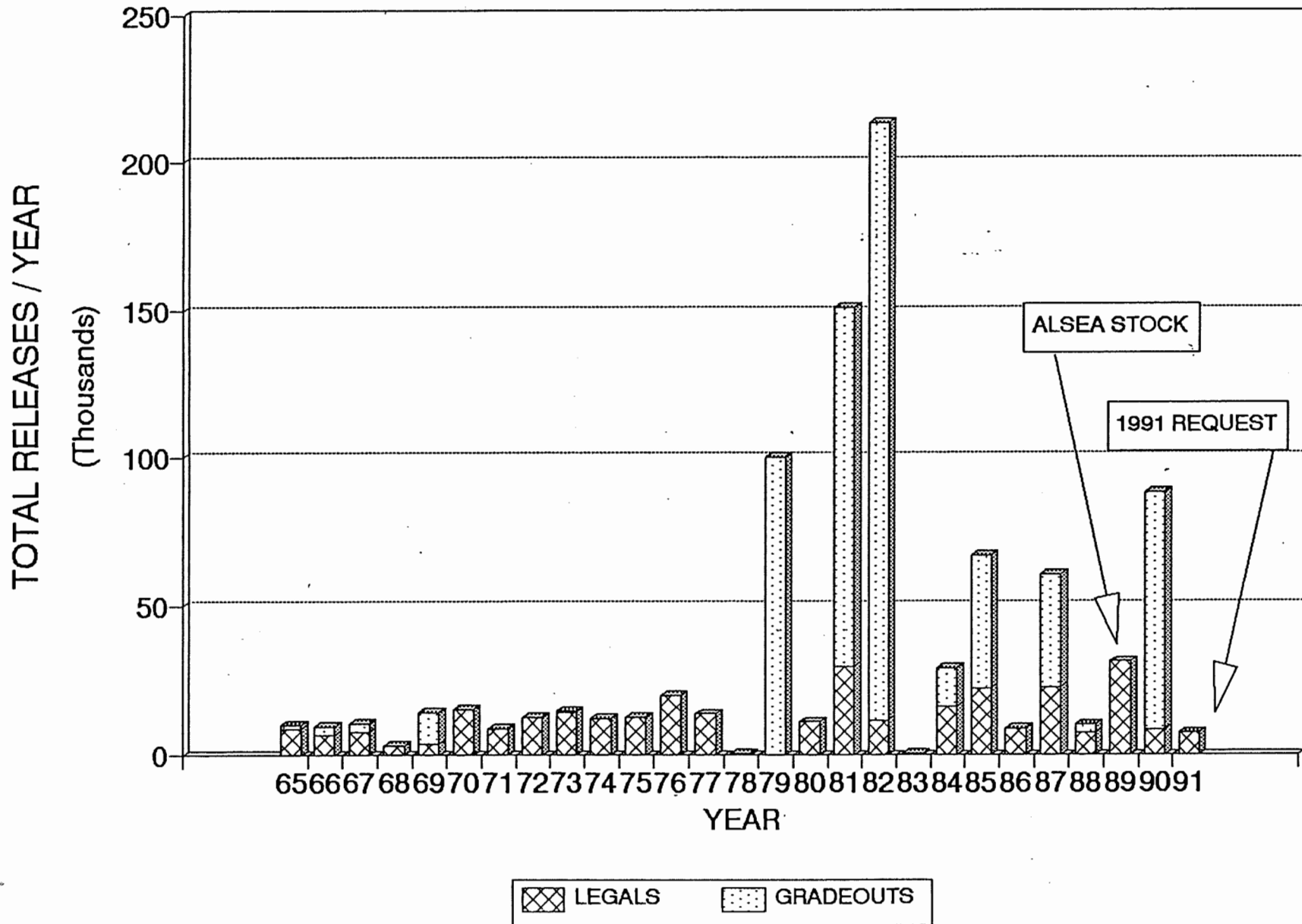
Wild Fish Policy compliance: So little data is available for local stocks, assessment of compliance may be little more than a guess at this point. Considerable work needs to be done with this stock before an accurate decision can be made; such as: H vs. W returns, spawning locations and populations, more complete life history data and evaluation of present broodstock suitability.

5. POSSIBLE ADDITIONS TO THE SENSITIVE SPECIES OR STOCKS OF CONCERN LIST.

Coastal cutthroat trout are currently listed under category 3 of the stocks of concern; stocks which we suspect problems but do not have data.

CUTTHROAT RELEASES - LAKES TILLAMOOK DISTRICT

EXHIBIT 1



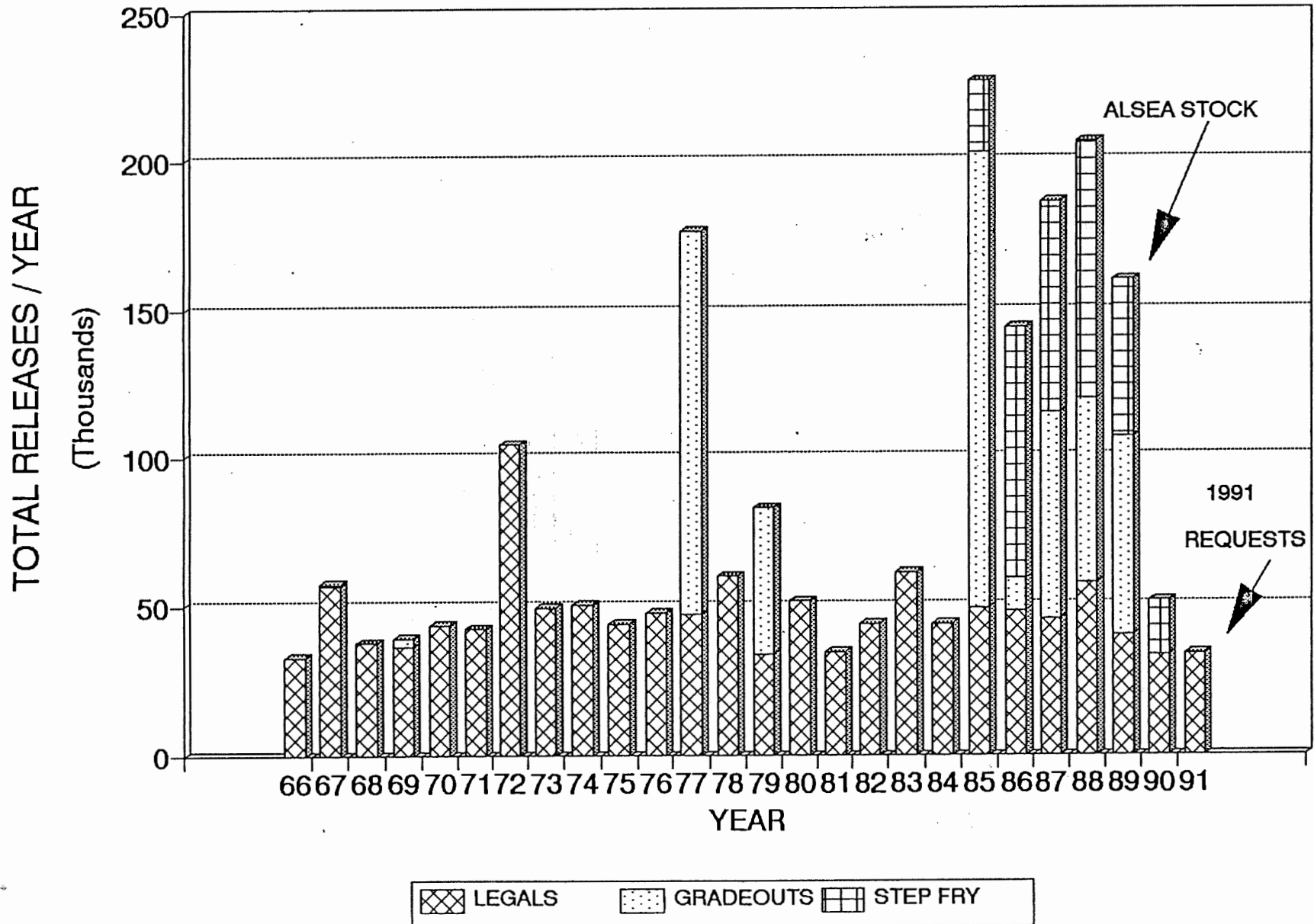
TILLAMOOK DISTRICT
 CUTTHROAT TROUT RELEASE DATA

LEGAL GRADES
 YEAR LAKES LAKES TOTAL

48		5080	5080
49			0
50		8990	8990
51			0
52		20080	20080
53		15000	15000
54		31910	31910
55	500	6990	7490
56	4640	4950	9590
57	2600		2600
58	3310		3310
59	3600		3600
60	3300	11220	14520
61	8210		8210
62	8000	23570	31570
63	17710	13480	31190
64	5500	5940	11440
65	8880	1540	10420
66	6700	3000	9700
67	7510	3200	10710
68	2950		2950
69	3410	11130	14540
70	15090		15090
71	9000		9000
72	12480		12480
73	14010	1010	15020
74	12240		12240
75	12520		12520
76	20020		20020
77	13410		13410
78		500	500
79		100330	100330
80	11040		11040
81	29400	121700	151100
82	11650	202090	213740
83	532		532
84	16390	12880	29270
85	22010	44970	66980
86	9050		9050
87	22600	38430	61030
88	7060	3000	10060
89	31420		31420
90	8440	80130	88570
91 (\$)	7000		

