

PUBLIC FISH CULTURE
in the
UNITED STATES,
1958

Marine Biological Laboratory
LIBRARY
MAR 12 1958
WOODS HOLE, MASS.

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

Fish and Wildlife Circular 58

Cover: Spring Creek, Washington, National Fish Hatchery,
a U. S. Bureau of Sport Fisheries and Wildlife
hatchery for Pacific salmon, part of the Columbia
River fishery program (BSFW photo).

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

PUBLIC FISH CULTURE IN THE UNITED STATES, 1958

A Statistical Summary

By William Hagen, Chief
and Joseph P. O'Connor, Statistician
BRANCH OF FISH HATCHERIES

FISH AND WILDLIFE SERVICE CIRCULAR 58

Washington • October 1959

CONTENTS

Introduction	1
Table 1. Distribution of fish from hatcheries of 50 States	8
Table 2. Summary of fish distribution, by species, from hatcheries of the Bureau of Sport Fisheries and Wildlife, 1957.	27
Table 3. Summary of fish distribution into State waters from hatcheries of 50 States and the Bureau of Sport Fisheries and Wildlife.	30
Table 4. Summary of fish distribution, by species, from hatcheries of 50 States and the Bureau of Sport Fisheries and Wildlife.	32
Table 5. Capital invested in State and Federal fish-cultural facilities and cost of operations.	33
Table 6. Fish food purchased by 50 States and the Bureau of Sport Fisheries and Wildlife.	36
Table 7. Hatchery and fishery research and management by 50 States and the Bureau of Sport Fisheries and Wildlife.	38
Table 8. Fish-cultural personnel and payrolls reported by 50 States and the Bureau of Sport Fisheries and Wildlife.	40
Table 9. State and Federal fish hatcheries and rearing stations	42



Steve Coker Hatchery, Dawson, Georgia--a Georgia State Game and Fish Commission hatchery for pondfish (Georgia State Game and Fish Commission photo).

PUBLIC FISH CULTURE IN THE UNITED STATES, 1958

The fish-cultural activities of the States and of the Federal Government have been reported previously, by Earle (1937) and by Tunison and others (1949). What Earle described as "big business" twenty-two years ago has now truly attained such stature. If it were possible to list accurate data for private fish-cultural activities, there would be substantial additions to the totals.

Fish culture as practiced by the public agencies is so different in most respects from that of the turn of the century as to be hardly recognizable. Disease control, nutritional requirements, techniques of fish culture, and equipment improvement are far beyond anything dreamed of at that time. But as advances are made, there are opened before us new vistas to be explored: new problems arise and old problems are newly recognized. The ingenuity of the fish culturist is constantly producing contributions to techniques and equipment - labor savers, if you will. The helpful pathologist or nutritionist is pointing the way to a better, and cheaper, final product.

Not so surprising, when one thinks of it, is the fact that here in the hatcheries is one of the few functions of public agencies where a definite product is produced - where it is possible to analyze the production in cost per unit, or effort per pound of fish. In those hatcheries where the simplest of cost-accounting methods are employed it is possible to show, over the years, increased production and improved quality, provided the results of research are available and the hatchery manager has the know-how or the help to apply these findings to his operations.

The fish culturists of the public agencies can be proud of their achievements within the hatchery. The next chapter, however, is the most important part of the story. Every fish culturist wants his product to contribute to the fisherman's creel. Dependence must be on the management biologist to help in producing for the creel. He should be working with the hatchery, stating the species desired, the numbers and size wanted at what time of year. His is the responsibility, not only for determining the extent to which the hatchery fish are being creeled, but also for advising on ways and means of improving the return to the fisherman. Unfortunately, insufficient assistance of this kind results in a major weakness of the hatchery program.

The preparation of the data herein reflects improvement in hatchery operations when compared with the previous two surveys. This third survey, after an interval of about ten years, was undertaken because of the expressed value of the data to State agencies, as well as to the hatchery operations of the Bureau of Sport Fisheries and Wildlife. Reports of activities were received from each of the fifty States. We have taken no liberties with the information supplied, with one exception. In a few instances, only numbers of fish were given. We have estimated the weights of these reported numbers and have so indicated by footnote. Two States listed no fish distributed although operating hatcheries are shown. In other respects, within limits, we have used all of the data supplied by the States.

The distribution of fish from the State and Federal hatcheries is summarized in tables 1 to 4, following the pattern used by Tunison (1949).

The total number of fish distributed (table 1) as shown in the current survey is 44 percent of the 1948 total and about 39 percent of the 1936 total. The swing to larger sizes of fish, particularly catchable trout, during the past ten years accounts for a part of the decrease in numbers. In earlier years, too, there were produced large numbers of commercial and marine species. Although data are not available for comparison, it is certain that the weight of the fish distributed is now at an all-time high.

In this third survey of fish culture some data are included that were not available for the 1937 and 1949 surveys. The types of foods purchased (table 6) are listed, indicating the swing to pellets, although comparative data are not available for the States.

In a comparison of fish foods purchased for Federal hatcheries in 1945, 1949, and 1955, Hagen (1957) listed no purchases of pellets in 1945 or 1949. In 1955, 489,062 pounds of pellets were purchased, and the current report (table 6) shows the purchase of 2,213,179 pounds of pellets by the Federal hatcheries in 1957.

Heretofore the surveys have listed the individual Federal and State hatcheries. This is not done at this time, as the Bureau issues separate publications providing this information. State hatcheries are listed in Fishery Leaflet 41 (rev. May 1959), and Federal hatcheries in Fishery Leaflet 147 (rev. Jan. 1959), both available free from the Bureau.

Regarding the numbers of State and Federal fish-cultural units, it will be noted (table 9) that these totaled 471 (46 States reporting) in 1936, 629 in 1948 (48 States), and 587 in 1958 (50 States). No attempt has been made to ascertain the station closures and new stations entering into production.

From data in table 5, an indication of the current value of all Federal and State fish-cultural facilities may be determined. The 1948 survey (Tunison, 1949) reports estimated replacement value of facilities. The current request was for capital investment since 1948. Quite obviously, closed hatcheries, increased replacement values because of greater construction costs, and other factors must be considered. Therefore, we have not attempted to calculate the current value of facilities.

Again referring to table 5, it is believed that the annual cost of fish-cultural operations is reasonably accurate, amounting to 17.7 million, or 1.7 million less than the 1948 figure when several States did not provide data. Operations include reported personnel (table 8), fish foods purchased (table 6), plus reported miscellaneous costs for supplies, maintenance, and other items.

Particularly interesting is the information presented in table 7, concerned with management and research personnel. Total personnel engaged in these activities has increased almost three-fold. In the field of research on hatchery problems a total of only 150 individuals was employed, with a total payroll of \$529,070. Comparing this with a total fish-cultural operating expense of 17.7 million dollars, we arrive at 3% for hatchery research. This is much too low when we realize that a nationwide reduction of one-tenth of a food conversion point can save hundreds of thousands of dollars, as can better information on disease control and nutritional deficiencies.

In the field of fishery management and research, having to do with the stocking of hatchery fish for the greatest return to the creel, a reported 776 people and a payroll of 3.8 million dollars are involved. Many of these individuals were engaged on studies only remotely concerned with the improvement of hatchery stocking. Perhaps the next few years will reveal the results of their studies. The services of management biologists are necessary to successful utilization of the hatchery product. Incidentally, the reported biologists total 926 compared with the 2,058 fish-cultural personnel, both figures including administrators.

The increase in fish-cultural personnel (table 8) since 1948 is a relatively modest 394 (19%), but payroll costs have jumped about 83%. During the same span of years the total number of Federal and State units (table 9) had dropped from 629 to 587. It is known, however, that hatcheries tend to be considerably larger than in previous years.

