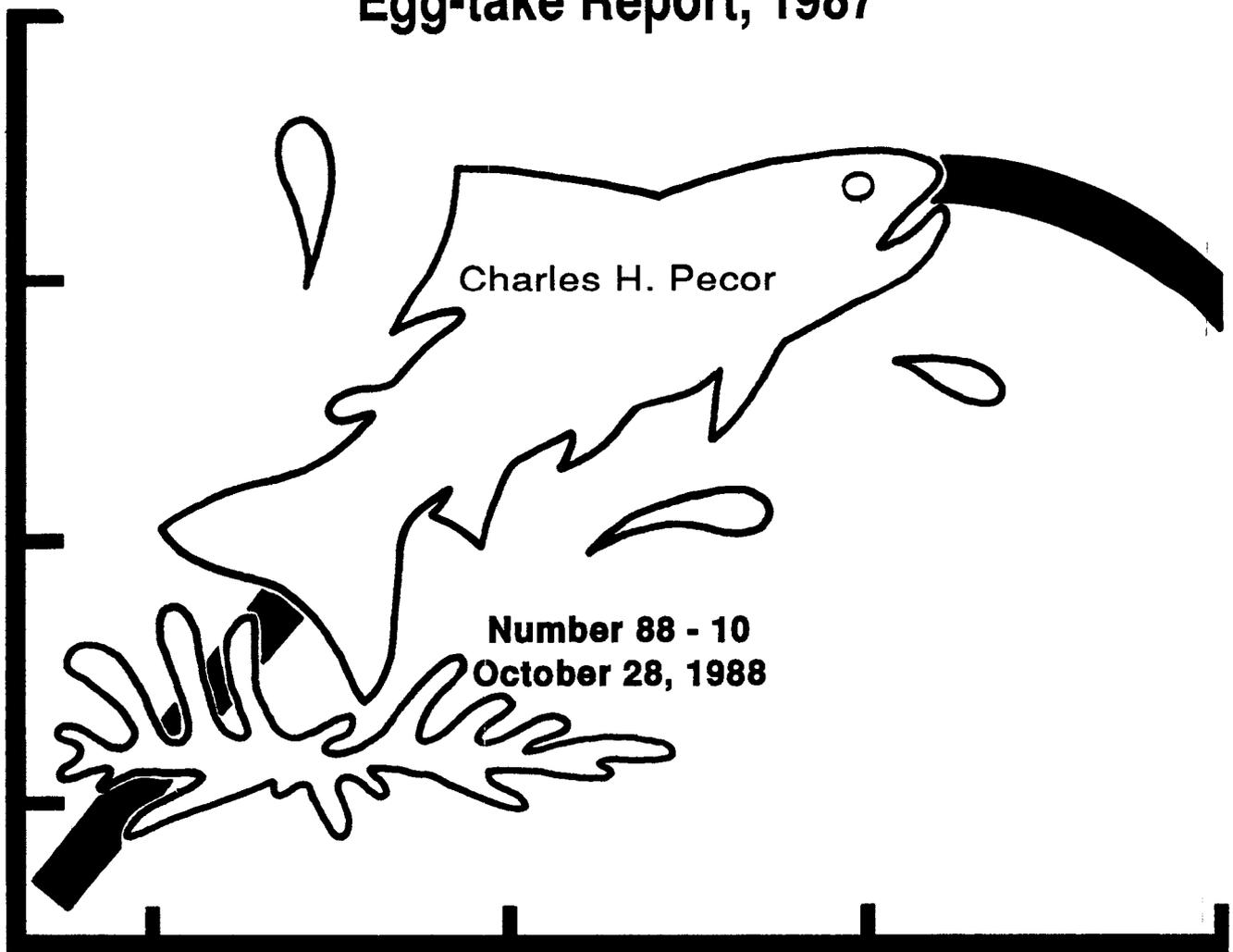


FISHERIES DIVISION

TECHNICAL REPORT

Platte River Harvest Weir and Coho Salmon Egg-take Report, 1987



Michigan Department of
Natural Resources

**MICHIGAN DEPARTMENT OF NATURAL RESOURCES
FISHERIES DIVISION**

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PLATTE RIVER HARVEST WEIR AND COHO SALMON

EGG-TAKE REPORT, 1987

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INTRODUCTION

Since 1966 the Platte River (Benzie County) has been the primary source of brood fish for the coho salmon stocking program undertaken by the Michigan Department of Natural Resources (MDNR). Eggs are collected each fall at the Platte River State Fish Hatchery, located 4.0 miles east of Honor (Figure 1). The young coho are raised to the smolt stage (about 5.5 inches long) in 1.5 years and stocked at selected sites throughout Michigan.

Prior to 1979, between 265,000 and 1,092,000 (average 607,000) coho smolts were stocked in the Platte River (Table 1). This produced sufficient adults for egg-take operations plus a spectacular Lake Michigan sport fishery from Frankfort to Platte Bay in August to September. The annual plants for 1979-84 approximated 1 million smolts and these plants, with the exception of the 1984, produced annual returns to the weir of 123,000 to 168,000 adults, or 12% to 16.4%. The 1984 plants produced a 1985 return of only 80,354 coho adults, or 8.1%. Plants since 1984 have decreased to the 1987 low of 622,079 smolts. Adult returns have also remained relatively low. The 1987 adult run was from a plant of 751,183 coho smolts made in the spring of 1986.

The Platte River has two salmon blocking weirs. The lower weir is located 1.6 miles upstream from the river mouth (Figure 1). Since 1980 it has been the primary site for harvesting surplus salmon. Steelhead runs are monitored there also. The upper weir, located at the Platte River Hatchery, has facilities for holding adults and collecting eggs.

Current in-state and out-of-state commitments require the collection of 12 to 14 million coho eggs annually. Depending on the size of the returning coho, the egg-take requires about 5,750 to 7,000 adult females (age 1.1).¹ To assure that enough females are available for egg-take, the Fisheries Division has directed that the first 30,000 salmon reaching the lower weir be passed upstream (allowed to swim through the open weir). An additional 3,000 salmon are passed each week to maintain a sport fishery in the river. However, the above numbers may be modified by the biologist-in-charge as conditions dictate.

Other salmon blocked by the lower weir (including surplus coho adults; a moderate run of chinook; and, in recent years, a few pink salmon) are collected and harvested. Coho jacks (age 1.0) are small enough to swim upstream through the weir grate. Trout that are collected during harvest operations are counted and released upstream. This includes a moderate run of steelhead plus small runs of brown trout and lake trout. All salmon collected at the upper weir are harvested, including the coho used for egg-take.

¹An age 1.1 for an anadromous fish means that 1 year was spent in the river (or hatchery) prior to smolting and 1 year was spent in Lake Michigan after smolting.

The 1987 salmon run was typical. The fish concentrated off Frankfort and Platte bays during the last 2 weeks in August and ran the river during the last 14 days in September as expected. The open-water fishery was relatively good considering the lower return rate which was recorded for this year. The river fishery was good throughout the run because we were able to pass fish almost on a daily basis.

The only problem which occurred was access to Platte Bay. The National Park Service did not start dredging the river mouth until September 8, the day after Labor Day. And then, due to past high Lake Michigan water levels and the recent drop of these levels, the dredging produced excessive current in the area of the access site. It was almost 2 weeks before upstream storage was reduced enough to slow the current at the access site so boats could be loaded without difficulty. Water levels in the river dropped almost 2 feet at the access site, over 6 inches at the lower weir, and affected water levels all the way upstream to the M-22 bridge.

LOWER WEIR OPERATION, 1987

The lower harvest weir was ready for operation on August 28. Beginning on September 4, the weir was closed at night and the accumulated fish were processed the next morning. The weir was left open during the day. The National Park Service assisted us in this operation by closing the weir gate at night. The weir was manned 24 hours per day from September 14 to October 23. A total of 34,905 salmonids (salmon plus trout) were actually counted through the weir between September 4 and October 20 (Table 2). The peak of the run occurred about when expected, during the week of September 21. The total number of salmonids passed through the weir was about 7.5% lower than the average for the previous 5 years. The species composition of these fish is assumed to be the same as that of the fish actually handled during each week of harvesting. Additional trout were sorted out during harvesting and transferred upstream from the weir.