(\$) Indicates requests

CUTTHROAT TROUT - RIVERS TILLAMOOK DISTRICT



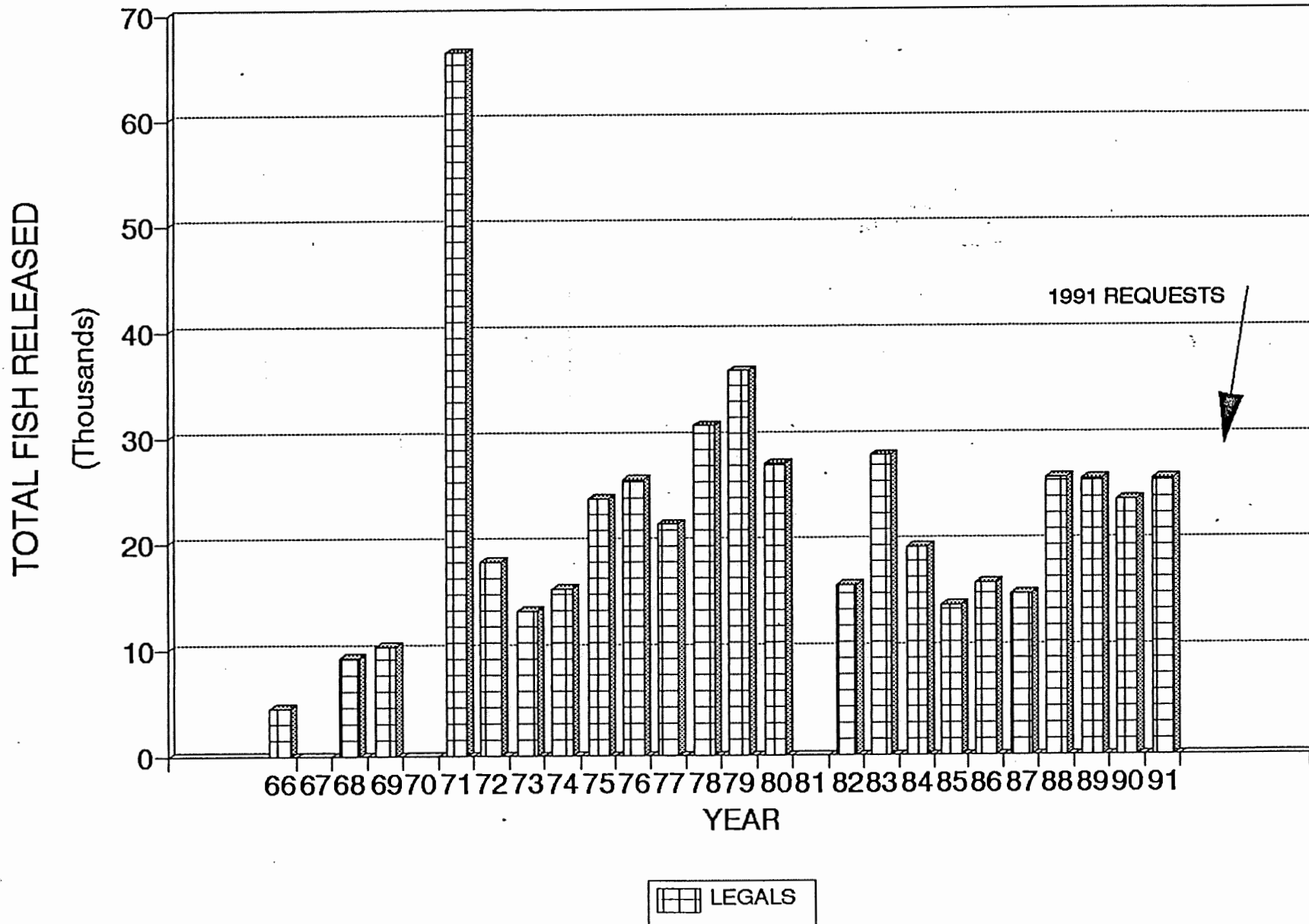
TILLAMOOK DISTRICT
CUTTHROAT TROUT RELEASE DATA

YEAR	LEGAL RIVERS	GRADE RIVERS	STEP RIVERS	TOTAL	STOCK
48	57130	908190		965320	
49	20560	1291450		1312010	
50	34230	16430		50660	
51	19590	66490		86080	
52	12850			12850	
53	13170			13170	
54	12660	36430		49090	
55	9910	3050		12960	
56	13000	5950		18950	
57	27700	2180		29880	
58	20090			20090	
59	18290			18290	
60	17240			17240	
61	35510			35510	
62	32620	37410		70030	
63	47860	780		48640	
64	16910			16910	
65	30320			30320	
66	32730	240		32970	
67	57120	670		57790	
68	37420			37420	
69	36610	3120		39730	
70	43500			43500	
71	42500			42500	
72	104290			104290	
73	49650			49650	
74	50560			50560	
75	44290			44290	
76	48040			48040	
77	47130	129470		176600	
78	60300			60300	
79	34020	49600		83620	
80	51530			51530	
81	34320			34320	NEHALEM
82	44300			44300	NEHALEM
83	61250			61250	NEHALEM
84	43980			43980	NEHALEM
85	49280	153380	24200	226860	NEHALEM
86	48610	11155	85210	144975	NEHALEM
87	45510	69890	71170	186570	NEHALEM
88	58170	62430	86840	207440	NEHALEM
89	40070	67260	53250	160580	ALSEA
90	34100	0	18500	52600	ALSEA
91	(\$ 34000				ALSEA

(\$) Indicates requests

RAINBOW TROUT - LAKES TILLAMOOK DISTRICT

EXHIBIT 3



TILLAMOOK DISTRICT
RAINBOW TROUT

LEGAL LEGAL
YEAR LAKES RIVERS TOTAL

50		5860	5860
51		18750	18750
52	200	13450	13650
53	1000	22690	23690
54	750	15270	16020
55			0
56			0
57	2480	15310	17790
58	1500	14420	15920
59	2180	14680	16860
60	2300	15550	17850
61			0
62			0
63			0
64			0
65	2500		2500
66	4400		4400
67			0
68	9200		9200
69	10230	810	11040
70			0
71	66360		66360
72	18140		18140
73	13530		13530
74	15690		15690
75	24190		24190
76	26010		26010
77	21720		21720
78	31010		31010
79	36200		36200
80	27390		27390
81			0
82	15950		15950
83	28150		28150
84	19480		19480
85	14050		14050
86	16020		16020
87	15070		15070
88	26080		26080
89	26010		26010
90	24020		24020
91	(\$ 26000		

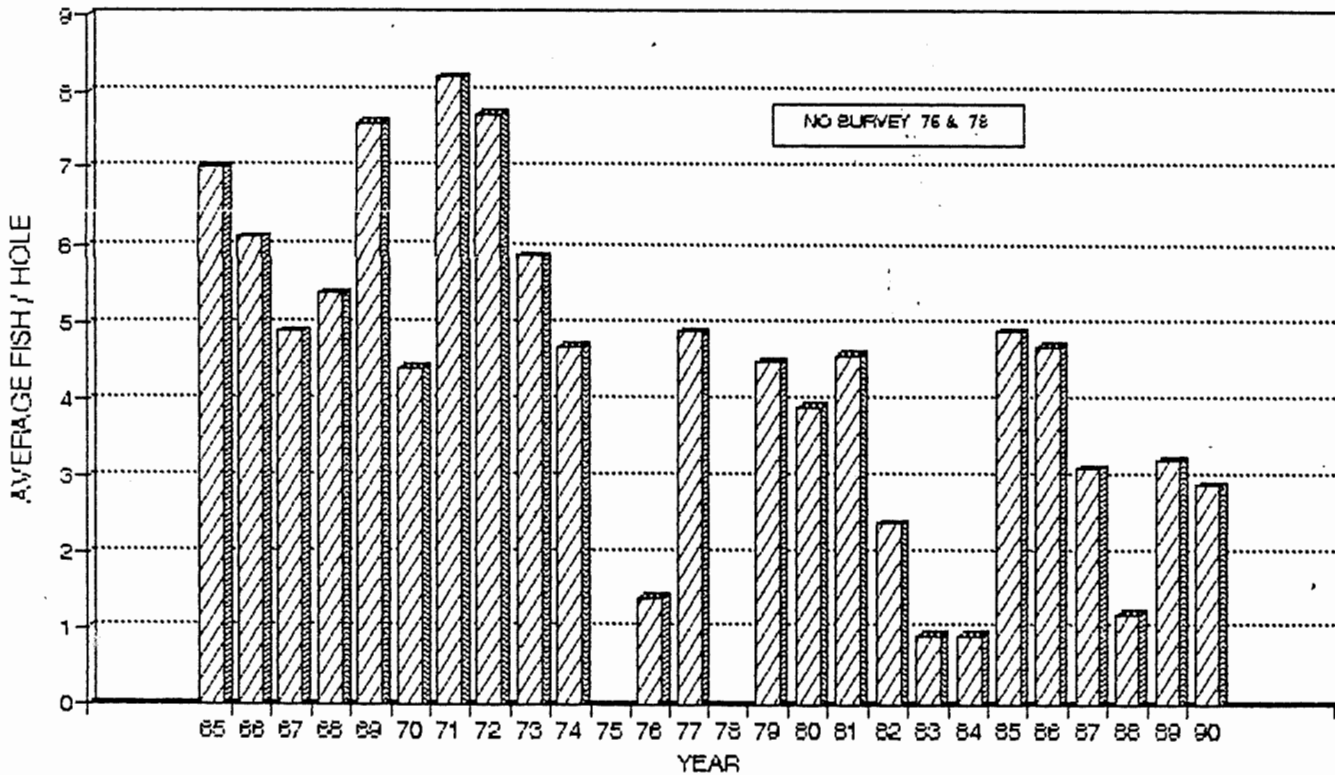
(\$) Indicates requests

SEARUN CUTTHROAT
TILLAMOOK FISH DISTRICT
RESTING HOLE SURVEY DATA

TABLE 1

YEAR	CTS/HOLE	YEAR	CTS/HOLE
65	7	79	4.5
66	6.1	80	3.9
67	4.9	81	4.6
68	5.4	82	2.4
69	7.6	83	0.9
70	4.4	84	0.9
71	8.2	85	4.9
72	7.7	86	4.7
73	5.9	87	3.1
74	4.7	88	1.2
75 NO SURVEY		89 NO SCUBA	3.2
76	1.4	90 NO SCUBA	2.9
77	4.9	91	
78 NO SURVEY			

CUTTHROAT RESTING HOLE DATA
TILLAMOOK DISTRICT



FISH REVIEW SPECIES UPDATE 1991

CHINOOK SALMON

TILLAMOOK DISTRICT

DATABASE:

Annual estimates of chinook salmon abundance are monitored through catch card estimates, spawning ground counts, and resting hole counts. A statistical creel project was designed and implemented for the 1990 fall chinook fishery in the Trask River and Tillamook Bay. Results of this survey are pending.

POPULATION STATUS:

Spring chinook (ChS) are present in the Kilchis, Wilson, Trask, and Nestucca Rivers. All of these populations are supplemented with hatchery fish, and are characterized by wide fluctuations in run size. These runs do not indicate a declining trend in recent years. Wild ChS in the Trask are characterized as self sustaining, but at low population levels. Hatchery programs are directed at minimizing potential influence on wild fall chinook stocks, while increasing angling opportunities in the rivers and bay. Poor water quality (temperature) may limit natural production in the lower reaches of the Nestucca and Trask Rivers. Prespawning mortality of ChS occurs each year in the Trask and Nestucca River. Dermocystidium appears to be the cause. The District plans to conduct juvenile snorkeling surveys downstream of these "hot" spots to assess influence on juvenile populations.