The questionnaire for this survey included an inquiry about expected fish requirements in 1970. Surprisingly enough, many States predicted no more fish would be required, and of these, several were trout States of the West where great increases in population (and thus fishing pressure) are predicted and where many reservoirs are being created and waters reclaimed. In the Middle West, generally, the States indicated a 1970 need for more trout, catfish, walleye, and northern pike. The Southeastern States were split in their opinions. Some wanted large increases in warm-water species and trout, while adding catfish and walleye. Others indicated large decreases in trout and warm-water species. The Northeastern States were quite consistent, expecting about the same requirements for trout, bass, and sunfish, while indicating a desire for walleye. For Pacific salmon there was indicated a large increase required in 1970.

If the estimates of population increases during the next decade are realized there will be increased fishing pressures. The creation of new and reclamation of old waters will continue and there will be loss of some stream mileage. These factors probably will result in revision of estimates of future need of hatchery fish for stocking. Farm ponds play an important part in the fishing picture. It is estimated that there are now some two million farm ponds and range tanks in the United States, and additions are at the rate of about a hundred thousand a year.

We acknowledge with appreciation the promptness with which each of the fifty States returned the questionnaires. It was apparent from the replies that most States maintain reliable records of their fish-cultural activities.

Literature Cited

Earle, Swepson.

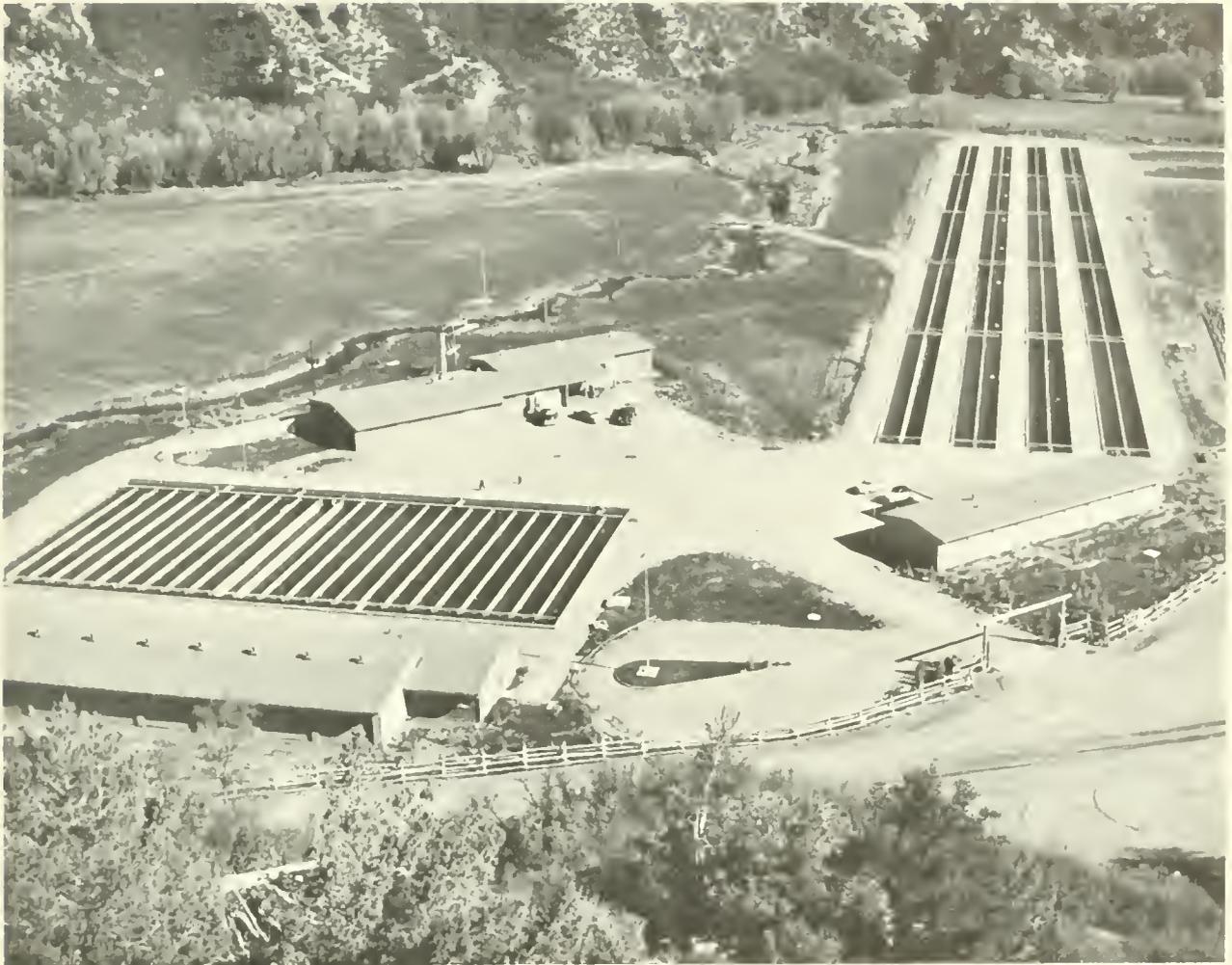
1937. Fish Culture is Big Business in the United States. Progressive Fish-Culturist 31:1-29.

Hagen, Wm., Jr.

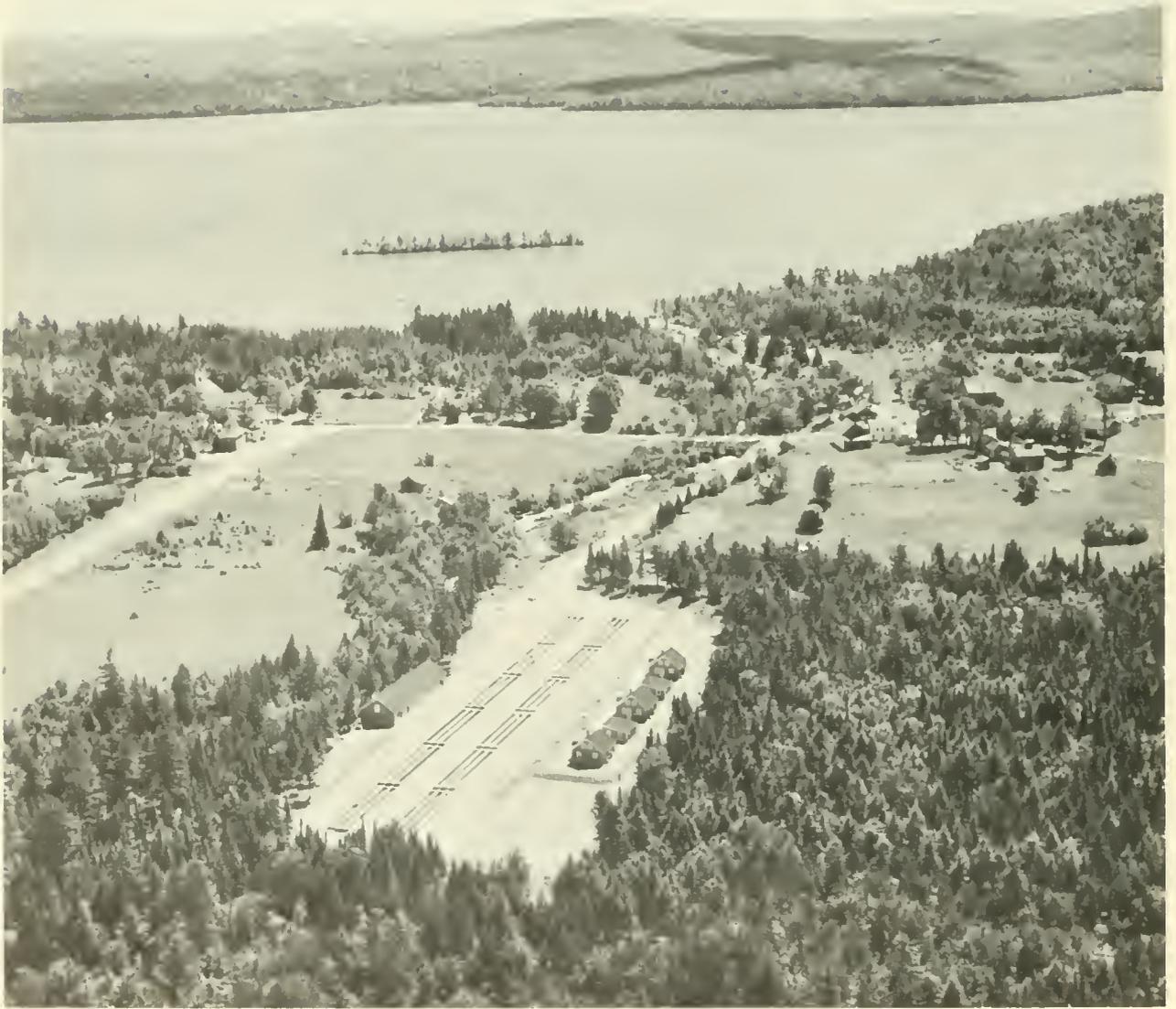
1957. Fish Foods Purchased for Federal Hatcheries - 1955, Compared with 1945 and 1949. Progressive Fish-Culturist 19(1):32-39.