Harvesting began September 15 and continued intermittently until October 23. Salmon were actually harvested on only 11 days during this period and three of the harvests were primarily to obtain biological samples. Three full semi-trailer loads and eight partial loads were sent to Tempotech Industries in Hart, Michigan.

Coho salmon

The harvest of coho salmon began on September 15 and ended on October 23, a period of 39 days. However, 78.5% of the coho were harvested on only 3 harvest dates, September 22, 24, and 30 (Figure 2). A total of only 24,707 adult coho weighing 152,198 pounds and 156 jack coho weighing 264 pounds were harvested (Table 3). Mean weights of the harvested coho

adults and jacks were 6.1 and 1.8 pounds, respectively (Table 4). An estimated 30,437 additional adult coho were passed upstream for egg-take operations at the upper weir (Table 2). A weekly summary of coho passed and harvested by age and sex is shown in Table 5.

The total run of 55,144 adult coho in the lower Platte represented a return of only 7.3% of the 1986 smolt plant and was, for the third year in a row, about one-half the number expected to return (Table 6). The low coho return was not restricted to the Platte River. Very low returns were also reported for the Little Manistee River (Ralph Hay, MDNR, personal communication) and other streams tributary to Lake Michigan.

The cause of the low returns in the Platte River and other Lake Michigan tributaries is not known. The hypotheses presented for the low returns the last 2 years (Pecor 1986, 1987) are not substantiated by the data collected this year.

Virtually all of the harvested coho were age 1.1. The average lengths and weights for age-1.1 males and females calculated from weekly biological samples are shown in Table 4. Males averaged 26.8 inches and 6.3 pounds and females averaged 25.8 inches and 6.0 pounds.

During the harvest operation, 156 age-1.0 coho were harvested. All were males (jacks). They had an average length of 15.9 inches and an average weight of 1.8 pounds (Table 4). No age-1.2 coho were observed in the harvest.

No grading of coho for skin or flesh color was done.

During the six weekly biological surveys, a total of 775 adult coho were randomly sampled for biological data. Three fresh lamprey wounds were observed on the coho in the biological samples and 34 fish had fin clips. The fin clips were adipose (Ad, 20 fish), left pectoral (LP, 8 fish), right pectoral (RP, 5 fish), and right ventral (RV, 1 fish). These clips were on fish planted in Illinois waters of Lake Michigan (LP) and Michigan waters of Lake Huron at Seymore Creek (LP), Port Hope (RP), Swan Bay (Ad), and Tawas (RV). The Lake Huron fish were reared at Platte River Hatchery.

In summary, a total of 55,144 adult coho salmon reached the lower Platte River weir during the fall of 1987, 17,505 (31.7%) males and 37,639 (68.3%) females (Table 5). The total adult run was 7.3% of the 1986 plant of 751,183 age-1.0 smolts (Table 6), about one-half the expected rate of return.

Chinook salmon

The chinook salmon run in the lower Platte River spanned the period from September 15 to October 23, although 85% of the run was harvested after September 28. A total of 5,336 chinook, including 4,788 adults (age 0.2 to 0.4) and 536 jacks (age 0.0 and 0.1), weighing 70,322 pounds were harvested (Table 7). The average weights of adults and jacks were 13.5 and 4.6 pounds, respectively. The average adult was 0.7 pound heavier than in 1986 (12.9 pounds). It was estimated that an additional 2,451 chinook were passed upstream at the lower

weir (Table 2). A weekly summary of chinook passed and harvested by age and sex is shown in Table 8.

Biological data were collected from 580 adult chinook randomly sampled during the harvest operation. In addition, biological data were collected on 180 jack chinook sorted out of the harvest. Chinook salmon length frequencies were converted to age frequencies by means of a length-age frequency table (Table 9) constructed by District 6 personnel at the Harrietta warehouse. They used scale samples and length measurements obtained during creel census at Pentwater, Ludington, Manistee, Frankfort, Leland, Grand Traverse Bay, Manistee Lake, Big Manistee River, Betsie River, and Platte River for the months September through November, 1987. In applying this table to those length groups in which two or more age groups are represented, the lighter fish were arbitrarily assigned to the younger age group and the heavier fish were assigned to the older age group. The resulting estimate of age composition of the 1987 chinook harvest was 0.1% age 0.0, 11.6% age 0.1, 8.4% age 0.2, 38.3% age 0.3, 38.1% age 0.4, and 3.4% age 0.5 (Table 8). Average lengths and weights for each age group are presented in Table 10.

Six chinook with lamprey wounds, three fresh and three healed, were recorded during the biological samples. No fin-clipped chinook were observed in the biological samples or harvest.

The total run of 7,787 chinook at the lower weir in 1987 was above the 1979-86 average of 4,719 and, in fact, is the largest run recorded for the Platte River. The average weight of adult chinooks in 1987 was higher than reported for 1986 but still lower than other years (Table 11). Adult males and females comprised 50.8% and 49.2% of the adult run, respectively. All chinook were either strays from other plants, escapees from the Platte River Hatchery, or the result of natural reproduction since chinook are not planted in the Platte River.

Pink salmon

Pink salmon showed up at the lower weir during 1987, as expected, since they normally run in odd-numbered years. The magnitude of the pink salmon run in the Platte River is difficult to assess because most run before the weir is in place and/or are small enough to swim through the weir grate. Overall, 11 pink salmon were harvested and it was estimated that an additional 126 were passed through the weir. Of the harvested fish, three were males and eight were females. Only four fish were weighed and measured and these fish averaged 2.3 pounds and 19.5 inches. Since 1981 the run of pink salmon in the Platte River has steadily increased although it is still at a relatively low level. The pink salmon runs in the Platte River were 2 in 1981, 35 in 1983, 53 in 1985, and 137 in 1987.

Steelhead

The peak steelhead runs occurred between September 14-20 and between October 19-25 (Table 12). During the harvest operation, 1,079 steelhead were handled. This was substantially higher than the number handled in 1986 but in line with the returns for 1982-85 (Table 13). It was estimated that an additional 1,884 steelhead were passed upstream through the open weir gate and the total steelhead run in the lower Platte River was 2,963 fish. A weekly summary of the number and weight of steelhead returning to the lower Platte River weir by age and sex is presented in Table 14.

Biological information, including scale samples, was collected from 326 steelhead. All scale samples (including steelhead and brown trout) were aged by District 6 personnel at the Harrietta warehouse. A total of eight age groups were recorded in 1987 (Table 14) as compared to seven in 1986 and nine in 1985. The average lengths and weights for each age group are shown in Table 15. Fish in the age-group 1.2 were the most numerous (40.4%) and fish in age-group 2.3 were the least numerous (0.3%). Most (66.0%) of the steelhead smolted after one summer in the river and the remaining 44.0% smolted after two summers in the river. In 1984, 1985, and 1986, 45%, 21%, and 7.2%, respectively, smolted after one summer in the river.

The size of the returning steelhead was more dependent upon the years spent in Lake Michigan than on age at smolting or years in the river (Table 16), as was true in the other years. Steelhead which had spent three summers (age .2) in Lake Michigan were the most frequent age group (64.9%) to return in 1987, although steelhead which spent one, two, and four summers in Lake Michigan were well represented (Table 16).

Overall, steelhead in 1987 had a mean length of 25.1 inches, a mean weight of 6.6 pounds, and consisted of 79.8% males and 30.2% females. No lamprey scars or fin clips were observed on any steelhead.

Brown trout and lake trout

Brown trout and lake trout are only minor components of the salmonid run in the Platte River (Tables 12 and 13). A total of 23 brown trout and 4 lake trout were counted and transferred upstream in 1987. It was estimated that an additional 8 brown trout were passed upstream with the coho salmon. This gives total runs in 1987 of 31 brown trout and 4 lake trout.

Biological information was obtained from 14 brown trout. Three age groups were identified, 25 age-1.1 fish, 3 age-2.1 fish, 3 age-1.2 fish. Lengths ranged from 18.9 to 24.6 inches (average 21.9) and weights ranged from 3.1 to 7.7 pounds (average 5.2). The sex ratio was 28.6% male to 71.4% female.