Fall chinook salmon (ChF) are present in the Miami, Kilchis, Wilson, Trask, Tillamook, and Nestucca and Little Nestucca Rivers. Abundance trends of ChF populations in all these rivers can be classified as either stable or increasing. All should be considered healthy at present. Hatchery management programs are directed at minimizing influence on wild stocks while increasing angler opportunity in the Kilchis River, Trask River, and Tillamook Bay.

STATUS OF HATCHERY PROGRAM:

Recent changes in rearing strategies for ChS and ChF allowed Trask Hatchery to utilize Gold Creek as a water source and thus eliminate a continuous disease problem with

Trask River water. The 1990 fall release of salmon from Trask Hatchery were given a clean bill of health by pathology. Changes were also made in the spawning strategy for ChF. Past egg takes at Trask Hatchery were evenly spread out during the month of November. We have shifted the egg take to place more emphasis on late eggs and thus shift mean date of return to the hatchery. Not only is this more similar to wild spawners, but will provide a later fishery. This appears to be a very workable program to replace the struggling ChW project.

WILD FISH COMPLIANCE:

The hatchery-wild composition of ChS populations is poorly documented. Volunteers collected nearly 250 scale samples from sport caught fish on the Trask River the summer of 1990. These scale samples are in the process of being interpreted and are unavailable at this time. Our assumption of 50% wild for ChS stocks in the District would indicate compliance with wild fish policy.

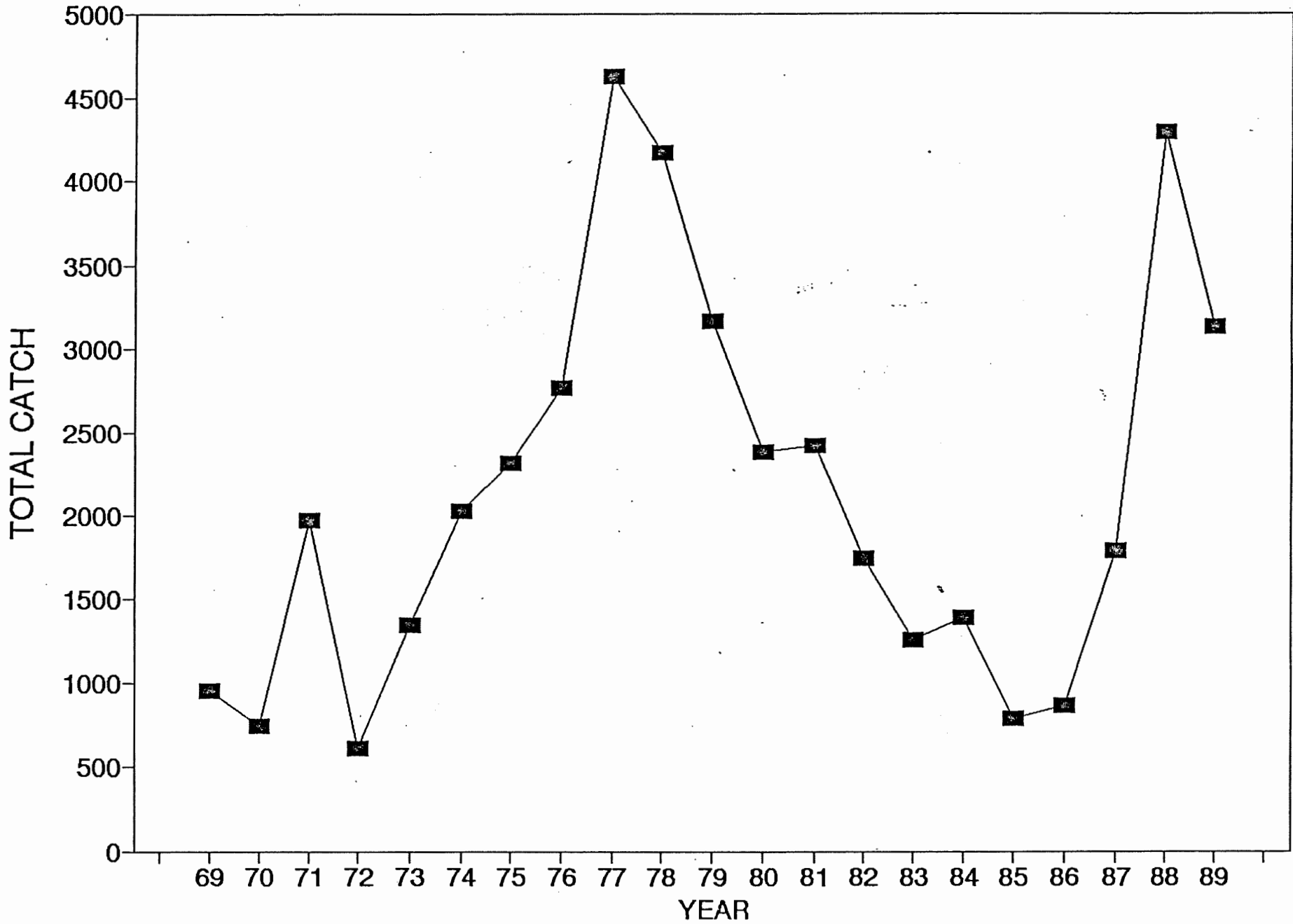
Fall run chinook are predominantly wild (95% +/-). Little or no hatchery influence (other than the Trask and Kilchis Rivers), is documented. Hatchery smolts are released into the Trask and Kilchis Rivers. Step fry are released into all District chinook rivers. We believe we are in compliance with the wild fish policy.

DIRECTION:

- Continue monitoring programs for both stocks.
- Work with species coordination to implement the wild fish policy and the chinook plan as applicable.
- Continue to collect scale data for ChS (Wild vs Hatchery data and age).
- Develop volunteer program to assist the District in monitoring return of marked ChS from Trask, Tuffy Creek, and Whiskey Creek Hatcheries.

SPRING CHINOOK CATCH TILLAMOOK DISTRICT

EXHIBIT 1



CATCH STATISTICS
TILLAMOOK DISTRICT

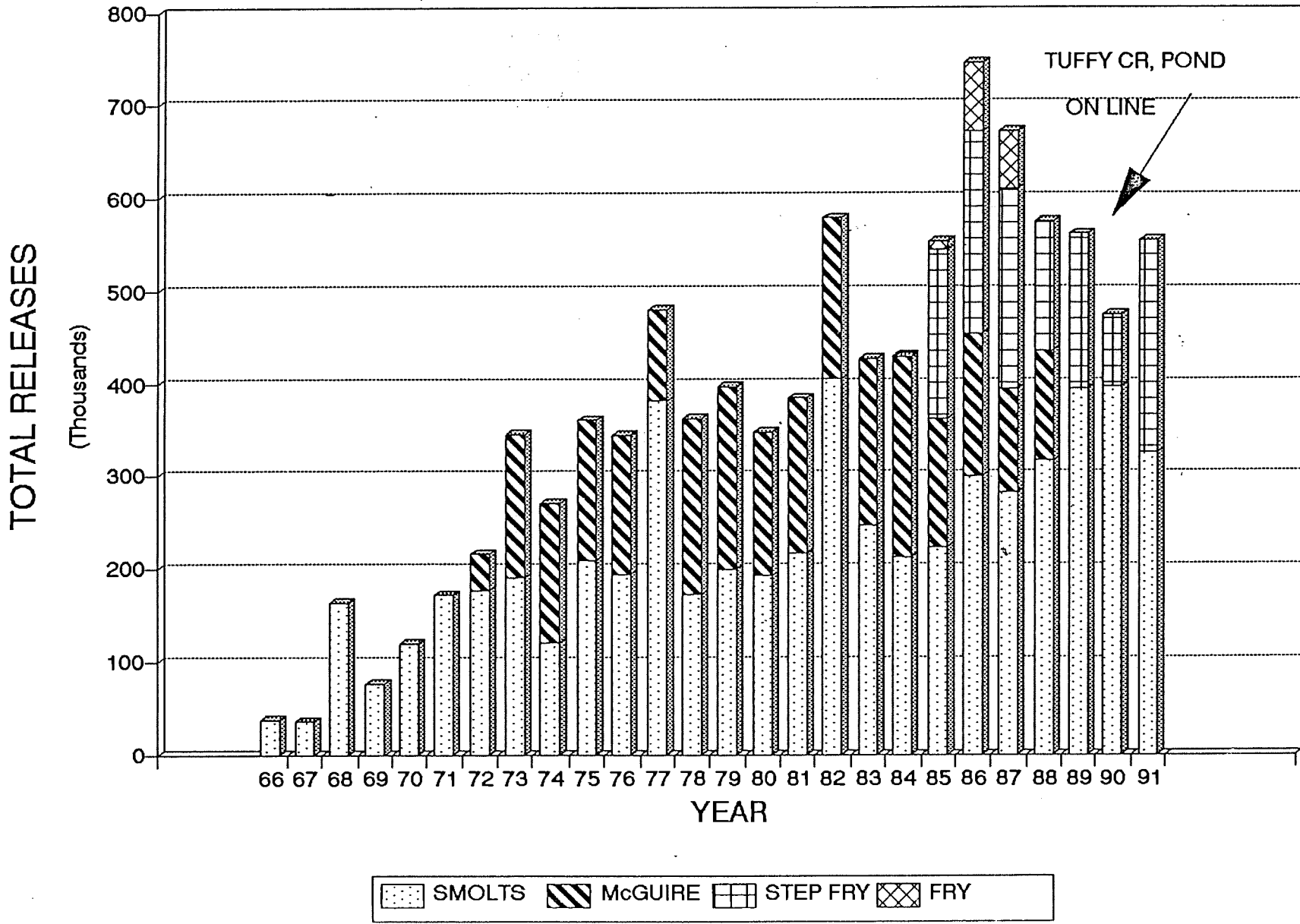
SPRING CHINOOK

YEAR	MIAMI	KILCHIS	WILSON	TRASK	TILL R.	NESTUCCA	THREE R.	L. NEST.	NESKOWIN	T.BAY	TOTAL

69	9	1	14	421	8	343				158	954
70	5	8	72	416	25	132		8		75	741
71	0	43	363	1150	28	340				51	1975
72	0	3	147	190	1	245				29	615
73	4	19	218	828	10	228		14		29	1350
74	0	16	287	1182	18	478		4		40	2025
75	8	29	503	1149	4	623		1			2317
76	4	22	286	1980	0	421		9		45	2767
77	6	48	887	2510	3	1040		5		122	4621
78		94	1004	2101	0	627		6		334	4166
79		22	469	1541		741				396	3169
80		6	122	1321		785		4		148	2386
81		0	187	798	3	1306		2		124	2420
82		6	232	798	2	644		4		63	1749
83		0	237	329		567		1		128	1262
84		9	54	619	12	432		5		259	1390
85		0	49	285	5	231		11		207	788
86	4	1	54	415	14	324		16		41	869
87		0	120	426	4	893				349	1792
88		16	189	1965	5	1396				718	4289
89		4	149	865	7	1297	55			751	3128