Tunison, A. V., S. M. Mullin, and O. Lloyd Meehean.

1949. Survey of Fish Culture in the United States. Progressive Fish-Culturist 11(1):31-69 and (4):253-262.



Rifle Falls Hatchery and Rearing Unit, Rifle, Colorado--a Colorado Game and Fish Department hatchery for trout (Colorado Game and Fish Department photo by George D. Andrews).



Roland H. Cobb Hatchery, Enfield, Maine--a Maine Department of Inland Fisheries and Game hatchery for Atlantic salmon (Maine Department of Inland Fisheries and Game photo).



Skamania Hatchery, Washougal, Washington--a Washington Department of Game hatchery for steelhead trout (Washington Department of Game photo).

TABLE 1.--Distribution of fish from hatcheries of 50 States

State and Year	Species	Fry	Fingerlings	6 inches and more	Total		Current Year	
					Weight (pounds)	Number	Year	1948
Alabama	Bass	-	371,426	-	418	371,426	445,786	389,993
10/1/57 to 9/30/58	Largemouth Sunfish	-	-	-	-	-	-	-
	Bluegill	-	1,772,285	-	3,789	1,772,285	1,174,312	3,692,783
	Redear	-	312,756	-	667	312,756	-	-
	Crappie	-	-	-	-	-	-	300
Alaska	Trout	-	-	-	-	-	-	-
1/1/58 to 12/31/58	Rainbow	733,000	-	-	1,000	733,000	-	-
	Steelhead	425,000	-	-	580	425,000	-	-
	Salmon	-	-	-	-	-	-	-
	Coho	208,000	30,000	-	1,200	238,000	-	-
	Sockeye	250,000	-	-	90	250,000	-	-
	Chinook	3,000	80,000	-	2,000	83,000	-	-
Arizona	Bass	-	13,832	-	2,116	13,832	80,100	85,249
7/1/57 to 6/30/58	Largemouth	-	-	-	-	-	-	2,900
	Smallmouth	-	-	-	-	-	-	-
	Bluegill	-	29,841	-	1,512	29,841	113,200	120,502
	Crappie	-	-	-	-	-	6,300	-
	Catfish	-	-	-	-	-	-	-
	Channel	-	-	-	-	-	-	8,000
	Trout	-	-	-	-	-	-	-
	Cutthroat	-	-	-	-	-	190,100	756,860
	Rainbow	2,028,214	442,817	768,655	310,370	3,239,686	750,448	1,312,274
	Brook	-	-	-	-	-	313,575	57,700
	Brown	-	-	-	-	-	11,224	3,495
	Grayling	-	-	-	-	-	-	450,000
Arkansas	Bass	-	613,154	-	1,150*	613,154	-	1,518,532
7/1/57 to 6/30/58	Largemouth	-	254,600	-	286*	254,600	-	114,175
	Smallmouth	-	-	-	-	-	-	1,000
	Rock	-	-	-	-	-	-	-
	Warmouth	-	46,300	-	87*	46,300	-	-
	Sunfish	-	-	-	-	-	-	-
	Bluegill	-	2,835,045	-	3,544*	2,835,045	-	2,079,593
	Redear	-	155,160	-	194*	155,160	-	18,020

*Estimated Weight

TABLE 1.--Distribution of fish from hatcheries of 50 States - Continued

State and Year	Species	Fry	Fingerlings	6 inches and more	Total Weight (pounds)	Total Number	
						Current Year	1948
Arkansas 7/1/57 to 6/30/58 (continued)	Sunfish (cont'd)	-	-	-	-	-	-
	Green	-	391,000	-	489*	391,000	-
	Crappie	-	276,818	-	346*	276,818	101,888
	Catfish	-	-	-	-	-	-
	Channel	-	934,975	-	1,753*	934,975	69,250
	Bullhead	-	150	-	0*	150	15,250
	Buffalofish	-	5,072	-	6*	5,072	-
	Shad	-	-	-	-	-	-
	Threadfin	-	30,760	-	38*	30,760	-
	Minnows	-	-	-	-	-	30,000
	Golden shiner	-	1,750	-	2*	1,750	40,740
	Goldfish	-	455	-	1*	455	-
	Trout	-	-	-	-	-	-
	Rainbow	-	-	-	-	-	6,325
	Brown	-	-	-	-	-	9,050
California 7/1/57 to 6/30/58	Bass	-	-	-	-	-	-
	Largemouth	-	14,360	-	27*	14,360	-
	Smallmouth	-	10,457	-	12*	10,457	51,000
	Sunfish	-	-	-	-	-	-
	Bluegill	-	100	652	153*	752	-
	Redear	-	194,386	986	268*	195,372	-
	Catfish	-	-	-	-	-	-
	Channel	-	21,050	-	39*	21,050	-
	Trout	-	-	-	-	-	-
	Cutthroat	-	574,476	-	1,491	574,476	363,510
	Rainbow	-	7,037,461	9,158,088	1,893,669	16,195,549	17,199,614
	Steelhead	-	977,692	581,426	49,481	1,559,118	1,595,860
	Golden	-	149,928	-	56	149,928	-
	Brook	-	1,577,699	-	6,350	1,577,699	1,753,018
	Brown	-	705,415	5,975	2,531	711,390	882,790
Salmon	-	-	-	-	-	-	
Coho	-	-	48,810	5,676	48,810	14,015	
Kokanee	-	706,040	-	428	706,040	457,800	
Chinook	-	1,488,691	690	4,886	1,489,381	3,733,050	
Unclassified	-	-	-	-	-	573,789	