Only four lake trout were passed upstream and all were passed on the last harvest day of the run (October 23). Three of the four lake trout were fin clipped with clips that have been recorded at the Platte River in the past. The clips were left ventral-adipose (LV-Ad, 1 fish),

both ventral (BV, 1 fish), and left ventral (LV, 1 fish). The BV and LV-Ad clips were assigned to lake trout planted offshore in 1980 and 1979 at either Good Harbor Bay Reef (located about 18.6 miles north of the Platte River) or South Fox Island Shoal (located about 43.5 miles north of the Platte River). The LV clip was assigned to lake trout planted in 1979 at many locations but it is assumed they came from the closest plant at Frankfort (located about 6 miles south of the Platte River). No other biological data were collected from lake trout.

UPPER WEIR OPERATION, 1987

The operation at the upper Platte River weir is primarily for egg-taking and does not have the capability of harvesting large numbers of salmon efficiently. The facility consists of a weir, fish passageway, fish ladder, maturation ponds, and egg-taking building. The weir blocks the upstream migration of salmonids and directs them up the fish ladder into the maturation ponds. The salmon are held in these ponds for up to 3 weeks while the eggs mature or "ripen", then the eggs are stripped and fertilized.

The weir stop-logs were in place by August 28 and the facility was fully operational by August 28.

Coho salmon

The first coho salmon (a few adults and some jacks) reached the maturation ponds the day after the weir logs were installed. Larger numbers of coho started showing up at the weir by September 20. No main run of coho occurred. Instead, the salmon remained in the river system and slowly migrated into the maturation ponds. All six ponds were near capacity by October 10.

The fish in the maturation ponds were checked weekly for egg condition (green or ripe) from September 28 to October 26. Egg-taking operations started when the proportion of ripe females was 50% or above. The percentage of ripe females on October 2, 7, 12, 20, and 29 was 48.7, 83.9, 83.1, 100, and 100, respectively. A total of 14,235,500 eggs were collected and fertilized in seven working days between October 8 and October 20. Of these eggs, 7,022,000 (49.3%) were for in-state rearing and 7,213,400 (50.7%) were for out-of-state commitments (i.e., Indiana, 0.6 million; Wisconsin, 2.0 million; Illinois, 0.3 million; Pennsylvania, 3.5 million; New Hampshire, 0.6 million; and Massachusetts, 0.2 million).

The 1987 egg-take was carried out as a routine operation. Egg quality was slightly below average throughout the egg-take operations. Water temperatures at the lower weir were above 16°C (61°F) during the major run into the lower river but below 14°C (57°F) at the hatchery during the maturation period.

The eye-up rate of coho salmon eggs incubated at the Platte River Hatchery also reflected the lower quality of the 1987 eggs. The average eye-up rate for the four egg-take days was 67%, with a daily range from 63.3% to 70.7%. Coho eye-up rates during the previous 8 years ranged from 50.4% (1984) to 82.2% (1980) and averaged 69.4%.

A total of 5,747 female coho salmon were stripped to collect the 14.2 million eggs (Table 17), an average of 2,471 eggs per female. A check of the fecundity of 25 individual females at the end of the run showed an average of 2,916 eggs per female with a range of 1,619 to 5,187. The difference between 2,471 and 2,916 represents the eggs that were retained by stripped females during the egg-take operation and eggs that were taken and thrown away because they were "buckshot". The average fecundities of the 25 individual fish sampled during 1983, 1984, 1985, and 1986 were 3,204, 2,290, 2,850, and 2,042 eggs per female, respectively.

The egg-take and harvest operation at the upper weir accounted for 25,437 coho, including 1,145 (4.5%) jacks and 24,292 (95.5%) adults (Table 17). The number of adults harvested at the upper weir was 80% of the estimated total number of adults passed at the lower weir. In other words, 6,145 (20%) adult coho salmon did not swim from the lower to the upper weir. A creel census of the Platte River between the two weirs showed an angler catch of 3,640 coho ($\pm 1,059$), or 59.2% of the coho that did not swim to the upper weir. This leaves approximately 2,500 fish in the river system. During 1983, 1984, 1985, and 1986, 8,732 (24.5%), 12,075 (33%), 7,214 (23.5%), and 9,031 (25%), respectively, did not swim to the upper weir.

The adult run at the upper weir consisted of 50.6% male and 49.4% female, based on the actual numbers of fish harvested. Males averaged 27.0 inches in length and 6.2 pounds in weight, and females averaged 25.9 inches in length and 6.1 pounds in weight. Overall, the adult coho averaged 26.4 inches and 6.1 pounds, almost identical in both length and weight to the coho harvested at the lower weir. Seventy-seven percent of the adult coho handled at the upper weir was used in the egg-take and about 5,559 fish were dead and/or harvested as surplus. In all (adults and jacks), 141,529 pounds of coho salmon were harvested at the upper weir (Table 18).

Three fin clips were identified on adult coho at the upper weir, adipose (Ad, 15 fish), left pectoral (LP, 6 fish), and right pectoral (RP, 3 fish). These are basically the same clips that were identified at the lower weir. One adult coho had a healed lamprey wound.

A total of 1,145 jack coho salmon (100% males, age 1.0) were harvested at the upper weir (Table 17). The total estimated jack run at the lower weir was 1,915. This represents 0.3% of the total coho smolt plant in 1987 and 3.5% of the total estimated run of 55,144 coho in the Platte River during 1987.

The weighted mean length and weight of jacks for 1987 were 15.8 inches and 1.6 pounds. In 1985 and 1986, the jacks averaged 15.2 and 15.4 inches in length, and 1.2 and 1.5 pounds in

weight, respectively. Four jacks had adipose fin clips. The adipose clip is reserved for coded-wire tagged fish but these jacks were not checked for coded tags.

Chinook salmon

Most (67.2%) of the chinook at the upper weir were harvested after October 20 (Table 19). The run was composed of 52% adult males, 30% jack males, and 18% adult females. The average weight of all chinook (adults and jacks combined) was 10.1 pounds. The total harvest of 256 fish was only 10.4% of the estimated number of chinook passed at the lower weir. A creel census of the Platte River between the two weirs estimated that an additional 350 chinook were caught by fishermen.

SUMMARY

The 1987 run of coho salmon in the Platte River consisted of 55,144 adults (31.7% male and 68.3% female). This is a return of 7.3% on the smolts planted in 1986 and is a relatively low percent return. Mean sizes at the lower weir were 26.8 inches and 6.3 pounds for adult males and 25.8 inches and 6.0 pounds for adult females. Mean sizes at the upper weir were 27.0 inches and 6.2 pounds for adult males, 25.9 inches and 6.1 pounds for adult females, and 15.8 inches and 1.6 pounds for jacks.

A grand total of 50,300 coho adults and jacks weighing 293,829 pounds were harvested. A total of 24,707 adults weighing 152,181 pounds were harvested at the lower weir and 25,437 adults and jacks weighing 141,529 pounds were harvested at the upper weir. The upper weir harvest included 5,747 stripped females weighing 25,860 pounds, from which the 1987 consignment of 14.2 million eggs were taken. The quality of the 1987 eggs was slightly less than normal as reflected in an average eye-up of 67% for eggs incubated at the Platte River Hatchery.

The 1987 run of 7,787 chinook (56.5% males and 43.5% females) was above average. Ultimately, 5,592 of these chinook (71.8%, 99,642 pounds) were harvested: 5,336 at the lower weir and 256 at the upper weir. The age composition of the chinook run was 0.1% age-0.0 (jacks), 11.6% age-0.1 (jacks), 8.5% age-0.2, 38.3% age-0.3, 38.1% age-0.4, and 3.4% age-0.5. The mean weights of age groups 0.0 through 0.5 were 0.4, 4.6, 7.5, 12.1, 15.7, and 19.8 pounds, respectively.

The 1987 fall steelhead run of 2,963 fish (72.5% males and 27.5% females) was the largest since 1980. Eight different age groups were identified but fish which had spent three summers in Lake Michigan (age groups 1.2 and 2.2) were the most numerous (64.9%). Overall, the steelhead averaged 25.1 inches long and weighed 6.6 pounds.