SPRING CHINOOK RELEASES TILLAMOOK DISTRICT

EXHIBIT 2



TILLAMOOK DISTRICT
 SPRING CHINOOK RELEASE DATA

YEAR	SMOLT	PRE SMOLT	FRY	(FRY) Mc GUIRE	STEP	TOTAL
49	7380					7380
50	3360					3360
51	0					0
52	0					0
53	0					0
54	0					0
55	25690					25690
56	17230					17230
57	42860					42860
58	0					0
59	36590					36590
60	0					0
61	0					0
62	18580					18580
63	50270					50270
64	49890					49890
65	58730					58730
66	37230					37230
67	35100					35100
68	162770					162770
69	75870					75870
70	118750					118750
71	171480					171480
72	176280			39900		216180
73	189220			156430		345650
74	120280			150000		270280
75	208090			152500		360590
76	192750			150000		342750
77	381190			99450		480640
78	170490			191790		362280
79	198700	31450		197900		428050
80	192330			155850		348180
81	215120			169710		384830
82	404290			174200		578490
83	246770			180870		427640
84	211540			218800		430340
85	222160		9160	139730	183600	554650
86	299470		73800	155330	219480	748080
87	282435		62160	113020	216420	674035
88	315760			120000	140240	576000
89	394400				168020	562420
90	396470	134980			78920 (A)	610370
91	325000 *				230000 *	

* indicates requests

89 SMOLTS INCLUDE:

13380 STEP - WHISKEY CREEK HATCHERY

109240 TUFFY CREEK REARING POND

SMOLT: < 20/LB

90 SMOLTS INCLUDE:

PRESMOLT: 20 - 125/L

53750 STEP - WHISKEY CR. HATCHERY

104670 TUFFY CREEK POND

FRY: >125/LB

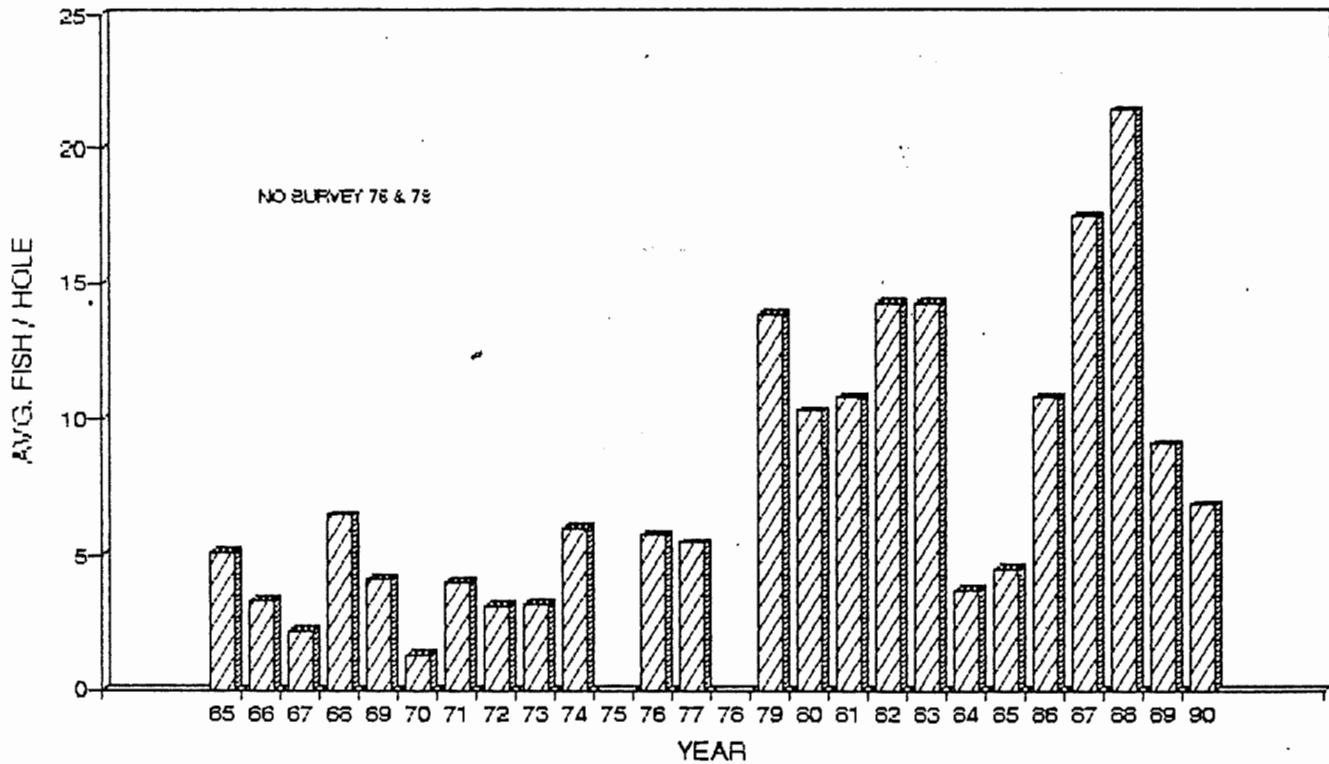
(A): indicates only STEP fry release

SPRING CHINOOK
 TILLAMOOK FISH DISTRICT
 RESTING HOLE SURVEY DATA (ADULTS & JACKS)

YEAR	CHS/HOLE	YEAR	CHS/HOLE
65	5.1	79	13.9
66	3.3	80	10.3
67	2.2	81	10.8
68	6.5	82	14.3
69	4.1	83	14.3
70	1.3	84	3.7
71	4	85	4.5
72	3.1	86	10.8
73	3.2	87	17.5
74	6	88	21.4
75 NO SURVEY		89 NO SCUBA	9.1
76	5.8	90 NO SCUBA	6.9
77	5.5		
78 NO SURVEY			

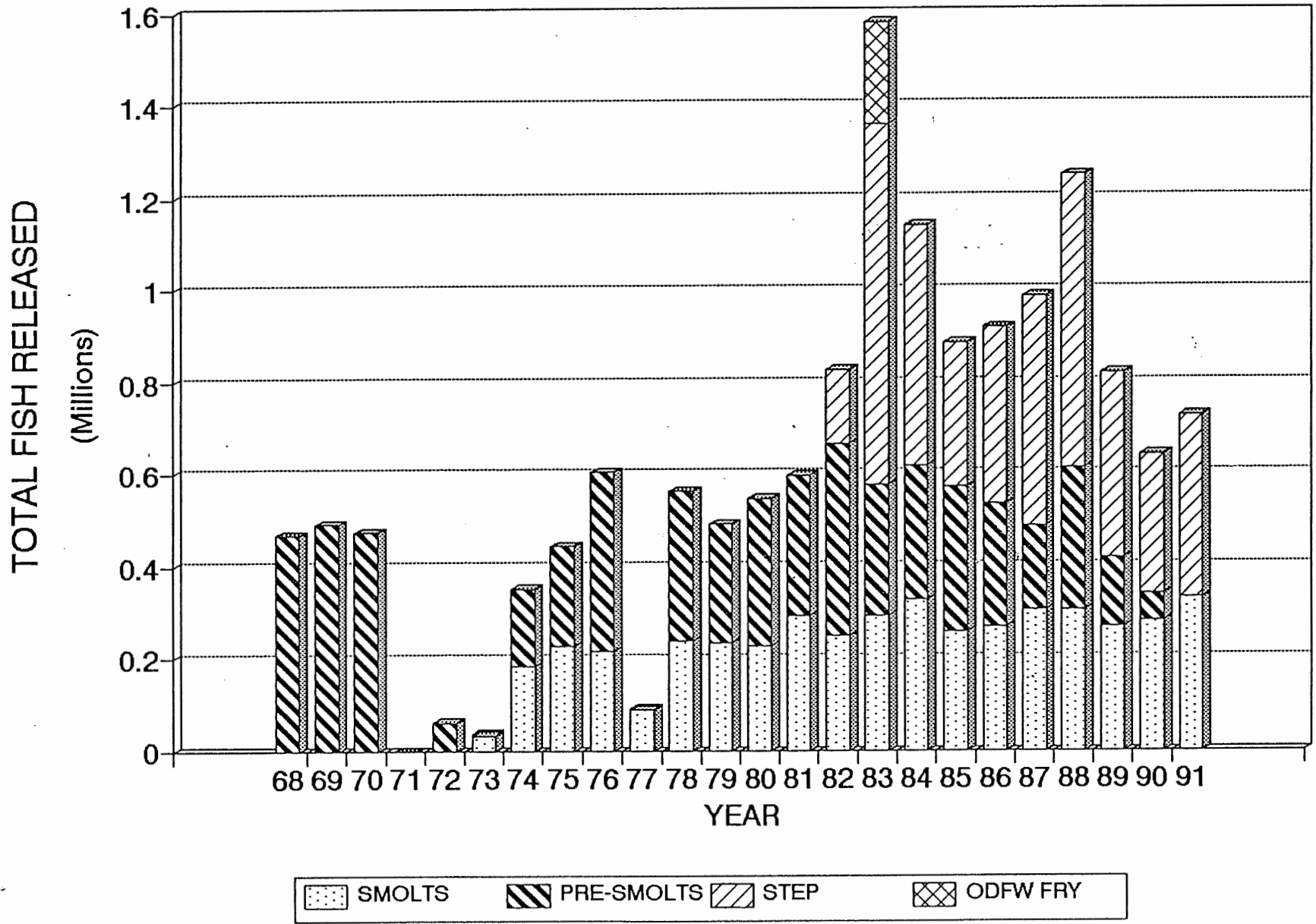
CHS RESTING HOLE DATA
 TILLAMOK DISTRICT

EXHIBIT 3



FALL CHINOOK RELEASES TILLAMOOK DISTRICT

EXHIBIT 4



TILLAMOOK DISTRICT
 FALL CHINOOK RELEASE DATA

YEAR	SMOLT	PRE SMOLT	FRY	STEP	TOTAL
68	0	466830			466830
69	0	490860			490860
70	0	475190			475190
71	0	0			0
72	0	58440			58440
73	34510	0			34510
74	183750	169700			353450
75	226870	217370			444240
76	218190	388530			606720
77	89020	0			89020
78	239060	326910			565970
79	235630	256820			492450
80	227460	318860			546320
81	291670	306900			598570
82	246840	419920		162400	829160
83	290910	284830	219310	785040	1580090
84	326640	293690		526340	1146670
85	256780	317340		312770	886890
86	268505	267080		383810	919395
87	304660	184580		502310	991550
88	306460	310670		638610	1255740
89	269900	151700		401350	822950
90	282086	58833		302300	643219
91	333000 *			400000 *	