*Estimated Weight

TABLE 1.--Distribution of fish from hatcheries of 50 States - Continued

State and Year	Species	Fry	Fingerlings	6 inches and more	Total Weight (pounds)	Current Year	Total Number	
							1936	1948
Colorado 1/1/57 to 12/31/57	Bass							
	Largemouth	1,440	3,592	-	66	5,032	-	37,667
	Bluegill	-	-	-	-	-	-	129,064
	Crappie	230,755	6,751	1,352	2,017	238,858	-	51,811
	Catfish	46,414	48,250	21,846	3,690	116,510	-	-
	Walleye	2,299,250	-	17	52	2,299,267	-	-
	Perch							
	Yellow	30,458	7,401	1,098	549	38,957	-	19,000
	Trout							
	Cutthroat	765,600	-	-	226	765,600	22,203,825	(Unclassified)
Rainbow	4,689,115	455,604	4,578,215	1,067,437	9,722,934	-	1,389,138	
Brook	903,186	3,625	18,203	6,394	925,014	-	1,496,246	
Brown	-	118,513	218,959	47,284	337,472	-	426,901	
Kokanee	2,911,032	-	-	694	2,911,032	-	1,000,476	

Connecticut 7/1/57 to 6/30/58	Bass							
	Largemouth	-	-	-	-	-	-	143
	Smallmouth	-	-	-	-	-	-	959
	Crappie	-	-	-	-	-	-	145,141
	Bullhead	-	-	-	-	-	-	527,463
	Perch	-	-	-	-	-	-	-
	Yellow	-	-	-	-	-	-	10,546,570
	White	-	-	-	-	-	-	888
	Pickrel	-	-	-	-	-	-	702
	Shad	-	-	-	-	-	-	8,894,000
	Roach	-	-	-	-	-	-	30,787
	Shiners	-	-	-	-	-	-	359,902
	Trout							405,282
Rainbow	40,000	4,200	19,140	2,159	63,340	-	(Unclassified)	
Brook	20,000	23,800	70,480	11,175	114,280	-	91,959	
Brown	45,000	20,000	123,129	47,702	188,129	-	590,460	
Smelt	-	-	-	-	-	-	356,796	
Flounder	-	-	-	-	-	-	26,098,800	

Delaware 7/1/57 to 6/30/58	Bass							
	Largemouth	-	40,000	-	75*	40,000	-	-
Bluegill	-	80,000	-	100*	80,000	-	-	

*Estimated Weight

TABLE 1.--Distribution of fish from hatcheries of 50 States - Continued

State and Year	Species	Fry	Fingerlings	6 inches and more	Total Weight (pounds)	Total Number	
						Current Year	1948
Florida 7/1/57 to 6/30/58	Bass	-	440,000	-	825*	440,000	1,100,000
	Largemouth	-	1,000,000	-	1,250*	1,000,000	3,959,600
	Bluegill	-	-	-	-	-	112,000
	Crappie	-	-	-	-	-	-
Georgia 4/1/57 to 3/31/58	Bass	400,000	-	-	550	400,000	500,000
	Largemouth	-	4,000,000	-	5,000	4,000,000	2,500,000
	Bluegill	-	-	-	-	-	500,000
	Trout	-	-	50,000	25,000	50,000	(Unclassified)
	Rainbow	-	-	25,000	12,500	25,000	-
	Brook	-	-	25,000	12,500	25,000	-
Hawaii 1958	Bass	-	1,500	-	3*	1,500	-
	Largemouth	-	250	-	0*	250	-
	Smallmouth	-	4,500	-	6*	4,500	-
	Bluegill	-	70,000	-	438*	70,000	-
	Rainbow trout	-	2,700	-	3*	2,700	-
	Tilapia	-	200	-	0*	200	-
Idaho 11/1/57 to 10/31/58	Bass	206,555	-	-	500	206,555	-
	Largemouth	-	3,588	-	69	3,588	1,750
	Smallmouth	-	-	-	-	-	-
	Trout	2,984,532	15,708	25,829	6,065	3,026,069	7,860,000
	Cutthroat	2,996,079	3,054,726	2,078,095	679,309	8,128,900	6,070,000
	Rainbow	579,472	70,950	84,871	14,343	735,293	-
	Kamloops	9,300	-	-	3	9,300	-
	Golden	-	-	36,996	4,254	36,996	8,500
	Lake	386,155	295,096	20,406	8,312	701,657	1,110,000
	Brook	-	-	-	-	-	-
Salmon	2,160,000	34,000	-	1,014	2,194,000	490,000	
Sockeye	-	-	-	-	-	-	-
Kokanee	-	-	-	-	-	-	-

*Estimated Weight

TABLE 1.--Distribution of fish from hatcheries of 50 States - Continued

State and Year	Species	Fry	Fingerlings	6 inches and more	Total Weight (pounds)	Total Number	
						Current year	1948
Illinois 1/1/57 to 12/31/57	Bass	-	359,467	1,784	3,350*	361,251	288,000 (
	Largemouth Sunfish	-	50,524	17,180	8,653*	67,704	3,559,000 (
	Bluegill	-	175	-	3*	175	(1,765,457
	Redear	-	68,936	-	86*	68,936	(62,000 (unclassified
	Crappie	-	-	-	-	-	-
	Catfish	-	-	73,225	13,730	73,225	-
	Channel	-	-	-	-	-	975,000 (
	Perch	-	-	30	16*	518,030	-
	Walleye	518,000	-	-	-	-	-
	Pike	-	-	369	89*	1,000,369	-
	Northern Trout (unclassified)	1,000,000	-	20,950	3,928	20,950	-
Lake	-	-	-	-	-	4,000,000	
Indiana 1/1/58 to 12/31/58	Bass	-	313,783	-	588*	313,783	439,761
	Largemouth	-	52,559	-	59*	52,559	-
	Smallmouth	-	120,663	-	226*	120,663	-
	Rock	-	-	-	-	-	-
	Sunfish	-	344,449	-	431*	344,449	1,146,997
	Bluegill	-	240,523	-	301*	240,523	103,675
	Redear	-	58,372	-	73*	58,372	3,950
	Crappie	-	-	-	-	-	-
	Catfish	-	1,700	-	3*	1,700	26,255
	Channel	460,000	-	-	9*	460,000	-
	Walleye	-	-	-	-	-	-
Iowa 7/1/57 to 6/30/58	Trout	-	-	43,272	8,114*	43,272	6,099
	Rainbow	-	-	3,839	720*	3,839	-
	Brook	-	-	10,520	1,972*	10,520	50,564
	Brown	-	-	-	-	-	-
	Bass	8,970	759,463	1,356	1,773*	769,789	190,070
Largemouth	-	15,315	67	36*	15,382	13,400	
Smallmouth	-	-	-	-	-	525	
White	-	-	-	-	-	-	
Yellow	-	-	-	-	-	-	

*Estimated Weight

TABLE 1.--Distribution of fish from hatcheries of 50 States - Continued

State and Year	Species	Fry	Fingerlings	6 inches and more	Total weight (pounds)	Total Number	
						Current Year	1948
Iowa 7/1/57 to 6/30/58 (continued)	Sunfish	14,094	7,000	407	126*	21,501	257,611
	Bluegill	-	-	-	-	-	4,800
	Pumpkinseed	-	-	-	-	-	262,251
	Crappie	-	2,050	26,415	4,956*	28,465	309,246
	Catfish	-	183,195	31,378	6,226*	214,573	12,346
	Bullhead	-	12,700	966,045	120,772*	978,745	663,380
	Perch	-	-	-	-	-	4,100
	Yellow Pickerel	-	-	-	-	-	1,021
	Walleye	128,209,333	1,016,248	893	3,874*	129,226,474	81,892,267
	Pike	-	-	-	-	-	-
	Northern Minnows	10,794,894	23,939	791	391*	10,819,624	85,490,703
	Shiners	-	-	-	-	-	1,500
	Trout	-	-	-	-	-	68,700
	Rainbow Brook	-	-	-	-	-	117,960
Brown	-	-	-	-	-	(Unclassified)	
Kansas 1/1/57 to 12/31/57	Bass	19,000	256,100	4,250	2,701	279,350	170,000
	Largemouth Bluegill	-	126,672	200	1,448	126,872	30,000
	Crappie	-	139,275	-	2,785	139,275	170,000
	Catfish	-	-	-	-	-	-
	Channel Walleye	507,500	747,753	19,237	8,878	1,274,490	192,000
	Walleye	500,000	-	-	5	500,000	-
Kentucky 7/1/56 to 6/30/57	Bass	500,000	80,000	1,000	681*	581,000	1,053,083
	Largemouth Bluegill	-	-	-	-	-	209,908
	Crappie	-	-	-	-	-	40,904
	Walleye	-	-	-	-	-	880,000
	Unclassified	-	-	-	-	-	119,630
Louisiana 7/1/57 to 6/30/58	Unclassified Warm-water	-	-	-	-	-	1,380,000
	-	-	-	-	-	-	-