Other salmonids passed upstream at the lower weir included 23 brown trout, 4 lake trout, and 126 pink salmon. Based on fin clips, the lake trout originated from plants made at Good Harbor Bay Reef, South Fox Island Shoal, and Frankfort.

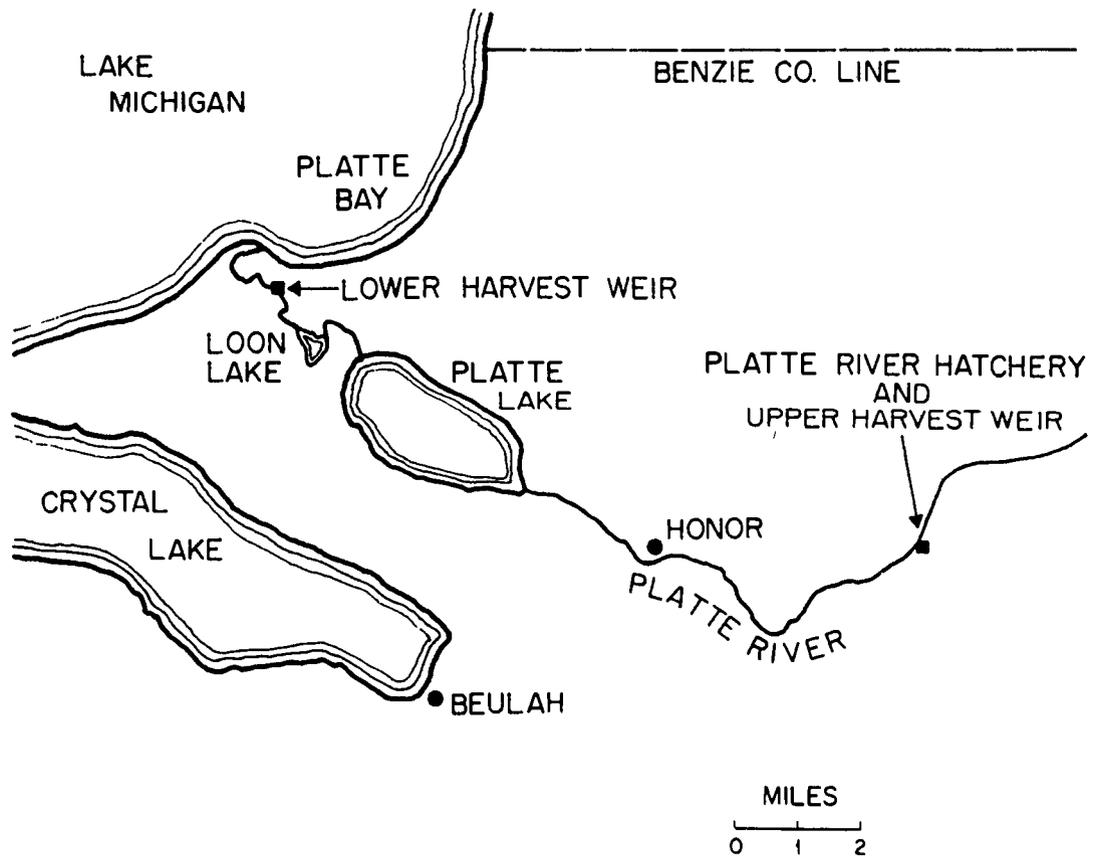


Figure 1. Location of the Platte River Hatchery and the upper and lower harvest weirs.

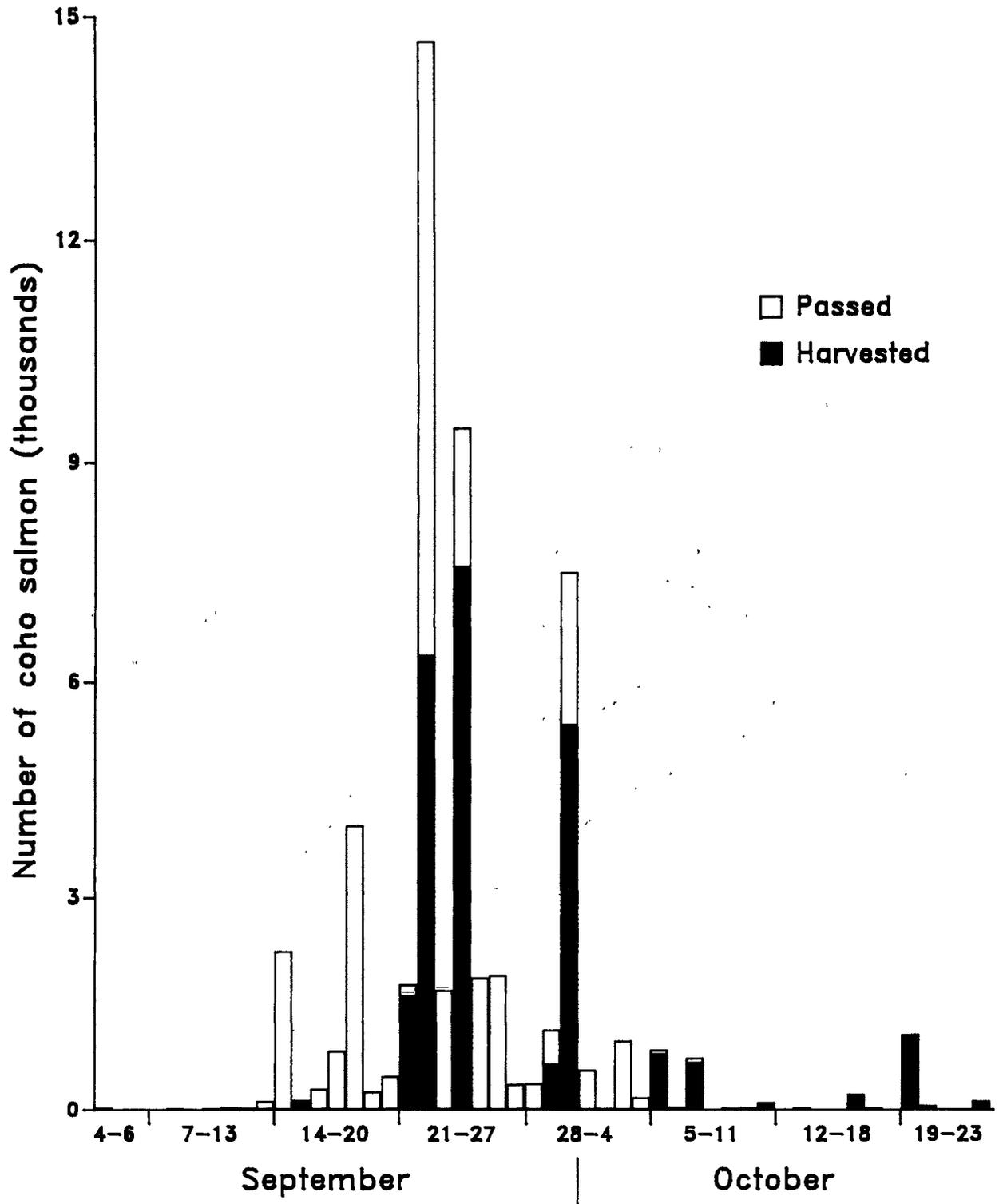


Figure 2. Periodicity of coho salmon passed upstream or harvested at the lower Platte River weir, fall 1987.

Table 1. Number of anadromous salmonids planted in the Platte River, 1966–87.

Year	Coho (yearlings)	Chinook (spring fingerlings)	Steelhead (yearlings)	Atlantic salmon (yearlings)
1966	265,000	—	—	—
1967	503,000	—	—	—
1968	309,000	—	—	—
1969	1,092,069	—	—	—
1970	777,640	—	—	—
1971	390,381	53,500	—	—
1972	406,330	40,630	—	—
1973	918,135	—	206,924	—
1974	804,131	—	100,386	7,308
1975	800,202	—	87,600	—
1976	500,903	—	—	—
1977	606,814	—	—	—
1978	516,202	—	—	—
1979	973,032	—	—	—
1980	1,028,038	—	—	—
1981	944,205	—	—	—
1982	1,000,010	—	—	—
1983	953,499	—	—	—
1984	989,192	—	—	—
1985	817,483	—	—	—
1986	751,183	—	—	—
1987	622,079	—	—	—
Total	15,968,528	94,130	394,910	7,308

Table 2. Total number of salmonids (salmon plus trout) and estimated number of coho and chinook salmon passed upstream at the lower Platte River weir, fall 1987.