* indicates requests

NOTE: RELEASES INCLUDE WINTER CHINOOK SMOLTS

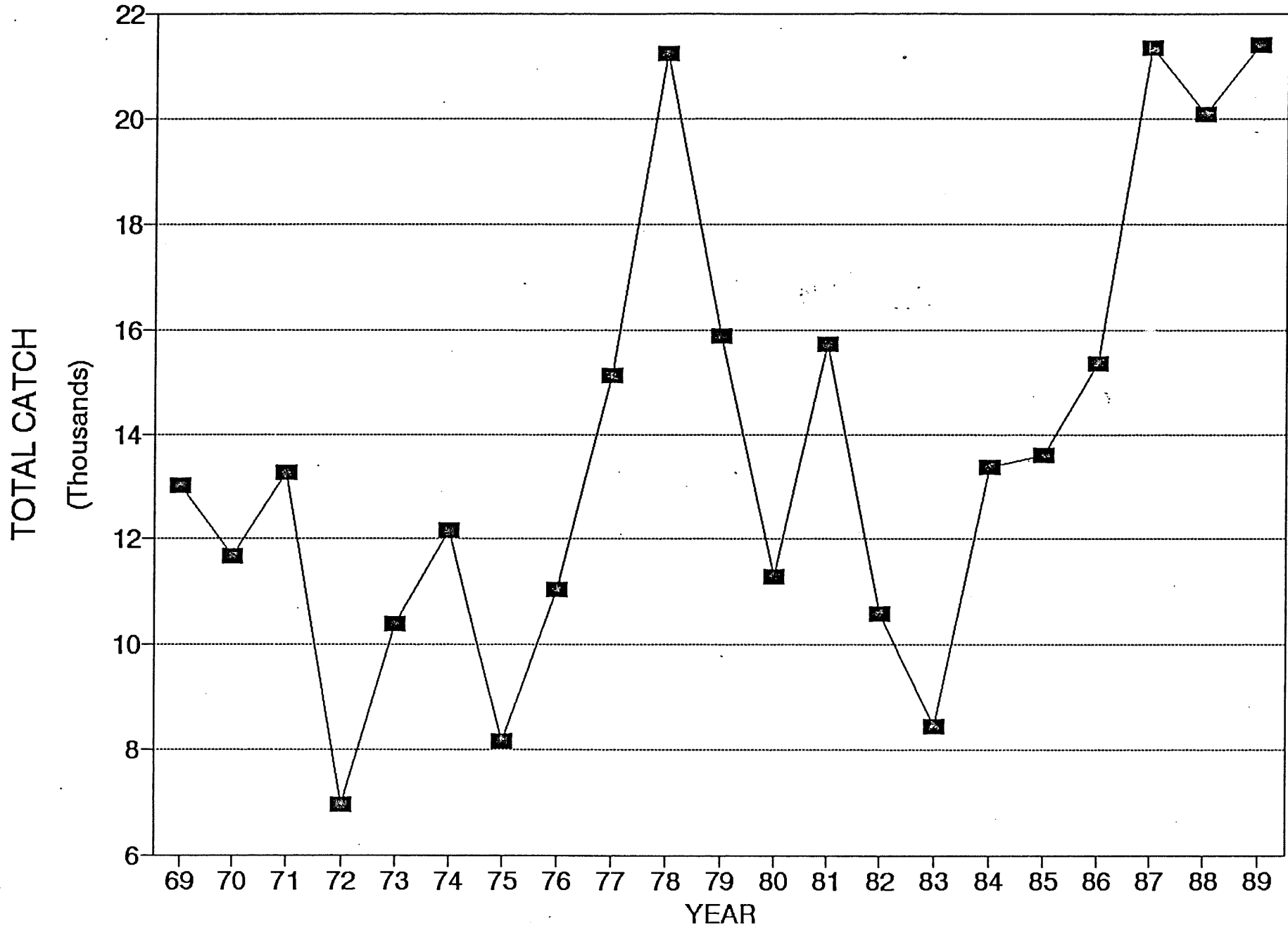
87 13190
 88 47970
 89 5810

SMOLT: < 20/LB

PRESMOLT: 20-125/LB

FRY: > 125/LB

FALL CHINOOK CATCH TILLAMOOK DISTRICT



CATCH STATISTICS
TILLAMOOK DISTRICT

FALL CHINOOK

YEAR	MIAMI	KILCHIS	WILSON	TRASK	TILL R.	NESTUCCA	BEAVER C	THREE R.	L.NEST.	NESKOWIN	T.BAY	SAND LK	TOTAL
69	43	342	2157	2953	331	3198				70	3922		13016
70	10	255	1694	3812	435	3357			187	26	1905		11681
71	53	374	2253	4301	255	3445			182	41	2353		13257
72	17	166	901	1878	181	2670			81	26	1046		6966
73	19	248	2054	3413	289	2568			169	10	1615		10385
74	131	155	1777	5174	539	2377			57	2	1960		12172
75	70	186	1740	2357	458	2615	16		66	24	658		8174
76	525	204	1492	3688	17	2398	30	3	449	1	2266		11043
77	481	264	2745	5177	184	3566	0	151	139	13	2395		15115
78	145	573	4214	5985	346	4331	6	208	251	3	5180	9	21245
79	21	341	4088	3177	162	3189	0	289	174		4445	6	15892
80	67	249	2097	3534	237	1888	6	274	189	6	2750	3	11294
81	28	168	4146	3550	195	3735	12	159	191	8	3531	0	15711
82	119	210	2128	2554	173	1866	3	162	132		3244	6	10594
83	22	262	1633	2083	287	1479	6	91	141		2450	0	8448
84	54	405	3383	3280	369	2328	0	111	332		3116	3	13381
85	75	478	3035	3780	255	2703	8	349	272		2649	4	13600
86	74	286	2737	3472	696	2629	7	218	441		4781	29	15363
87	316	218	2222	6804	669	3007	5	222	568		7301	30	21357
88	241	335	2596	4334	583	2822	4	262	607		8303	8	20091
89	160	363	2811	6776	662	2398	0	430	586		7197	15	21398

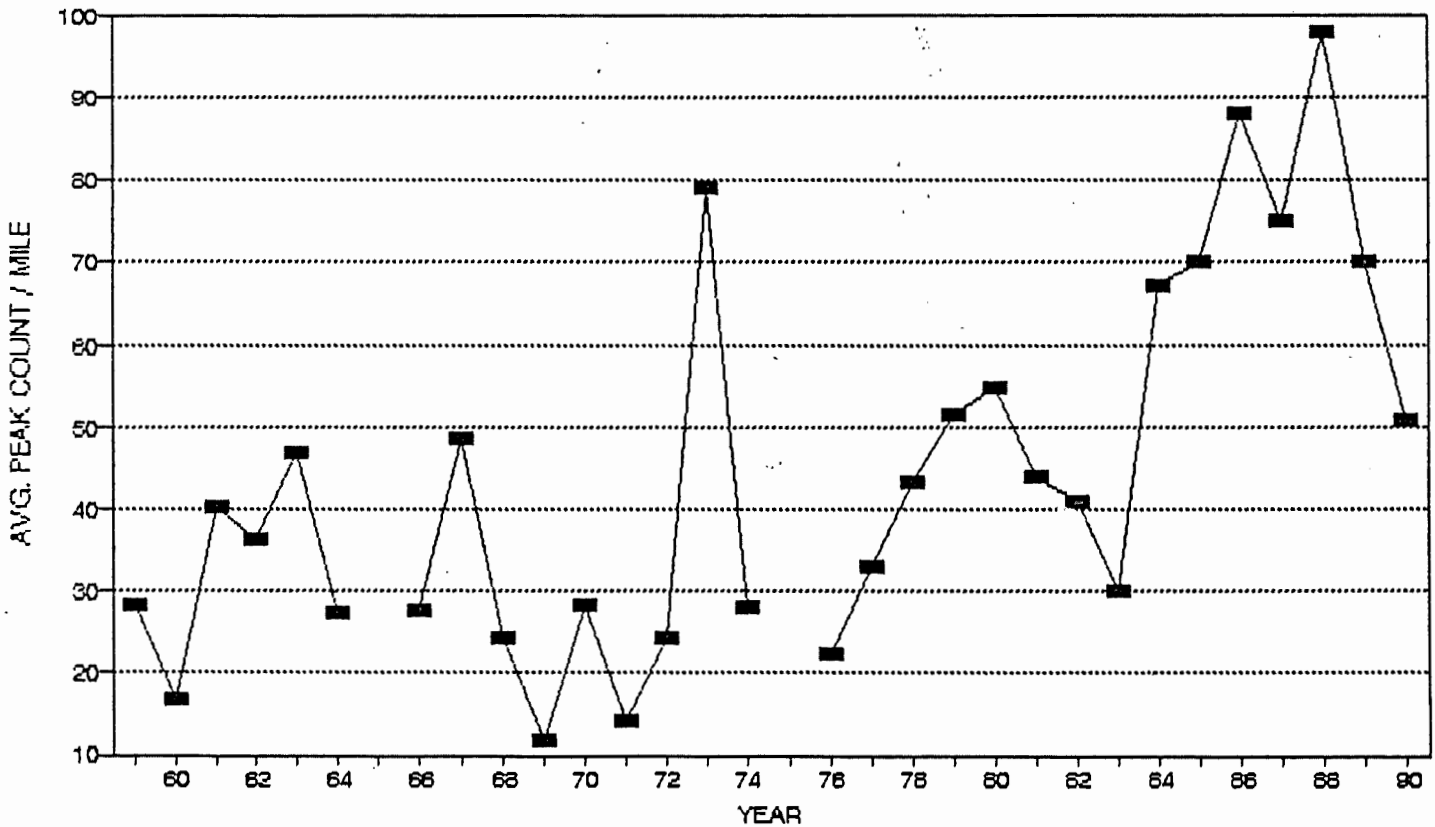
EXHIBIT 6

SPAWNING SURVEY PEAK COUNTS ADULT ONLY - PEAK COUNT
 TILLAMOOK DISTRICT (Total peak count/total survey miles)

YEAR	CHINOOK	YEAR	CHINOOK

	28.3	75	NO SURVEY
60	16.7	76	22.4
	40.4		33
62	36.4	78	43.4
	46.9		51.5
64	27.3	80	55
			44
66	27.6	82	41
	48.6		30
68	24.6	84	67
	11.7		70
70	28.4	86	88
	14		75
72	24.4	88	98
	78.9		70
74	28	90	51

FALL CHINOOK PEAK COUNTS
 TILLAMOOK DISTRICT



SUMMER STEELHEAD

DATABASE:

Annual estimates of summer steelhead run strengths are monitored thru catch estimates and dive count surveys.