*Estimated Weight

TABLE 1.--Distribution of fish from hatcheries of 50 States - Continued

State and Year	Species	Fry	Fingerlings	6 inches and more	Total		Current Year	Total Number
					Weight (pounds)	Weight (pounds)		
Maine 1/1/57 to 12/31/57	Bass	-	-	-	-	-	-	30,000
	Largemouth Trout	-	-	-	-	-	-	1,300
	Rainbow Lake	-	168,350	42,000	8,038	210,350	-	-
	Brook	-	1,066,172	250,000	67,693	1,316,172	-	4,908,001
	Brown	-	73,250	44,000	3,480	117,250	-	421,500
	Salmon	-	-	-	-	-	-	-
	Sockeye	-	-	-	-	-	-	593,500
	Landlocked	-	281,560	210,000	17,631	491,560	-	3,347,700
	Togue	-	-	-	-	-	-	30,731
	-	-	-	-	-	-	-	-
Maryland 7/1/57 to 6/30/58	Bass	-	2,420	-	2	2,420	255,300	40,701
	Largemouth	12,000	18,439	-	20	30,439	-	7,400
	Smallmouth	-	-	-	-	-	130,000	9,600
	Bluegill	-	-	-	-	-	-	1,835
	Crappie	-	-	-	-	-	-	-
	Perch	-	-	-	-	-	-	-
	Yellow	-	-	-	-	-	209,550,000	10,800,265
	White	-	-	-	-	-	65,360,000	-
	Pike	-	-	-	-	-	-	-
	Northern	-	-	-	-	-	760	23
	Shad	-	-	-	-	-	1,702,400	-
	Trout	-	-	-	-	-	110,000	103,800
	Rainbow	-	10,400	95,979	35,000	95,979	(Unclassified)	(Unclassified)
	Brook	-	-	25,715	13,000	36,115	-	-
Brown	-	-	31,542	12,000	31,542	-	-	
Herring	-	-	-	-	-	6,640,000	-	
-	-	-	-	-	-	-	-	-
Massachusetts 7/1/57 to 6/30/58	Bass	-	33,380	14,565	2,373	47,945	55,584	60,000
	Smallmouth	-	-	-	-	-	164,990	-
	Bluegill	-	-	-	-	-	219,060	32,835
	Crappie	-	-	-	-	-	-	-
	Perch	-	-	-	-	-	-	-
	Yellow	-	-	-	-	-	83,674	102,875
	White	-	-	-	-	-	116,695	-
Walleye	-	-	-	-	-	119,375	-	
Bullhead	-	-	-	-	-	242,245	249,615	

TABLE 1.--Distribution of fish from hatcheries of 50 States - Continued

State and Year	Species	Fry	Fingerlings	6 inches and more	Total Weight (pounds)	Total Number	
						Current Year	1948
Massachusetts 7/1/57 to 6/30/58 (continued)	Pickarel	-	1,084	1,481	475	2,565	5,821
	Trout	-	-	-	-	-	12,978
	Rainbow	-	117,000	196,445	79,796	313,445	141,513
	Lake	-	27,102	6,330	795	33,432	-
	Brook	-	279,286	551,804	118,993	831,090	390,749
	Brown	-	34,900	186,589	79,751	221,489	205,326
	Salmon	-	-	-	-	-	98,036
-	Chinook	-	-	-	-	-	39,000
Michigan 1/1/57 to 12/31/57	Bass	-	-	-	-	-	-
	Largemouth	-	142,151	11,247	3,223	153,398	625,207
	Smallmouth	-	6,155	6,753	583	12,908	254,496
	Sunfish	-	-	-	-	-	-
	Bluegill	-	271,430	73,364	7,703	344,794	6,881,789
	Redear	-	-	125	43	125	-
	Perch	-	-	-	-	-	-
	Yellow	-	-	-	-	-	1,803,050
	Walleye	200,000	140,500	4,605	17,493	345,105	205,276,624
	Pike	-	-	-	-	-	-
	Northern	6,500	4,863	1,759	2,066	13,122	6
	Muskellunge	-	15,444	-	51	15,444	-
	Trout	-	-	-	-	-	-
Minnesota 7/1/57 to 6/30/58	Rainbow	-	284,005	1,338,423	281,209	1,622,428	980,751
	Steelhead	-	150	7,771	1,135	7,921	-
	Lake	-	2,238	113,388	11,128	115,626	3,509,000
	Splake	-	450	2,550	276	3,000	-
	Brook	-	103,815	546,476	120,820	650,291	3,924,192
	Brown	-	10,563	128,930	38,461	139,493	3,558,749
	Bass	-	-	-	-	-	-
	Largemouth	20,000	1,109,589	3,729	6,912	1,133,318	271,518
	Smallmouth	21,000	30,456	32	304	51,488	39,909
	White	-	-	-	-	-	60
Bluegill	-	1,308,675	295,302	36,067	1,603,977	143,625	
Crappie	-	2,780	367,514	62,898	370,294	43,330	
Catfish	-	40,050	34	74	40,084	-	
Bullhead	-	202,500	348,177	71,196	550,677	-	
Walleye	129,741,000	5,149,710	10,425	62,714	134,901,135	489,159,555	
						184,805,774	

TABLE 1.--Distribution of fish from hatcheries of 50 States - Continued

State and Year	Species	Fry	Fingerlings	6 inches and more	Total		Current Year	1936	1948
					Weight (pounds)	Number			
Minnesota 7/1/57 to 6/30/58 (continued)	Pike	-	-	-	-	-	-	-	-
	Northern Muskellunge	2,755,000	933,295	196,711	68,804	3,885,006	-	-	9,880,412
	Perch	350,000	504	17	150	350,521	-	-	-
	Pickarel	-	-	45,955	6,869	45,955	-	-	90,930
	Suckers	2,803,000	-	26,787	12,840	2,829,787	2,973,000	-	-
	Minnows	-	66,000	-	150	66,000	-	-	23,884,706
	Whitefish	1,613,000	-	-	32	1,613,000	-	-	2,633,925
	Herring	-	-	-	-	-	440,000	-	920,000
	Trout	-	-	-	-	-	-	-	742,000
	Rainbow	-	128,356	81,254	17,323	209,610	1,374,763	-	(Unclassified)
	Brook	-	544,291	132,639	45,833	676,930	2,030,733	-	-
	Brown Lake	-	182,124	176,667	39,328	358,791	1,296,954	-	-
	Splake	-	75,088	11,682	1,805	86,770	3,196,900	-	766,000
Grayling	200,000	1,739	-	37	1,739	-	-	-	
Unclassified	-	-	-	4	200,000	-	2,000,000	-	-