Date	Salmonids passed	Coho		Chinook	
		Percent in harvest ¹	Estimated number passed	Percent in harvest ¹	Estimated number passed
9/04	43				
Weekly total	43	83.7	36	2.3	1
9/08	23				
9/09	3				
9/10	26				
9/11	55				
9/12	42				
9/13	160				
Weekly total	309	83.8	259	1.3	4
9/14	2,720				
9/15	3				
9/16	380				
9/17	1,019				
9/18	4,818				
9/19	332				
9/20	908				
Weekly total	10,180	83.7	8,523	1.1	114
9/21	194				
9/22	8,858				
9/23	1,837				
9/24	2,043				
9/25	2,032				
9/26	2,087				
9/27	401				
Weekly total	17,452	94.1	16,425	4.9	847
9/28	483				
9/29	597				
9/30	2,514				
10/01	677				
10/02	31				
10/03	1,183				
10/04	228				
Weekly total	5,713	83.6	4,774	13.5	773

Table 2. Continued:

Date	Salmonids passed	Coho		Chinook	
		Percent in harvest ¹	Estimated number passed	Percent in harvest ¹	Estimated number passed
10/05	188				
10/06	103				
10/07	213				
10/09	70				
10/10	97				
Weekly total	671	41.3	277	54.2	364
10/12	60				
10/13	165				
10/16	16				
10/17	178				
Weekly total	419	18.9	79	76.1	319
10/20	118				
Weekly total	118	54.2	64	24.6	29
Annual total	34,905	87.2	30,437	7.0	2,451

¹Percentage of the harvested or handled salmonids which were either coho or chinook.

Table 3. Summary of adult coho salmon harvested at the lower Platte River weir, fall 1987.

Date	Coho harvested			Cumulative total	Total weight (pounds)
	Jacks age 1.0	Adult age 1.1	Mortalities		
9/15	33	149	0	182	933
Weekly total	33	149	0		933
9/21	35	1,624	0	1,841	9,736
9/22	45	6,345	0	8,231	37,867
9/24	11	7,560	2	15,804	45,059
Weekly total	91	15,529	2		92,662
9/29	3	625	0	16,432	4,057
9/30	18	5,400	0	21,850	35,045
Weekly total	21	6,025	0		39,102
10/05	2	780	0	22,632	5,376
10/07	0	649	0	23,281	4,472
10/11	0	111	0	23,392	684
Weekly total	2	1,540	0		10,532
10/16	1	236	5	23,634	1,481
Weekly total	1	236	5		1,481
10/19	8	1,080	8	24,730	6,909
10/23	0	130	3	24,863	843
Weekly total	8	1,210	11		7,752
Annual total	156	24,689	18	24,863	152,462

Table 4. Mean total length (inches) and weight (pounds), by age and sex, of coho salmon harvested at the lower Platte River weir, fall 1987. Two standard errors in parentheses.

Week beginning	Measurement	Age 1.0		Age 1.1	
		Male	Female	Male	Female
9/14	Length	15.8 (0.346)	—	26.4 (0.630)	25.3 (0.268)
	Weight	1.8 (0.119)	—	6.2 (0.459)	5.8 (0.206)
9/21	Length	16.0 (0.389)	—	26.9 (0.597)	25.9 (0.242)
	Weight	1.8 (0.130)	—	6.2 (0.494)	6.0 (0.185)
9/28	Length	16.4 (0.599)	—	27.0 (0.473)	25.9 (0.294)
	Weight	2.0 (0.237)	—	6.6 (0.338)	6.4 (0.228)
10/05	Length	14.6 (1.620)	—	27.2 (0.375)	26.1 (0.332)
	Weight	1.2 (0.299)	—	7.0 (0.328)	6.8 (0.272)
10/12	Length	14.6 —	—	27.0 (0.508)	25.8 (0.272)
	Weight	1.3 —	—	6.5 (0.486)	6.1 (0.245)
10/19	Length	14.9 (0.559)	—	27.1 (0.429)	26.0 (0.265)
	Weight	1.4 (0.154)	—	6.4 (0.310)	6.3 (0.237)
Weighted seasonal mean	Length	15.9 (0.303)	—	26.8 (0.342)	25.8 (0.162)
	Weight	1.8 (0.104)	—	6.3 (0.276)	6.0 (0.124)
Sexes combined	Length	15.9 (0.303)		26.1 (0.162)	
	Weight	1.8 (0.104)		6.1 (0.122)	

Table 5. Summary of the number and weight, by age and sex, of jack and adult coho salmon returning to the lower Platte River weir (harvested plus passed), fall 1987.

Week beginning	Male		Female		Total	
	Number	Pounds	Number	Pounds	Number	Pounds
Age 1.0						
9/14	1,680	2,952	—	—	1,680	2,952
9/21	186	326	—	—	186	326
9/28	37	73	—	—	37	73
10/05	2	2	—	—	2	2
10/12	2	3	—	—	2	3
10/19	8	11	—	—	8	11
Total	1,915	3,367	—	—	1,915	3,367
(Percent)	(3.4)	(1.0)	—	—	(3.4)	(1.0)
Age 1.1						
9/14	2,588	16,015	6,379	36,923	8,967	52,938
9/21	8,966	55,194	22,990	137,050	31,956	192,244
9/28	4,514	29,992	6,285	40,261	10,799	70,253
10/05	818	5,754	999	6,819	1,817	12,573
10/12	92	600	228	1,388	320	1,988
10/19	527	3,378	758	4,789	1,285	8,167
Total	17,505	110,933	37,639	227,230	55,144	338,163
(Percent)	(30.7)	(32.5)	(65.9)	(66.5)	(96.6)	(99.0)

Table 6. Summary of adult coho salmon (age 1.1) runs at the lower Platte River weir, 1979-87.

Year	Estimated number passed	Number harvested	Total run	Plant in previous year	Percent return	Mean length (inches)	Mean weight (pounds)
1979	36,404	0	36,404	516,200	7.1	23.1	4.4
1980	76,480 ¹	46,633	123,113	973,032	12.7	26.9	7.6
1981	38,874	129,175	168,049	1,028,038	16.3	27.0	6.8
1982	38,951	90,412	129,363	944,205	13.7	25.8	6.2
1983	35,600	120,758	156,358	1,000,010	15.6	26.6	6.9
1984	36,572	105,530	142,102	953,449	14.9	24.8	5.5
1985	30,736	49,659	80,354	989,192	8.1	25.7	6.1
1986	36,124	16,646	52,770	817,483	6.5	24.4	5.3
1987	30,437	24,707	55,144	751,183	7.3	26.1	6.1

¹Fish not counted; estimated from harvest at upper weir.

Table 7. Summary of all chinook salmon harvested at the lower Platte River weir, fall 1987.

Date	Chinook harvested			Cumulative total	Total weight (pounds)
	Jacks ages 0.0-0.1	Adults ages 0.2-0.5	Mortalities		
9/15	1	1	0	2	9
Weekly total	1	1	0		9
9/21	11	52	0	65	728
9/22	61	307	0	433	4,275
9/24	55	314	1	803	4,362
Weekly total	127	673	1		9,365
9/29	1	32	0	836	551
9/30	91	852	0	1,779	14,667
Weekly total	92	884	0		15,218
10/05	44	618	0	2,441	8,520
10/07	129	922	1	3,493	12,900
10/11	18	292	0	3,803	4,118
Weekly total	191	1,832	1		25,538
10/16	85	885	2	4,775	12,692
Weekly total	85	885	2		12,692
10/17	24	226	3	5,336	3,295
10/19	16	287	5	5,083	4,205
Weekly total	40	513	8		7,500
Annual total	536	4,788	12	5,336	70,322

Table 8. Summary of the number and weight, by age and sex, of chinook salmon returning to the lower Platte River weir (harvested plus passed), fall 1987.