POPULATION STATUS:

Summer steelhead are present primarily in the Nestucca, Wilson, Kilchis, Trask (strays), and Three Rivers. They are predominantly an introduced hatchery product; scale collections indicate that a small percentage (<10% district wide) are naturally produced fish. The Siletz stock remains a good contributor to the fishery, but appears to be suffering from the same factors influencing returns of StW and other StS stocks.

STATUS OF HATCHERY PROGRAM:

1991 smolts are being released with 100% fin marks. The current smolt program utilizes Siletz stock. The district objective of developing a Three Rivers broodstock looked exceptionally promising until dealt a severe setback as a result of IHN. Interestingly 100% of the Three Rivers broodstock showed positive for IHN, while 100% of the Siletz stock trapped, hauled, held and spawned at Cedar Creek tested negative (adults & eggs); pathology is at a loss to explain. Siletz stock was used as a backup and allowed production to continue.

Incidence of net marks and seal marks, though not recorded, was noticeably less than in winters. Hatchery personnel estimate <10% showed marks.

We will continue our attempt to develop a Three Rivers broodstock, ie. locally adapted Siletz stock returns to Three Rivers.

WILD FISH COMPLIANCE:

As an introduced hatchery product in the district, summer steelhead do not fall under the purview of the Wild Fish Policy in and of themselves. However, we have some concerns regarding the potential interbreeding of summer and winter stocks, in particular summers and wild winters.

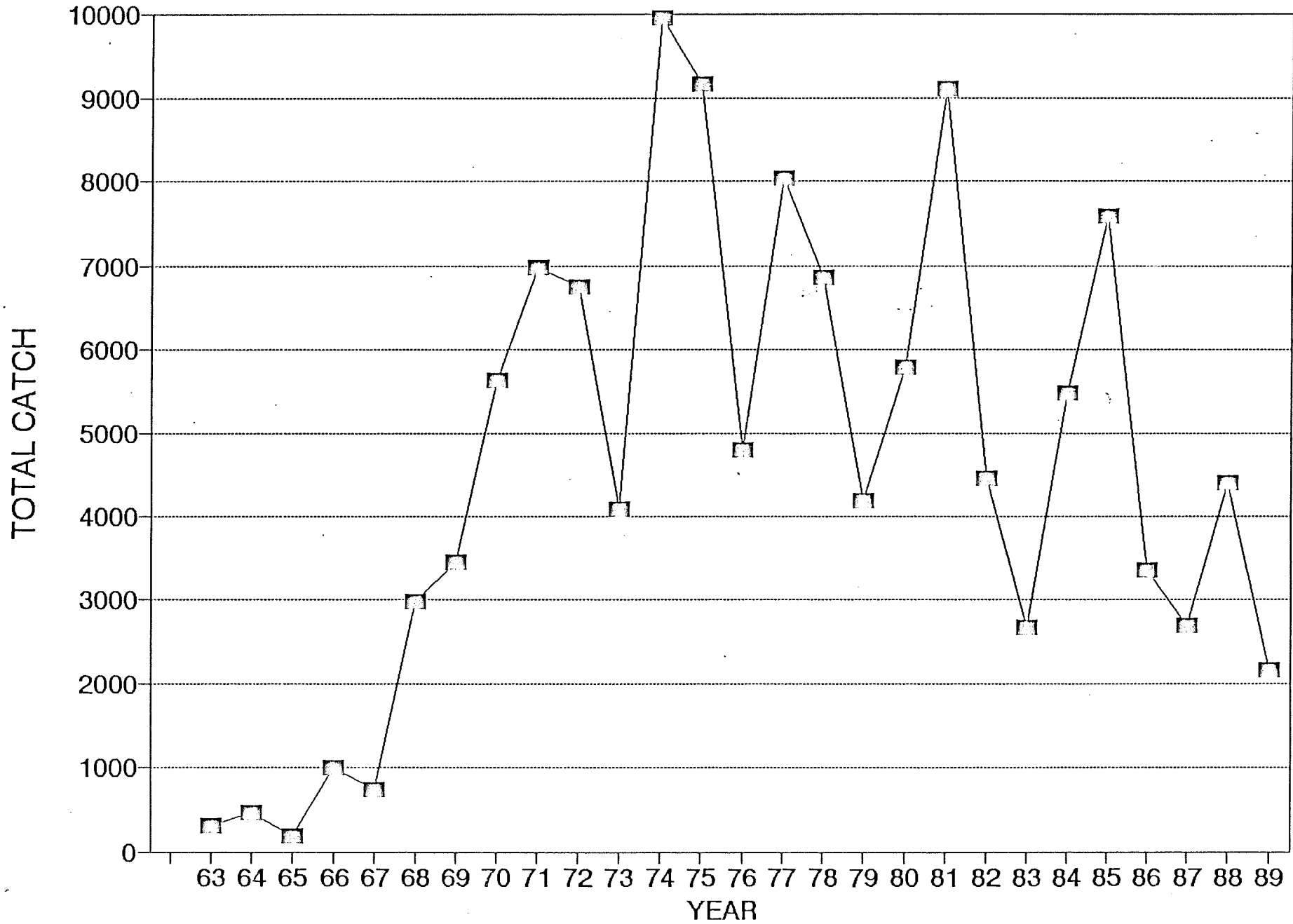
Lacking data, we have altered release schemes in an attempt to lessen the potential for interaction. Release numbers were increased in Three Rivers (broodstock development needs), with reductions made in the Nestucca allotment. Stocking in the Nestucca has been adjusted to lower system "regular" sites.

DIRECTION:

- Continue present monitoring programs.
- Continue Three Rivers broodstock development efforts while working with pathology on the IHN problem.
- Work with species coordinator and research section to seek answers to the interbreeding questions between summer and winter steelhead stocks.
- Begin documenting incidences of seal and net marks on returning summer stock.

SUMMER STEELHEAD CATCH TILLAMOOK DISTRICT

EXHIBIT 1



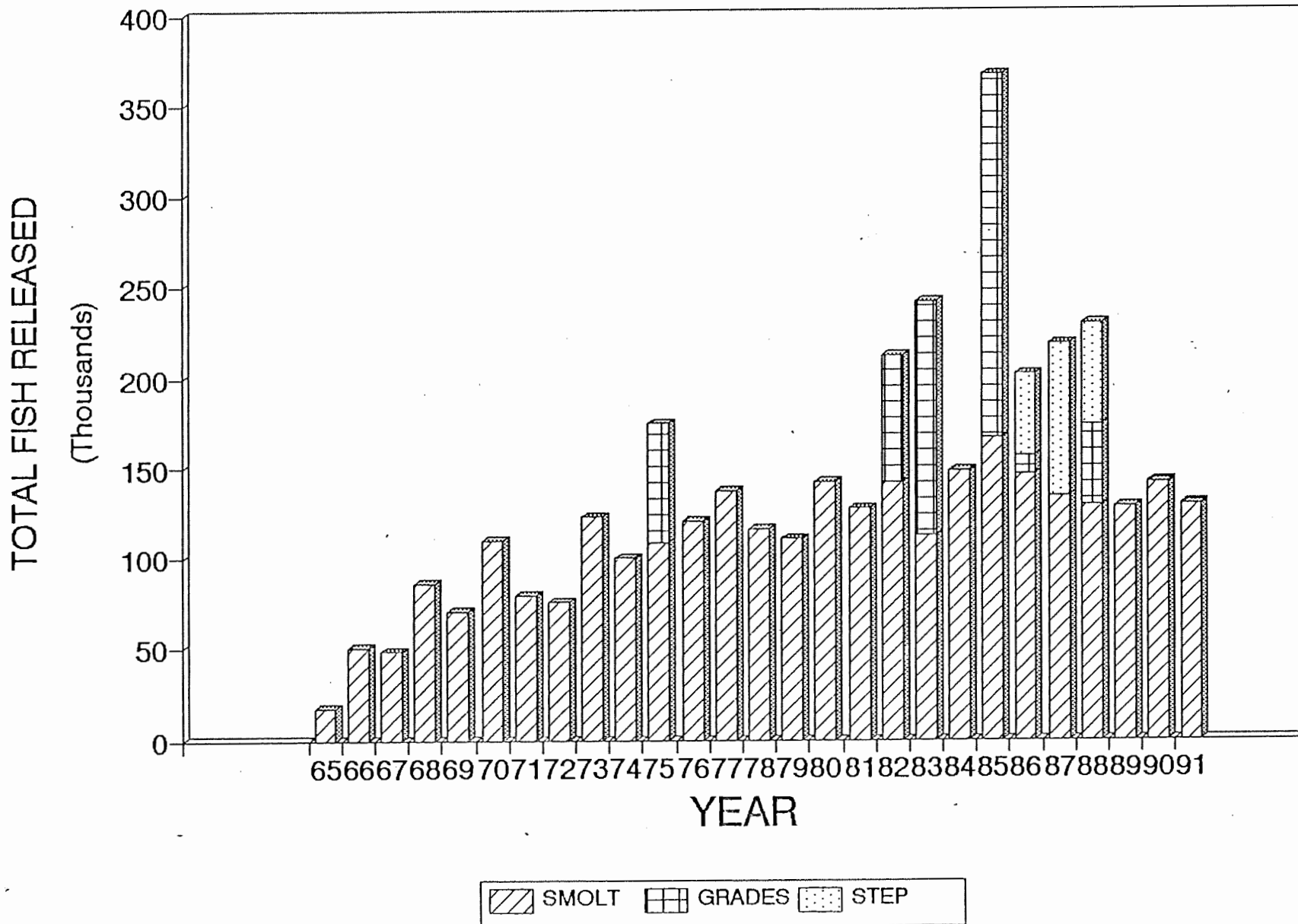
CATCH STATISTICS
TILLAMOOK DISTRICT

SUMMER STEELHEAD

YEAR	MIAMI	KILCHIS	WILSON	TRASK	TILL. R.	NESTUCCA	THREE	L. NEST.	T.BAY	TOTAL
63		3	64	12	6	213			3	301
64	4	5	82	47		302			29	469
65		4	43	35		90			12	184
66		13	170	39	4	768			9	1003
67			10	30		678			15	733
68			62	59	10	2827		9	14	2981
69		11	148	306	21	2947		8	12	3453
70	10	5	1163	846	1	3599		5	14	5643
71	4	38	2345	893	3	3666		22		6971
72		29	1819	656	13	4223		6		6746
73	8	8	1016	423	7	2611			4	4077
74	8	10	2404	745	53	6688		27		9935
75	19	293	2613	746	6	5458		21		9156
76	20	144	1321	581	3	2665	7	58		4799
77	26	229	2105	801	3	4780	47	50		8041
78		261	1563	537		4391		106		6858
79		129	1174	428		2318	104	41		4194
80		105	1140	536		3846	107	59		5793
81		177	2680	625	1	5444	124	56		9107
82	8	51	923	467		2924	57	16		4446
83	8	69	748	196	1	1533	93	26		2674
84	17	121	1174	312	6	3650	142	40	19	5481
85	45	217	1647	628	6	4875	78	55	41	7592
86	10	71	830	311	3	2067	42	19		3353
87		51	779	259	1	1522	54	9	17	2692
88		193	1179	370	1	2482	49	5	116	4395
89 (\$)		36	472	188		1424	16	4	22	2162
90										