Mississippi - No State Fish Hatcheries.									
Missouri 7/1/57 to 6/30/58	Bass	-	1,249,903	-	2,344*	1,249,903	609,514	-	1,648,260
	Largemouth	-	-	-	-	-	(Unclassified)	-	(Unclassified)
	Smallmouth	-	-	-	-	-	-	-	-
	Sunfish	-	4,133,604	-	5,167*	4,133,604	735,250	-	1,525,535
	Bluegill	-	-	-	-	-	637,106	-	398,345
	Green	-	-	-	-	-	523,947	-	248,335
	Crappie	-	-	-	-	-	162,989	-	-
	Catfish	-	953,749	-	1,788*	953,749	(Unclassified)	-	251,476
	Channel	-	-	-	-	-	-	-	215,160
	Bullhead	6,400,000	-	-	128*	6,400,000	-	-	-
	Walleye	-	-	-	-	-	10,600	-	71,000
	Goggleeye	-	-	-	-	-	-	-	34,110
	Minnows	-	166,860	-	188*	166,860	-	-	-
Trout	-	-	369,596	69,300*	369,596	90,000	-	277,326	

*Estimated Weight

TABLE 1.--Distribution of fish from batteries of 50 States - Continued

State and Year	Species	Fry	Fingerlings	6 inches and more	Total Weight (pounds)	Current Year	Total Number	
							1936	1948
Montana 1/1/57 to 12/31/57	Bass	-	-	-	-	-	241,461	-
	Largemouth	-	-	-	-	-	39,276	-
	Bluegill	-	-	-	-	-	49,032	-
	Crappie	-	-	-	-	-	13,660	-
	Catfish	-	-	-	-	-	-	-
	Walleye	1,229,000	-	-	20	1,229,000	-	-
	Pike	-	-	-	-	-	-	-
	Northern	120,000	-	-	4	120,000	300,000	-
	Perch	-	-	-	-	-	56,568	-
	Trout	-	-	-	-	-	-	-
	Cutthroat	1,410,070	1,377,186	23,149	7,967	2,810,405	7,535,877	3,927,000
	Rainbow	-	3,556,182	767,346	171,540	4,323,528	6,786,030	2,823,000
	Steelhead	-	-	-	-	-	12,624	-
	Golden	2,000	-	-	0	2,000	-	-
Mackinaw	-	94,000	-	70	94,000	-	-	
Brook	-	700	-	20	700	1,797,446	764,000	
Brown	-	-	-	-	-	2,059,320	1,800,000	
Grayling	1,133,183	-	657	159	1,134,625	10,955,044	2,025,000	
Salmon	-	-	-	-	-	(Unclassified)	-	
Sockeye	102,080	2,597,011	209,356	684	2,908,447	3,308,330	4,220,000	
Nebraska 1/1/57 to 12/31/57	Bass	-	-	-	-	-	-	-
	Largemouth	-	44,470	19,892	5,066*	64,362	330,000	97,137
	Bluegill	-	54,425	7,752	2,006*	62,177	120,000	201,050
	Crappie	-	9,475	502	106*	9,977	200,000	165,286
	Catfish	-	-	-	-	-	-	-
	Channel	-	220,115	-	413*	220,115	159,161	54,100
	Bullhead	-	-	284	36*	284	-	184,631
	Walleye	1,476,200	844,451	-	980*	2,320,651	2,050,000	842,596
	Pike	-	-	-	-	-	-	-
	Northern	-	4,850	-	5*	4,850	-	-
	Trout	-	-	-	-	-	-	-
Rainbow	-	123,000	86,185	16,929*	209,185	300,000	88,528	
Brook	-	-	-	-	-	40,000	60,804	
Brown	49,800	11,478	25,987	4,995*	87,265	-	-	

*Estimated Weight

TABLE 1.--Distribution of fish from hatcheries of 50 States - Continued

State and Year	Species	Fry	Fingerlings	6 inches and more	Total		Current Year	Total Number
					Weight (pounds)	Number		
Nevada 1/1/57 to 12/31/57	Trout	-	-	-	-	-	-	-
	Cutthroat	-	669,069	57,436	3,474	726,505	-	997,900
	Rainbow	-	198,011	516,606	110,617	714,617	-	1,266,500
	Brook	-	34,769	148,017	37,990	182,786	-	-
	Brown	-	102,034	47,772	9,713	149,806	-	-
	Salmon	-	-	-	-	-	-	-
	Kokanee	65,000	-	-	65	65,000	-	-
New Hampshire 1/1/58 to 12/31/58	Trout	-	-	-	-	-	-	-
	Rainbow	-	77,600	239,963	49,455	317,563	407,687	94,514
	Golden	-	-	888	9	888	-	-
	Lake	-	-	58,510	2,534	58,510	586,590	1,193,725
	Splake	-	10,000	-	381	10,000	-	-
	Brook	-	600,314	817,985	194,835	1,418,299	1,711,174	1,986,371
	Aureola	-	-	-	-	-	115,500	5,957
	Brown	-	10,000	18,597	3,144	28,597	40,775	104,584
	Salmon	-	-	-	-	-	-	-
	Landlocked	-	2	165,570	3,925	165,572	53,900	30,840
New Jersey 7/1/57 to 6/30/58	Bass	-	-	-	-	-	-	-
	Largemouth	-	15,744	204	532	15,948	343,468	270,002
	Smallmouth	-	-	-	-	-	36,000	(Unclassified)
	Sunfish	-	425	425	27	850	2,900	-
	Bluegill	-	4,700	1,950	222	6,650	381,000	184,855
	Crappie	-	-	-	-	-	250	-
	Bullhead	-	-	-	-	-	33,775	-
	Perch	-	-	950	237	950	-	-
	White	-	-	-	-	-	32,000	-
	Yellow	-	-	-	-	-	123,800,250	-
	Shad	-	-	-	-	-	6,230,000	-
	Trout	-	-	-	-	-	-	-
	Rainbow	-	5,500	109,110	59,832	114,610	575,289	451,273
Brook	-	-	122,670	42,093	122,670	514,041	(Unclassified)	
Brown	-	3,000	256,545	98,140	259,545	615,673	-	
New Mexico 4/1/57 to 3/31/58	Trout	-	-	-	-	-	-	-
	Cutthroat	-	197,908	5,631	1,582	203,539	1,470,693	804,433
	Rainbow	-	2,809,510	1,311,539	287,628	4,121,049	1,851,794	2,534,282
	Brook	-	59,850	-	414	59,850	268,000	-
	Brown	-	1,278,326	2,838	823	1,281,164	32,500	377,914

TABLE 1.--Distribution of fish from hatcheries of 50 States - Continued

State and Year	Species	Fry	Fingerlings	6 inches and more	Total weight (pounds)	Total Number		
						Current Year	1936	1948
New York 4/1/57 to 3/31/58	Bass	-	29,219	-	167	29,219	1,361,248	20,000
	Largemouth	-	54,476	-	440	54,476	(Unclassified)	793,962
	Smallmouth	-	-	-	220	800	-	-
	Bluegill	-	-	28,350	14,587	28,350	15,165	5,400
	Crappie	-	-	7,200	10,800	7,200	109,748	1,046
	Bullhead	-	-	-	-	-	559,750	-
	Perch	-	-	-	-	-	206,790,000	464,144,000
	Walleye	95,050,000	2,810	34	1,283	95,052,844	5,471,801	5,451,376
	Muskelunge	3,802,500	10,900	6,803	860	3,820,203	2,797,750	-
	Shad	-	-	-	-	-	23,220,000	4,326,000
	Whitefish	-	-	-	-	-	58,500,000	-
	Herring	-	-	-	-	-	-	-
	Trout	-	-	-	-	-	-	-
	Rainbow	-	218,886	416,546	55,620	635,432	1,102,914	268,405
Lake	540,000	1,013,167	84,547	17,719	1,637,714	1,621,956	1,103,872	
Splake	-	12,500	2,000	427	14,500	-	-	
Brook	-	2,171,039	690,790	168,572	2,861,829	4,148,419	2,922,266	
Brown	50,000	1,211,153	1,813,971	310,903	3,075,124	3,780,709	1,733,185	
Salmon	-	-	-	-	-	-	-	
Sockeye	-	67,340	-	33	67,340	-	-	
Atlantic	-	39,780	-	390	39,780	-	18,561	
Landlocked	-	2,640	-	97	2,640	23,083	1,526	
North Carolina 7/1/57 to 6/30/58	Bass	-	-	-	420	326,998	-	113,927
	Largemouth	326,998	-	-	61	46,303	-	4,800
	Smallmouth	46,303	-	-	21	3,000	-	-
	Rock	-	3,000	-	145	123,300	-	6,519
	Sunfish	123,300	-	-	1,460	916,731	-	157,249
	Bluegill	916,731	-	-	31	40,500	-	-
	Redear	40,500	-	-	-	-	-	370
	Crappie	-	-	-	-	-	-	-
	Pike	-	-	-	6	1,970	-	-
	Northern	1,000	970	-	-	-	-	-
	Trout	-	-	-	-	-	-	-
Rainbow	-	274,920	176,892	66,435	451,812	-	56,304	
Brook	-	559,149	80,978	21,867	640,127	-	30,458	
Brown	-	193,281	32,046	6,397	225,327	-	10,316	