Week beginning	Male		Female		Total	
	Number	Pounds	Number	Pounds	Number	Pounds
<u>Age 0.0</u>						
9/14	—	—	—	—	—	—
9/21	—	—	—	—	—	—
9/28	11	5	—	—	11	5
10/05	—	—	—	—	—	—
10/12	—	—	—	—	—	—
10/19	—	—	—	—	—	—
Total	11	5	—	—	11	5
(Percent)	(0.1)	(0.0)	—	—	(0.1)	(0.0)
<u>Age 0.1</u>						
9/14	61	242	—	—	61	242
9/21	288	1,310	—	—	288	1,310
9/28	167	798	—	—	167	798
10/05	232	1,117	—	—	232	1,117
10/12	116	517	—	—	116	517
10/19	41	187	—	—	41	187
Total	905	4,171	—	—	905	4,171
(Percent)	(11.6)	(4.3)	—	—	(11.6)	(4.3)
<u>Age 0.2</u>						
9/14	—	—	61	296	61	296
9/21	105	828	26	241	131	1,069
9/28	111	800	11	90	122	890
10/05	178	1,315	36	321	214	1,636
10/12	47	357	35	306	82	663
10/19	32	235	14	132	46	367
Total	473	3,535	183	1,386	656	4,921
(Percent)	(6.1)	(3.6)	(2.4)	(1.4)	(8.4)	(5.1)
<u>Age 0.3</u>						
9/14	—	—	—	—	—	—
9/21	314	3,392	392	4,886	706	8,278
9/28	234	2,764	379	4,777	613	7,541
10/05	410	4,665	499	6,271	909	10,936
10/12	268	3,193	279	3,486	547	6,679
10/19	74	845	134	1,699	208	2,544
Total	1,300	14,859	1,683	21,119	2,983	35,978
(Percent)	(16.7)	(15.3)	(21.6)	(21.8)	(38.3)	(37.1)

Table 8. Continued:

Week beginning	Male		Female		Total	
	Number	Pounds	Number	Pounds	Number	Pounds
<u>Age 0.4</u>						
9/14	—	—	—	—	—	—
9/21	262	3,864	235	4,099	497	7,963
9/28	434	6,658	345	5,432	779	12,090
10/05	481	7,447	481	7,529	962	14,976
10/12	221	3,623	244	3,855	465	7,478
10/19	124	1,953	138	2,222	262	4,175
Total	1,522	23,545	1,443	23,137	2,965	46,682
(Percent)	(19.5)	(24.3)	(18.5)	(23.8)	(38.1)	(48.1)
<u>Age 0.5</u>						
9/14	—	—	—	—	—	—
9/21	26	504	—	—	26	504
9/28	22	403	33	677	55	1,080
10/05	71	1,479	—	—	71	1,479
10/12	47	904	35	671	82	1,575
10/19	28	556	5	100	33	656
Total	194	3,846	73	1,448	267	5,294
(Percent)	(2.5)	(4.0)	(0.9)	(1.5)	(3.4)	(5.5)

Table 9. Length-age distribution (in percent of inch group) for chinook salmon scale sampled during creel census at Pentwater, Ludington, Manistee, Frankfort, Leland, Grand Traverse Bay, Manistee Lake, Big Manistee River, Betsie River, and Platte River during the period September to November 1987.¹

Length (inches)	Age				
	0.1	0.2	0.3	0.4	0.5
13	—	—	—	—	—
14	—	—	—	—	—
15	—	—	—	—	—
16	—	—	—	—	—
17	—	—	—	—	—
18	—	—	—	—	—
19	—	—	—	—	—
20	100	—	—	—	—
21	100	—	—	—	—
22	100	—	—	—	—
23	100	—	—	—	—
24	25	75	—	—	—
25	—	100	—	—	—
26	—	100	—	—	—
27	—	100	—	—	—
28	—	100	—	—	—
29	—	50	50	—	—
30	—	50	50	—	—
31	—	15	85	—	—
32	—	—	85	15	—
33	—	—	60	40	—
34	—	—	60	40	—
35	—	—	30	70	—
36	—	—	10	80	10
37	—	—	—	85	15
38	—	—	—	80	20
39	—	—	—	75	25
40+	—	—	—	—	100

¹Table developed by District 6 personnel at the Harrietta warehouse.

Table 10. Mean total length (inches) and weight (pounds), by age and sex, of chinook salmon harvested at the lower Platte River weir, fall 1987. Two standard errors in parentheses.

Week beginning	Measure- ment	Age					
		0.0		0.1		0.2	
		Male	Female	Male	Female	Male	Female
9/14	Length	—	—	22.4	—	—	25.8
	Weight	—	—	4.0	—	—	4.9
9/21	Length	—	—	22.6 (0.645)	—	29.0 (2.937)	30.1
	Weight	—	—	4.5 (0.417)	—	7.9 (1.803)	9.3
9/28	Length	10.8	—	22.8 (0.400)	—	27.7 (1.509)	28.8
	Weight	0.4	—	4.8 (0.288)	—	7.2 (0.783)	8.2
10/05	Length	—	—	23.1 (0.388)	—	28.0 (1.552)	30.1 (0.355)
	Weight	—	—	4.8 (0.334)	—	7.4 (1.025)	8.9 (1.102)
10/12	Length	—	—	23.1 (0.534)	—	28.8 (2.701)	30.4 (0.646)
	Weight	—	—	4.5 (0.321)	—	7.6 (1.423)	8.7 (0.641)
10/19	Length	—	—	23.0 (0.546)	—	28.2 (2.141)	30.5 (0.830)
	Weight	—	—	4.6 (0.441)	—	7.3 (1.008)	9.4 (0.641)
Weighted seasonal mean	Length	10.8	—	22.8 (0.262)	—	28.2 (0.963)	28.7 (0.317)
	Weight	0.4	—	4.6 (0.180)	—	7.5 (0.589)	7.6 (0.527)
Sexes combined	Length	10.8	—	22.8 (0.262)	—	28.4 (0.782)	—
	Weight	0.4	—	4.6 (0.180)	—	7.5 (0.499)	—

Table 10. Continued:

Week beginning	Measurement	Age					
		0.3		0.4		0.5	
		Male	Female	Male	Female	Male	Female
9/14	Length	—	—	—	—	—	—
	Weight	—	—	—	—	—	—
9/21	Length	32.5 (1.092)	33.8 (0.816)	35.4 (0.651)	36.8 (0.884)	38.6 —	— —
	Weight	10.8 (0.867)	12.5 (0.709)	14.7 (0.721)	17.4 (0.779)	19.4 —	— —
9/28	Length	33.4 (0.680)	33.4 (0.465)	36.1 (0.448)	35.0 (0.428)	37.4 (0.748)	39.2 (2.165)
	Weight	11.8 (0.475)	12.6 (0.388)	15.3 (0.447)	15.7 (0.541)	18.3 (0.441)	20.5 (1.527)
10/05	Length	32.5 (0.756)	33.3 (0.616)	35.8 (0.653)	34.9 (0.466)	41.6 (5.146)	— —
	Weight	11.4 (0.637)	12.6 (0.538)	15.5 (0.618)	15.7 (0.505)	20.8 (3.100)	— —
10/12	Length	33.8 (0.654)	33.4 (0.505)	37.1 (0.799)	35.4 (0.623)	38.4 (2.219)	37.4 (1.733)
	Weight	11.9 (0.514)	12.5 (0.436)	16.4 (0.825)	15.8 (0.849)	19.2 (1.363)	19.2 (0.509)
10/19	Length	33.1 (0.729)	33.6 (0.418)	36.7 (0.571)	35.5 (0.394)	38.7 (1.192)	36.4 —
	Weight	11.4 (0.524)	12.7 (0.441)	15.8 (0.533)	16.1 (0.524)	19.8 (1.133)	20.1 —
Weighted seasonal mean	Length	32.9 (0.390)	33.5 (0.289)	36.1 (0.285)	35.4 (0.252)	39.5 (2.204)	38.2 (1.316)
	Weight	11.4 (0.313)	12.5 (0.251)	15.5 (0.283)	16.0 (0.280)	19.8 (1.335)	19.8 (0.750)
Sexes combined	Length	33.3 (0.243)		35.7 (0.207)		39.2 (1.584)	
	Weight	12.1 (0.215)		15.7 (0.223)		19.8 (0.975)	

Table 11. Summary of chinook salmon runs at the lower Platte River weir, 1979-87.