(\$) preliminary data 1/2 season, 12/90

SUMMER STEELHEAD RELEASES TILLAMOOK DISTRICT



TILLAMOOK DISTRICT
 SUMMER STEELHEAD RELEASE DATA

YEA	SMOLT	GRADE	STEP	TOTAL
65	16600			16600
66	49860			49860
67	48150			48150
68	85640			85640
69	70120			70120
70	109750			109750
71	79120			79120
72	75890			75890
73	122570			122570
74	99800			99800
75	108980	65730		174710
76	120490			120490
77	136920			136920
78	115310			115310
79	110760			110760
80	141850			141850
81	127480			127480
82	142250	70520		212770
83	112040	129570		241610
84	148000			148000
85	166710	200700		367410
86	146310	9980	46120	202410
87	133630		84450	218080
88	128510	45110	56430	230050
89	127770			127770
90	141580			141580
91	130000			*

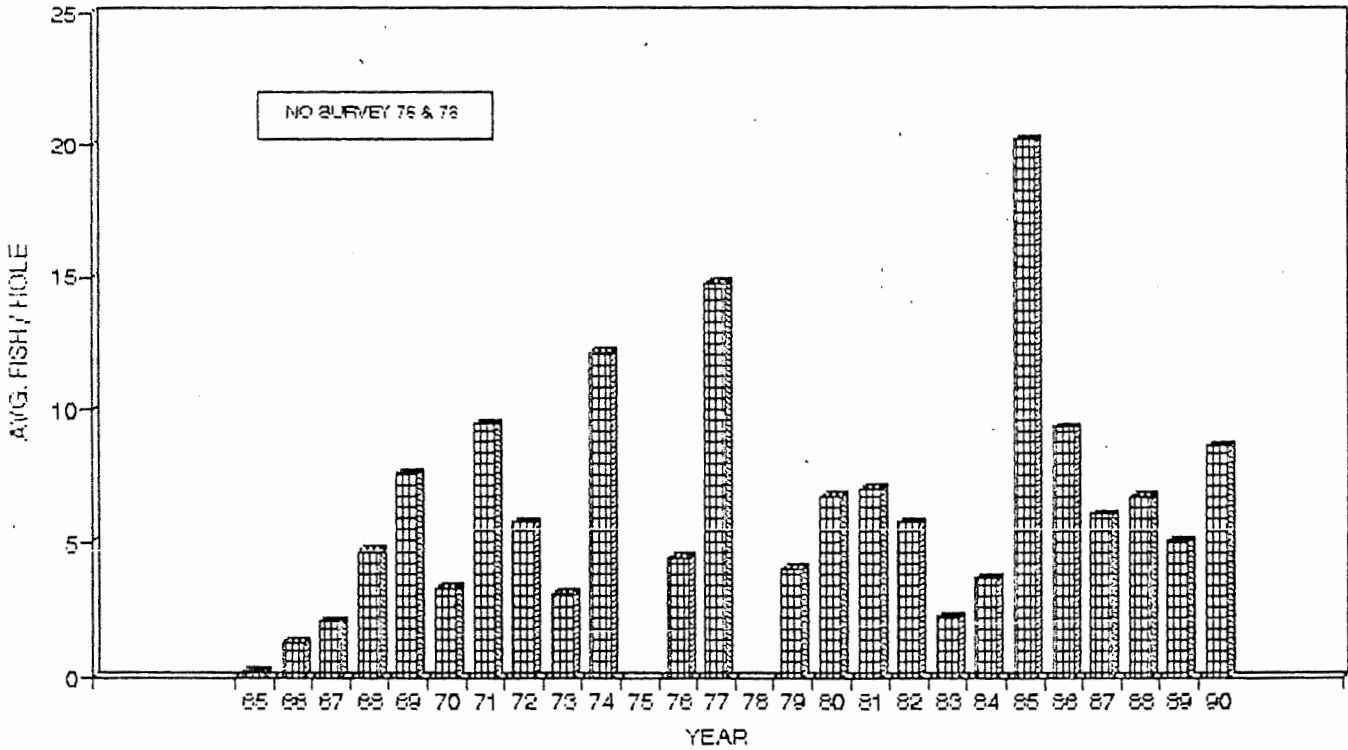
* indicates requests

SUMMER STEELHEAD
TILLAMOOK DISTRICT
RESTING HOLE SURVEY DATA

EXHIBIT 3

YEAR	STS/HOLE	YEAR	STS/HOLE
65	0.2	79	4.1
66	1.3	80	6.8
67	2.1	81	7.1
68	4.7	82	5.8
69	7.6	83	2.3
70	3.4	84	3.7
71	9.5	85	20.2
72	5.8	86	9.4
73	3.2	87	6.1
74	12.2	88	6.8
75 NO SURVEY		89 NO SCUBA	5.2
76	4.5	90 NO SCUBA	8.7
77	14.8		
78 NO SURVEY			

STS RESTING HOLE DATA
TILLAMOOK DISTRICT



SUMMER STEELHEAD SCALE INTERPERTATIONS
MAY 1985 - NOVEMBER 1990

RIVER	# FISH	% H	% W
Kilchis	22	100%	
Wilson	45	89%	11%
Trask	48	83%	17%
Nestucca	126	94%	6%
Three Rivers (Cedar Creek Hatchery)	90	91%	9%

WINTER STEELHEAD SCALE INTERPRETATIONS
NOVEMBER 1984 - NOVEMBER 1990

RIVER	# FISH	% H	% W
Miami	7	57%	43%
Kilchis	101	76%	24%
Wilson	362	78%	22%
Trask	482	33%	67%
Tillamook	15	80%	20%
Nestucca	236	73%	27%
Three Rivers	77	94%	6%
Little Nestucca	16	88%	12%

SEAL & NET MARKS
CEDAR CREEK HATCHERY

YEAR	FISH	SEAL	%	NET	%
1990	307	107	35%	200	65%
1991	578	185	32%	166	28%

Note: 1991 trapping still in progress.

COASTAL STURGEON (White & Green)

TILLAMOOK DISTRICT

NATURE OF THE DATABASE:

Current information is limited to estimates of recreational catch (exhibit 1) based on tag returns and expansion of catch data. Limited information is available from tag returns on fish caught in Tillamook Bay that have been tagged in other locations.

STATUS OF POPULATIONS IN COASTAL ESTUARIES:

Limited information is available on populations of white and green sturgeon found in estuaries. Life history requirements indicate unsuitable habitat and flows exist in the district for spawning. Creel data and angler interviews indicate that very few oversize and very few fish under 24 inches are landed. Tag recoveries obtained from anglers are predominantly from fish tagged in the Lower Columbia estuary (7 recorded thru 1990, exhibit 2) and one from San Francisco. Based on this information it appears that local fisheries are comprised of transient fish, although the reason for their movement is presently unknown. Overharvest is a concern only to the extent of removing legal sized stock which results in a depressed fishery until more transients arrive.

STATUS OF HATCHERY PROGRAMS:

Not Applicable.

POPULATIONS OF CONCERN:

Probably none. An issue of concern for coastal stocks is the general lack of stock information. In January, 1991, a volunteer sturgeon tagging program was initiated in the Tillamook district to begin a process designed to gather stock information for "local populations" and to assist with statewide stock information. At present, 14 "tagging kits" are on line in the Tillamook district, primarily in Tillamook Bay. Creel data, as well as tagging data, is being collected which will be incorporated into the statewide database. It should be noted that this program began from the request of a group of local anglers concerned about the local sturgeon fishery and its potential for overfishing.

A second issue of concern on a local level is the increase of guided sturgeon angling trips. Based on existing information this appears not to be a true biological concern other than "temporary" overfishing of stocks present. Recent statewide changes in bag and length limits appear to be resulting in more "shakers" and less "keepers" and will likely dampen the guide business. Most anglers indicate more shakers, but do not appear to be upset by the "reduction" of keepers; they seem to be content with the fact there

are fish available to catch and that the bag restrictions were a step in the right direction.

DIRECTION:

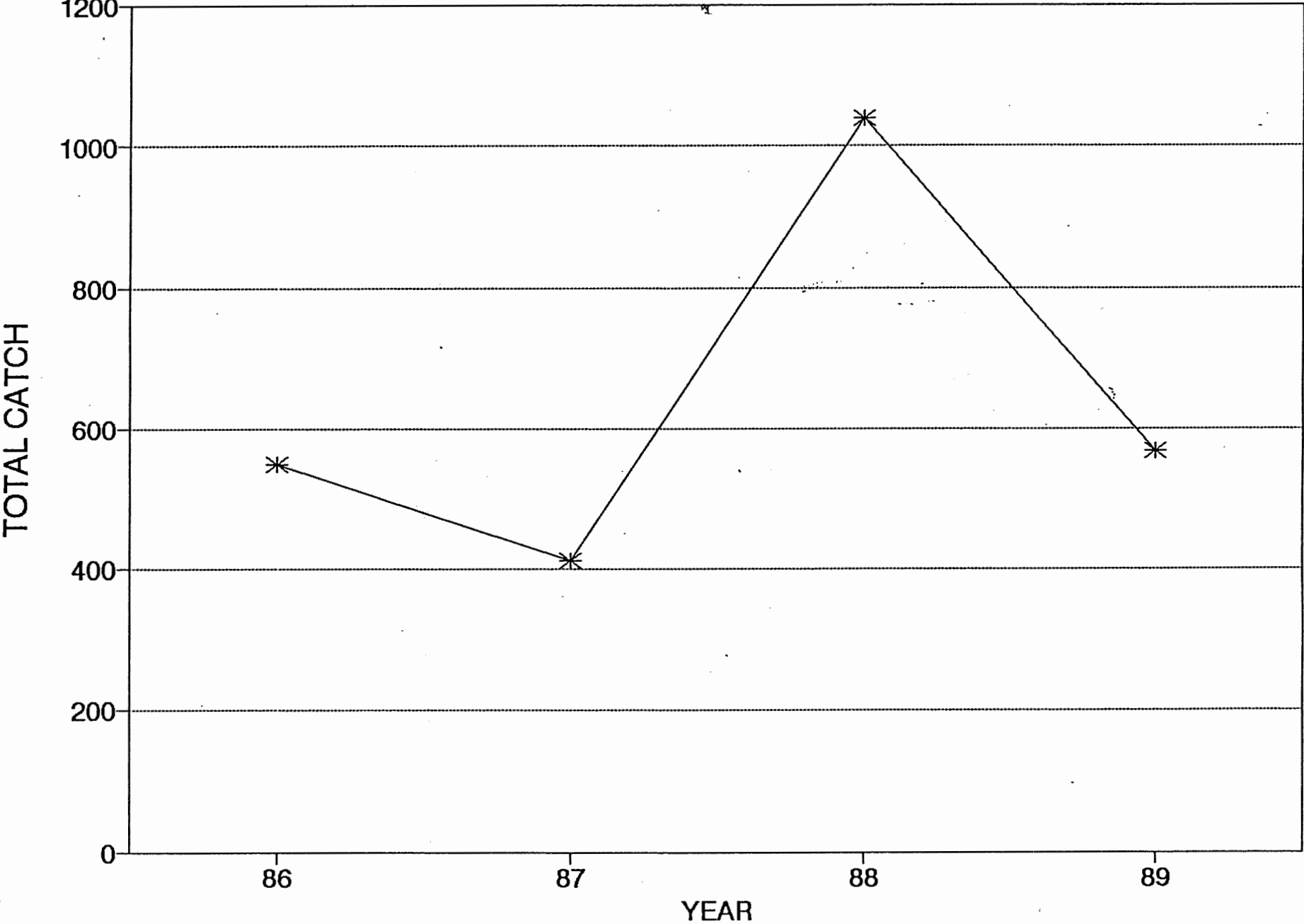
Continue monitoring population with creel and tag data.

Collect tagging data each fall and forward to appropriate staff for entry into database.

Evaluate 1991 tagging program with appropriate staff and continue if feasible.

WHITE STURGEON CATCH TILLAMOOK DISTRICT

EXHIBIT 1



CATCH STATISTICS
TILLAMOOK DISTRICT

WHITE STURGEON

YEAR	T.BAY	T.RIVER	KILCHIS	MIAMI	WILSON	TRASK	B&R		SAND LK.	OCEAN	TOTAL
							NESTUCCA	L.NEST.			
86	353	165	0	0	6	18	0	0	6	0	548
87	365	29	6	0	0	12	0	0	0	0	412
88	920	104	4	4	0	4	0	4	0	0	1040
89	436	119	0	0	9	4	0	0	0	0	568
90											

1990: First Size Regulation Change.

STURGEON TAG RECOVERIES
TILLAMOOK DISTRICT

TAG DATE	LOCATION / RM	RECOVER DATE	RECOVER LOCATION	DAYS OUT
4/86	COL. EST. / 28	10/90	TILLAMOOK RIVER	*43
4/86	COL. EST. / 28	2/90	TILLAMOOK BAY	*22
6/86	COL. EST. / 7	5/87	TILLAMOOK BAY	360
5/87	COL. EST. / 8	4/88	TILLAMOOK BAY	337
6/87	COL. EST. / 15	1/89	TILLAMOOK BAY	592
6/87	COL. EST. / 8	3/90	TILLAMOOK BAY	996
6/90	COL. EST. / 6	8/90	OCEAN OFF NESTUCCA	47

* Unclear how WDF determined these figures.

FISH REVIEW SPECIES UPDATE 1991

WARMWATER SPECIES

NATURE OF THE DATABASE:

Status of Tillamook district warmwater species is determined from spring and fall electroshocking sampling, limited gill net data, creel information and liberation records.

STATUS OF POPULATIONS:

LAKE LYTLE:

Spring electrofishing was complicated in 1990 by the extreme growth of Milfoil, although fish were taken the nature of the cover may have heavily biased the sample. Data continues to show apparent loss of some year classes.

In the summer of 1990 the lake was treated with SONAR to reduce the milfoil biomass and it appears to have worked well. Spring sampling is scheduled in May 1991 and hopefully a better sample will be obtained.

Gill net sample in 1990 produced two cutthroat trout; stomach samples indicated snails and caddis cases.

DIRECTION:

- Continue monitoring populations.
- Work with local bass anglers on habitat improvement.
- Attempt to assess reasons for age class losses.
- Work toward better limnological data for the lake.

CAPE MEARS:

Gill net data sampling took 11 cutthroat and two rainbow trout; stomach samples revealed a high incidence of clams and snails.

Spring electrofishing was once again hampered by high wind and driving rain. Limited sampling indicated a possible loss of the young of the year bass. Local anglers have indicated seeing spawning bass but felt adequate cover for the young was missing. They also assessed the population size as being in fairly good condition. A group of local anglers installed 11 Christmas bundles and 2 tree rows in areas where they have seen fish spawning, or congregating. More work is planned later in 1991.

DIRECTION:

- Continue working with local groups to improve habitat.
- Gather more limnological data to accurately assess the feasibility of redear sunfish or other WW species introductions.

TOWN LAKE:

Spring electrofishing revealed the Blazers could beat Phoenix in game five and that we suddenly had an illegal introduction of yellow perch in the district between 89 & 90.

Largemouth bass young of the year were noticeably absent, perch are a prime suspect.

DIRECTION:

- Continue monitoring populations, maybe we can luck into a trophy yellow perch fishery.
- Evaluate impacts of the illegal introduction and re-evaluate management options & goals.
- Continue toward improving access to the lake.

OVERALL VIEW

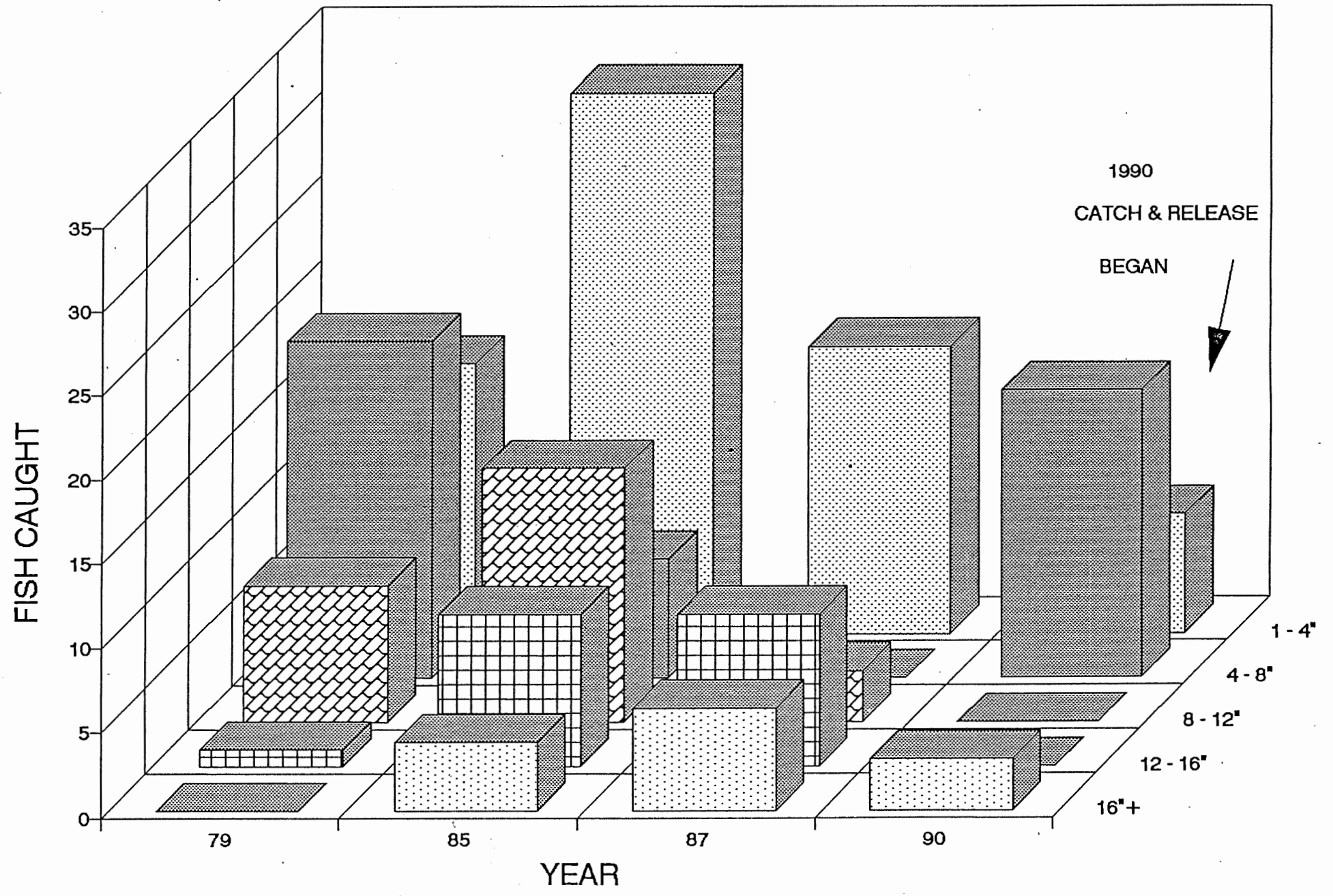
Excavation for a new WW pond, Lorens Drift, may begin this summer with the pond being "built" to specifications provided to the operator. We are excited to see this finally get off the ground. Unless there are last minute changes of heart the target finish is two summers.

Work will continue with the species coordinator to evaluate habitat and utilize volunteers to make needed improvements; and to work toward a stable and diverse warmwater fishery.

As always we will try to provide handicapped access where feasible to our fisheries.

District will work with the species coordinator and continue to pursue redear sunfish introductions into suitable district lakes.

LAKE LYTLE ELECTROFISHING LARGEMOUTH BASS



LAKE LYTLE ELECTOSHOCKING
LARGEMOUTH BASS

SIZE RANGE	YEAR			
	79	85	87	90
1-4"	16	32	17	7
4+ -8"	20	7	0	17
8+ -12"	8	15	3	0
12+ -16"	1	9	9	0
16+ "	0	4	6	3