TABLE 1.--Distribution of fish from hatcheries of 50 States - Continued

State and Year	Species	Fry	Fingerlings	6 inches and more	Total Weight (pounds)	Total Number			
						Current Year	1936 1948		
North Dakota	Bass	-	-	-	-	-	6,900	67,235	
	Largemouth	-	-	-	-	-	4,500	6,174	
	Sunfish	-	-	-	-	-	10,400	206,353	
	Bluegill	-	-	-	-	-	3,500	8,973	
	Crappie	-	-	-	-	-	(Unclassified-	1,121	
	Catfish	-	-	-	-	-	3,300	11,004	
	Bullhead	-	-	-	-	-	2,300	7,266	
	Perch	-	-	-	-	-	730,000	6,786,412	
	Walleye	-	-	-	-	-	-	-	
	Pike	-	-	-	-	-	-	-	
	Northern Golden shiner	-	-	-	-	-	5,450,000	4,760	
	-	-	-	-	-	-	-	2,000	
	Ohio 1/1/58 to 12/31/58	Bass	-	-	-	-	-	-	-
		Largemouth	-	103,586	-	2,589	103,586	678,148	118,570
Smallmouth		-	50,600	-	763	50,600	-	43,171	
Rock		-	-	-	-	-	8,274	97,272	
Spotted		-	-	-	-	-	-	4,305	
Sunfish		-	-	-	-	-	-	(Unclassified- 196	
Bluegill		-	-	-	-	-	1,312,010	95,356	
Crappie		-	-	-	-	-	94,975	22,285	
Catfish		-	-	-	-	-	-	-	
Channel		-	-	-	-	-	768,469	31,970	
Bullhead		-	3,011	-	100	3,011	-	53,001	
Perch		-	-	-	-	-	-	-	
Yellow		-	-	-	-	-	3,602	14,303	
Walleye		55,650,000	-	-	-	1,113*	55,650,000	191,380,000	78,680,650
Pike		1,000,000	-	-	-	21*	1,001,067	-	-
Northern		-	1,067	-	-	10*	81,379	-	-
Muskellunge		-	81,379	-	-	-	-	-	-
Whitefish		-	-	-	-	-	-	150,440,000	123,280,000
Minnows	-	1,327,850	-	-	1,494*	1,327,850	-	-	
Suckers	-	-	-	-	-	-	937	-	
Goldfish	-	-	-	-	-	-	-	270	
Unclassified	-	-	-	-	-	-	1,575,586	5,443	

*Estimated Weight

TABLE 1.--Distribution of fish from hatcheries of 50 States - Continued

State and Year	Species	Fry	Fingerlings	6 inches and more	Total Weight (pounds)	Total Number	
						Current Year	1936
Oklahoma 1/1/57 to 12/31/57	Bass	-	881,763	-	1,653*	881,763	2,072,200
	Largemouth	-	-	-	-	-	1,500
	Smallmouth	-	-	-	-	-	22,375
	Rock	-	-	-	-	-	36,300
	Warmouth	-	-	-	-	-	99,000
	Sunfish (unclassified)	-	173,255	-	217*	173,255	476,000
	Bluegill	-	170,985	-	214*	170,985	32,900
	Redear	-	-	-	-	-	419,000
	Crappie	-	104,715	-	131*	104,715	-
	Catfish	-	-	-	-	-	718,750
	Channel	-	507,945	-	952*	507,945	35,300
	Bullhead	-	-	-	-	-	4,600
	Perch	-	-	-	-	-	-
	Minnows	-	-	-	-	-	30,650
Unclassified	-	-	-	-	-	133,730	
Oregon 7/1/57 to 6/30/58	Shad	3,461,070	-	-	692	3,461,070	-
Trout							
Cutthroat	481,860	244,832	250,115	44,251	976,807	1,830,500	1,531,306
Rainbow	6,074,148	4,245,211	2,139,456	426,801	12,458,815	8,955,750	11,876,876
Steelhead	-	2,932,784	294,354	90,346	3,227,138	2,295,090	2,188,626
Golden	35,800	-	-	14	35,800	-	-
Lake	-	-	150,220	16,403	150,220	-	-
Brook	690,265	976,274	-	4,998	1,666,539	6,690,900	1,852,469
Brown	95,820	229,128	-	1,260	324,948	435,000	-
Salmon							
Chum	230,330	-	-	188	230,330	-	52,540
Coho	60,500	10,341,627	54,726	142,343	10,456,853	-	623,823
Sockeye	-	314,948	-	7,069	314,948	-	-
Kokanee	1,731,918	19,980	-	509	1,751,898	456,100	-
Chinook	231,087	14,774,391	141,758	168,656	15,147,236	65,000	791,000
Atlantic	-	-	974	34	974	-	-
Yanks	-	-	-	-	-	-	180,800
Pennsylvania 6/1/57 to 5/31/58	Bass	-	87,880	6,869	5,407	94,749	620,207
Largemouth	-	33,820	15,705	12,546	49,525	180,468	-
Smallmouth	-	-	-	-	-	-	-

*Estimated Weight

TABLE 1.--Distribution of fish from hatcheries of 50 States - Continued

State and Year	Species	Fry	Fingerlings	6 inches and more	Total		Current Year		1948
					Weight (pounds)	Number	Year	Number	
Pennsylvania 6/1/57 to 5/31/58 (continued)	Bluegill	-	5,102	27,413	8,581	32,515	374,106	269,020	
	Crappie	-	-	12,717	12,696	12,717	-	1,300	
	Catfish (Unclassified)	-	42	137,212	74,799	137,254	261,100	164,660	
	Bullhead	-	-	400	376	400	-	-	
	Perch	-	-	-	-	-	-	-	
	Yellow	-	-	1,933	677	1,933	256,612,000	147,105,771	
	Pickereel	-	-	206	384	206	1,637	1,696	
	Walleye	-	130,580	1,006	3,320	131,586	12,477,400	8,020,000	
	Pike	-	-	-	-	-	-	-	
	Northern	9,000	-	416	165	9,416	21,242,000	-	
Muskellunge	-	100	3,770	271	3,870	1,171	-		
Whitefish	-	-	-	-	-	14,000,000	2,516,000		
Suckers	-	-	-	-	-	11,116	18,807		
Minnows	-	-	-	-	-	921,800	74,350		
Goldfish	-	-	-	-	-	-	35		
Carp	-	-	1,700	5,525	1,700	20,101	-		
Cisco	-	-	-	-	-	8,460,000	5,400,000		
Eels	-	520,400	-	0	520,400	30,002	-		
Trout	-	1,836,880	2,044,767	734,576	3,881,647	3,859,900	5,030,112		
Trout	-	-	-	-	-	-	-		
Rhode Island 1/1/58 to 10/1/58	Rainbow	-	-	15,000	7,000	15,000	-	-	
	Brook	-	2,100	19,100	8,000	21,200	-	60,000	
	Brown	-	-	22,000	13,000	22,000	-	3,000	
South Carolina 7/1/55 to 6/30/56	Bass	-	-	-	-	-	-	-	
	Largemouth	-	326,634	-	941	326,634	((
	Smallmouth	-	9,530	-	30	9,530	((
	Bluegill	-	2,982,224	-	3,961	2,982,224	((
	Crappie	-	-	9,000	9	9,000	((
	Catfish	-	-	-	-	-	((
	Trout	-	-	-	-	-	((
	Rainbow	-	-	15,612	2,799	15,612	-	-	
South Dakota 7/1/56 to 6/30/57	Bass	-	45,000	5,700	1,509*	50,700	((
	Largemouth	-	54,000	20,000	5,068*	74,000	((
	Bluegill	-	-	60,000	11,250*	60,000	((
	Crappie	-	-	-	-	-	((