Year	Estimated number passed	Number harvested	Total run	Adult (ages 0.2-0.5)	
				Mean length (inches)	Mean weight (pounds)
1979	4,159	543	4,702	—	—
1980	2,736 ¹	1,699	4,435	32.8	14.5
1981	1,391	2,172	3,563	34.7	15.6
1982	1,393	1,606	2,999	34.4	14.0
1983	1,275	4,839	6,114	33.6	14.7
1984	1,566	4,358	5,924	34.8	14.8
1985	1,772	3,093	4,865	34.8	13.9
1986	2,469	2,678	5,147	33.6	12.9
1987	2,451	5,336	7,787	34.1	13.5

¹Fish not counted; estimated from harvest at upper weir.

Table 12. Number of trout released upstream at the lower Platte River weir, fall 1987.¹

Date	Steelhead		Brown trout		Lake trout	
	Handled	Passed	Handled	Passed	Handled	Passed
9/04	—		—		—	
Weekly total	0	5	0	0	0	0
9/07	—		—		—	
Weekly total	0	43	0	0	0	0
9/15	25		—		—	
Weekly total	25	1,429	0	0	0	0
9/21	33		1		—	
9/22	50		—		—	
9/24	79		1		—	
Weekly total	162	172	2	2	0	0
9/29	101		1		—	
9/30	103		3		—	
Weekly total	204	162	4	3	0	0
10/05	71		8		—	
10/07	69		3		—	
10/011	13		1		—	
Weekly total	153	28	12	2	0	0
10/16	60		2		—	
Weekly total	60		2		—	
10/19	375		3		—	
10/23	100		—		4	
Weekly total	475	25	3	- 0	4	0
Annual total	1,079	1,884	23	8	4	0
Combined total	2,963		31		4	

¹ Released trout include those actually handled, counted, then transferred upstream, and those (estimated) which swam through the weir when it was open.

Table 13. Annual fall runs of steelhead, brown trout, and lake trout handled during the harvest of coho salmon at the lower Platte River weir, 1980-87.

Year	Steelhead	Brown trout	Lake trout
1980	124	7	0
1981	682	78	0
1982	1,276	38	38
1983	1,545	58	7
1984	1,292	74	69
1985	1,189	79	20
1986	364	31	14
1987	1,079	23	4

Table 14. Summary of the number and weight, by age and sex, of steelhead returning to the lower Platte River weir, fall 1987.

Week beginning	Male		Female		Total	
	Number	Pounds	Number	Pounds	Number	Pounds
<u>Age 1.0</u>						
9/14	300	397	—	—	300	397
9/21	46	63	—	—	46	63
9/28	28	49	—	—	28	49
10/05	8	14	—	—	8	14
10/12	1	2	—	—	1	2
10/19	15	26	15	41	30	67
Total	398	551	15	41	413	592
(Percent)	(13.4)	(2.8)	(0.5)	(0.2)	(13.9)	(3.0)
<u>Age 2.0</u>						
9/14	120	251	—	—	120	251
9/21	—	—	—	—	—	—
9/28	6	11	6	15	12	26
10/05	5	11	3	7	8	18
10/12	1	2	5	21	6	23
10/19	15	50	—	—	15	50
Total	147	325	14	43	161	368
(Percent)	(5.0)	(1.7)	(0.5)	(0.2)	(5.4)	(1.9)
<u>Age 1.1</u>						
9/14	—	—	—	—	—	—
9/21	19	96	19	113	38	209
9/28	6	32	11	46	17	78
10/05	—	—	8	41	8	41
10/12	4	19	1	3	5	22
10/19	23	117	30	192	53	309
Total	52	264	69	395	121	659
(Percent)	(1.8)	(1.3)	(2.3)	(2.0)	(4.1)	(3.4)
<u>Age 2.1</u>						
9/14	—	—	—	—	—	—
9/21	—	—	28	160	28	160
9/28	6	30	6	28	12	58
10/05	5	30	3	17	8	47
10/12	1	6	1	6	2	12
10/19	30	198	30	184	60	382
Total	42	264	68	395	110	659
(Percent)	(1.4)	(1.3)	(2.3)	(2.0)	(3.7)	(3.4)

Table 14. Continued:

Week beginning	Male		Female		Total	
	Number	Pounds	Number	Pounds	Number	Pounds
<u>Age 1.2</u>						
9/14	541	4,267	60	397	601	4,664
9/21	102	797	28	191	130	988
9/28	83	699	44	346	127	1,045
10/05	43	374	43	336	86	710
10/12	14	104	5	38	19	142
10/19	136	1,148	98	746	234	1,894
Total	919	7,389	278	2,054	1,197	9,443
(Percent)	(31.0)	(37.8)	(9.4)	(10.5)	(40.4)	(48.3)
<u>Age 2.2</u>						
9/14	180	1,270	120	886	300	2,156
9/21	28	200	46	347	74	547
9/28	67	515	83	644	150	1,159
10/05	20	175	38	303	58	478
10/12	28	238	17	137	45	375
10/19	61	513	38	305	99	818
Total	384	2,911	342	2,622	726	5,533
(Percent)	(13.0)	(14.9)	(11.5)	(13.4)	(24.5)	(28.3)
<u>Age 1.3</u>						
9/14	180	1,839	—	—	180	1,839
9/21	9	73	—	—	9	73
9/28	6	46	17	141	23	187
10/05	3	32	3	24	6	56
10/12	—	—	—	—	—	—
10/19	8	76	—	—	8	76
Total	206	2,066	20	165	226	2,231
(Percent)	(7.0)	(10.6)	(0.7)	(0.8)	(7.6)	(11.4)
<u>Age 2.3</u>						
9/14	—	—	—	—	—	—
9/21	—	—	9	83	9	83
9/28	—	—	—	—	—	—
10/05	—	—	—	—	—	—
10/12	—	—	—	—	—	—
10/19	—	—	—	—	—	—
Total	—	—	9	83	9	83
(Percent)	—	—	(0.3)	(0.4)	(0.3)	(0.4)

Table 15. Mean total length (inches) and weight (pounds), by age and sex, of steelhead passed at the lower Platte River weir, fall 1987. Two standard errors in parentheses.

Week beginning	Measure-ment	Age					
		1.0		2.0		1.1	
		Male	Female	Male	Female	Male	Female
9/14	Length	14.5 (0.594)	—	15.7 (1.417)	—	—	—
	Weight	1.3 (0.139)	—	2.1 (1.543)	—	—	—
9/21	Length	14.6 (0.492)	—	—	—	23.3 (5.197)	25.2 (0.394)
	Weight	1.4 (0.165)	—	—	—	5.1 (2.646)	6.0 (0.882)
9/28	Length	15.8 (0.446)	—	16.5 —	17.2 —	24.0 —	21.2 (3.898)
	Weight	1.8 (0.197)	—	1.8 —	2.4 —	5.3 —	4.2 (1.764)
10/05	Length	14.6 (1.491)	—	16.4 (1.496)	16.7 —	—	22.9 (2.173)
	Weight	1.8 (0.674)	—	2.2 (0.882)	2.4 —	—	5.1 (1.273)
10/12	Length	16.3 —	—	15.0 —	20.9 (4.189)	22.3 (1.555)	17.4 —
	Weight	2.4 —	—	1.5 —	4.1 (2.193)	4.7 (0.778)	2.6 —
10/19	Length	15.9 (0.748)	18.1 (1.693)	19.9 (2.677)	—	22.6 (1.142)	24.5 (1.639)
	Weight	1.8 (0.441)	2.8 (0.220)	3.3 (0.441)	—	5.1 (0.882)	6.4 (1.406)
Weighted seasonal mean	Length	14.7 (0.450)	18.1 (1.576)	16.2 (1.235)	18.4 (1.874)	23.0 (2.100)	23.9 (0.911)
	Weight	1.4 (0.108)	2.8 (0.205)	2.2 (1.313)	3.0 (0.981)	5.1 (1.113)	5.7 (0.684)
Sexes combined	Length	14.8 (0.444)		16.3 (1.076)		23.5 (0.960)	
	Weight	1.4 (0.111)		2.3 (1.143)		5.4 (0.573)	

Table 15. Continued:

Week beginning	Measure- ment	Age					
		2.1		1.2		2.2	
		Male	Female	Male	Female	Male	Female
9/14	Length	—	—	27.9 (1.066)	26.2 —	27.3 (1.418)	26.3 (4.055)
	Weight	—	—	7.9 (0.887)	6.6 —	7.1 (0.918)	7.4 (3.307)
9/21	Length	—	24.5 (1.127)	27.3 (0.850)	25.5 (0.954)	27.1 (3.036)	27.0 (1.413)
	Weight	—	5.7 (0.674)	7.8 (0.644)	6.8 (0.882)	7.1 (1.148)	7.5 (0.830)
9/28	Length	23.2 —	23.2 —	28.5 (0.817)	27.2 (1.220)	27.7 (0.753)	27.7 (0.452)
	Weight	5.1 —	4.6 —	8.4 (0.628)	7.9 (0.833)	7.7 (0.311)	7.8 (0.385)
10/05	Length	24.2 (2.756)	24.2 —	28.7 (0.986)	27.2 (0.397)	28.9 (0.552)	27.5 (0.447)
	Weight	6.0 (1.764)	5.5 —	8.7 (0.732)	7.8 (0.328)	8.8 (0.644)	8.0 (0.428)
10/12	Length	23.6 —	25.8 —	27.0 (0.895)	26.5 (1.642)	28.4 (0.783)	27.3 (0.541)
	Weight	5.5 —	5.7 —	7.5 (0.634)	7.6 (1.490)	8.5 (0.567)	8.0 (0.385)
10/19	Length	25.5 (2.162)	25.1 (1.140)	28.4 (0.935)	27.2 (0.794)	28.2 (1.337)	27.8 (1.546)
	Weight	6.6 (1.298)	6.1 (0.277)	8.4 (0.764)	7.6 (0.641)	8.4 (0.922)	8.0 (1.426)
Weighted seasonal mean	Length	24.9 (1.752)	24.7 (0.752)	28.0 (0.646)	26.8 (0.421)	27.7 (0.730)	27.1 (1.435)
	Weight	6.3 (1.054)	5.8 (0.335)	8.0 (0.536)	7.4 (0.331)	7.6 (0.459)	7.7 (1.169)
Sexes combined	Length	24.8 (0.645)		27.7 (0.532)		27.4 (0.675)	
	Weight	6.0 (0.372)		7.9 (0.434)		7.6 (0.496)	

Table 15. Continued:

Week beginning	Measure- ment	Age			
		1.3		2.3	
		Male	Female	Male	Female
9/14	Length	30.2 (1.242)	—	—	—
	Weight	10.2 (2.950)	—	—	—
9/21	Length	27.2	—	—	30.0
	Weight	8.2	—	—	9.3
9/28	Length	27.0	28.2 (1.898)	—	—
	Weight	7.7	8.3 (1.203)	—	—
10/05	Length	31.6	28.0	—	—
	Weight	10.8	7.9	—	—
10/12	Length	—	—	—	—
	Weight	—	—	—	—
10/19	Length	29.1	—	—	—
	Weight	9.5	—	—	—
Weighted seasonal mean	Length	30.0 (1.232)	28.2 (1.723)	—	30.0
	Weight	10.0 (2.926)	8.2 (1.092)	—	9.3
Sexes combined	Length	—	29.8 (1.074)	30.0	—
	Weight	—	9.9 (2.522)	—	9.3

Table 16. Age composition, mean length (inches), and mean weight (pounds) summarized by summers growth in Lake Michigan, for steelhead trout sampled at the lower Platte River weir, fall 1987.

Age	Summers in lake	Percent of sample	Mean length (inches)	Mean weight (pounds)
_.0	1	19.4	15.2	1.7
_.1	2	7.8	24.1	5.7
_.2	3	64.9	27.6	7.8
_.3	4	7.9	29.8	9.9
All			25.1	6.6

Table 17. Number of coho salmon harvested at the upper Platte River weir, fall 1987.

Date	Jacks	Males	Females		Mortalities
			Round	Stripped	
10/02	14	32	76	0	645
Weekly total	14	32	76	0	645
10/06	0	0	0	0	427
10/07	8	38	62	0	1
10/08	313	1,350	600	926	247
10/09	342	1,235	723	1,074	57
Weekly total	663	2,623	1,385	2,000	732
10/12	96	1,520	480	895	346
10/13	47	950	210	468	59
10/14	25	855	240	509	69
10/15	62	1,615	325	1,138	77
Weekly total	230	4,940	1,255	3,010	551
10/20	146	1,864	841	707	181
10/22	58	1,341	999	0	33
Weekly total	204	3,205	1,840	707	214
10/29	31	156	302	0	6
Weekly total	31	156	302	0	6
11/05	3	111	214	0	83
Weekly total	3	111	214	0	83
12/01	0	97	65	30	13
Weekly total	0	97	65	30	13
Annual total	1,145	11,164	5,137	5,747	2,244

Table 18. Weight (pounds) of coho salmon harvested at the upper Platte River weir, fall 1987.

Date	Jacks	Males	Females		Mortalities
			Round	Stripped	
10/02	19	196	442	0	3,870
Weekly total	19	196	442	0	3,870
10/06	0	0	0	0	2,562
10/07	12	232	360	0	6
10/08	470	8,235	3,480	3,982	1,457
10/09	547	7,534	4,193	4,618	336
Weekly total	1,029	16,001	8,033	8,600	4,361
10/12	154	9,120	2,928	4,117	2,076
10/13	75	5,700	1,260	2,153	354
10/14	40	5,130	1,464	2,341	414
10/15	99	9,690	1,983	5,235	462
Weekly total	368	29,640	7,635	13,846	3,306
10/20	219	12,116	5,214	3,252	1,158
10/22	87	8,717	6,194	0	211
Weekly total	306	20,833	11,408	3,252	1,369
10/29	38	1,045	1,963	0	40
Weekly total	38	1,045	1,963	0	40
11/05	4	744	1,391	0	548
Weekly total	4	744	1,391	0	548
12/01	0	611	390	162	79
Weekly total	0	611	390	162	79
Annual weight	1,764	69,070	31,262	25,860	13,573
Mean weight	1.5	6.2	6.1	4.5	6.1

Table 19. Number and weight (pounds) of chinook salmon (jacks and adults combined) harvested at the upper Platte river weir, fall 1987.

Date	Males		Females		Mortality		Total	
	Number	Weight	Number	Weight	Number	Weight	Number	Weight
10/02	0	0	0	0	8	97	8	97
Weekly total	0	0	0	0	8	97	8	97
10/06	0	0	0	0	6	73	6	73
10/07	3	18	0	0	0	0	3	18
10/08	7	40	0	0	6	39	13	79
10/09	9	62	1	8	0	0	10	70
Weekly total	19	120	1	8	12	112	32	240
10/12	4	16	3	35	8	88	15	139
10/13	4	21	1	14	0	0	5	35
10/14	3	9	0	0	0	0	3	9
10/15	9	77	1	14	3	33	13	124
Weekly total	20	123	5	63	11	121	36	307
10/20	25	178	3	44	7	78	35	300
10/22	32	286	6	82	2	24	40	392
Weekly total	57	464	9	126	9	102	75	692
10/29	22	252	3	40	2	7	27	319
Weekly total	22	252	3	40	2	7	27	319
11/05	40	480	15	201	15	200	70	881
Weekly total	40	480	15	201	15	200	70	881
12/01	3	25	2	14	3	36	8	75
Weekly total	3	25	2	14	3	36	8	75
Annual total	161	1,464	35	452	60	675	256	2,611
Mean weight		9.1		12.9		11.3		10.2

LITERATURE CITED

- Pecor, C. H. 1986. Platte River harvest weir and coho salmon egg-take report, 1985. Michigan Department of Natural Resources, Fisheries Technical Report 86-3, Ann Arbor.
- Pecor, C. H. 1987. Platte River harvest weir and coho salmon egg-take report, 1986. Michigan Department of Natural Resources, Fisheries Technical Report 87-1, Ann Arbor.

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