*Estimated Weight

TABLE 1.--Distribution of fish from hatcheries of 50 States - Continued

State and Year	Species	Fry	Fingerlings	6 inches and more	Total Weight (pounds)	Total Number	
						Current Year	1948
South Dakota 7/1/56 to 6/30/57 (continued)	Catfish (Unclassified)	-	40,000	-	75*	40,000	991,534
	Bullhead	-	-	31,000	5,812*	31,000	-
	Perch	-	-	16,000	3,000*	16,000	383,500
	Walleye	13,800,000	11,000	400	363*	13,811,400	247,871
	Pike	-	-	-	-	-	13,000,000
	Northern Trout	150,000	12,000	800	167*	162,800	152,950
	Rainbow	-	372,994	35,448	8,977*	408,442	1,045,472
	Brook	-	73,293	603	571*	73,896	(Unclassified)
	Brown	-	361,470	39,398	9,646*	400,868	371,255
	-	-	-	-	-	-	120,500
Tennessee 7/1/57 to 6/30/58	Bass	-	324,326	328	630	324,654	136,500
	Largemouth	-	6,272	-	231	6,272	(Unclassified)
	Smallmouth	-	1,950	-	25	1,950	-
	Coosa	-	-	-	-	-	-
	Sunfish	-	1,072,150	357	1,359	1,072,507	77,000
	Bluegill	-	2,500	-	5	2,500	-
	Redear	-	-	982	57	3,900,982	-
	Walleye	3,900,000	-	-	155	155,000	-
	Minnows	-	155,000	-	-	-	483,000
	Trout	-	-	-	-	-	(Unclassified)
Texas 9/1/57 8/31/58	Cutthroat	6,000	11,104	-	190	17,104	965,000
	Rainbow	-	165,380	120,413	56,194	285,793	(Unclassified)
	Brook	-	-	5,163	2,360	5,163	-
	Brown	6,410	150	5,575	1,671	12,135	-
	Salmon	-	-	-	-	-	-
	Kokanee	-	1,094	-	42	1,094	-
	-	-	-	-	-	-	-
	Bass	-	10,607,363	-	13,260*	10,607,363	14,137,196
	Largemouth	-	53,075	-	100*	53,075	(Unclassified)
	Rock	-	322,528	-	605*	322,528	-
Warmouth	-	321,635	-	402*	321,635	134,345	
Sunfish	-	822,780	-	1,028*	822,780	1,714,153	
Redear	-	142,920	-	179*	142,920	(Unclassified)	
Green	-	120,533	-	151*	120,533	-	
Redbreast	-	-	-	-	-	-	

*Estimated Weight

TABLE 1.--Distribution of fish from hatcheries of 50 States - Continued

State and Year	Species	Fry	Fingerlings	6 inches and more	Total Weight (pounds)	Total Number	
						Current Year	1948
Texas 9/1/57 to 8/31/58 (continued)	Crappie	-	431,500	-	539*	431,500	456,929
	Catfish	-	2,030,665	-	3,807*	2,030,665	1,182,978
Utah 1/1/58 to 12/31/58	Catfish	1,788,729	-	-	-	1,788,729	-
	Walleye	-	-	-	15	-	-
	Trout	-	-	-	-	-	-
	Cutthroat	1,042,217	-	-	415	1,042,217	14,776,786
	Rainbow	221,658	3,417,094	2,055,469	771,963	5,694,221	8,141,086
	Lake	-	6,500	-	80	6,500	235,400
	Brook	210,739	1,232,864	-	14,682	1,443,603	3,503,546
	Brown	725,202	263,904	-	2,259	989,106	5,830,830
	Grayling	-	-	-	-	-	2,601,296
	Salmon	-	-	-	-	-	-
Vermont 1/1/57 to 12/31/57	Kokanee	290,910	117,600	-	1,078	408,510	-
	Bass	-	-	-	-	-	-
	Largemouth	-	-	-	-	-	43,550
	Catfish	-	-	-	-	-	375
	Perch	-	-	-	-	-	17,600,000
	Walleye	-	-	-	-	-	16,500,000
	Trout	-	-	-	-	-	-
	Rainbow	-	155,000	225,047	34,414	380,047	189,280
	Steelhead	-	-	-	-	-	6,888
	Lake	-	79,000	39,250	4,180	118,250	217,356
Virginia 1/1/58 to 12/31/58	Brook	-	2,013,079	230,880	49,885	2,243,959	303,540
	Brown	-	437,569	29,658	9,670	467,227	2,043,129
	Salmon	-	-	-	-	-	178,718
	Atlantic Landlocked	-	190,975	-	2,566	190,975	-
Virginia 1/1/58 to 12/31/58	Atlantic Landlocked	-	-	-	-	-	8,000
	Bass	-	-	-	-	-	144,650
	Largemouth	-	75,666	75,666	37,833	75,666	15,870
	Smallmouth Rock	-	85,800	26,000	42,900	85,800	77,740
							2,500
							31,000

*Estimated Weight

TABLE 1.--Distribution of fish from hatcheries of 50 States - Continued

State and Year	Species	Fry	Fingerlings	6 inches and more	Total weight (pounds)	Total Number	
						Current Year	1936
Virginia 1/1/58 to 12/31/58 (continued)	Sunfish (unclassified)	-	-	73,000	9,125	73,000	101,000
	Bluegill	-	-	123,258	15,407	123,258	108,900
	Crappie	-	-	31,000	3,875	31,000	44,400
	Shiners	-	-	-	-	-	60,900
	Trout	-	-	458,718	275,953	458,718	401,433
Washington Dept. of Fisheries 1/1/58 to 12/31/58	Trout	-	-	-	-	-	274,467
Game 7/1/57 to 6/30/58	Cutthroat	-	2,270,000	-	14,188	2,270,000	2,639,591
	Rainbow	-	17,000,000	5,000,000	667,455	22,000,000	12,316,958
	Steelhead	1,740	64,879	2,000,000	231,095	2,066,619	749,493
	Brook	-	1,100,000	-	6,875	1,100,000	992,116
	Grayling	-	-	-	-	-	44,000
	Salmon	-	-	-	-	-	-
	Pink	-	684,233	-	1,664	684,233	-
	Chum	100,000	4,478,010	-	12,440	4,578,010	382,102
	Coho	803,472	22,791,237	-	293,877	23,594,709	8,762,048
	Sockeye	-	24,300	-	80	24,300	32,127
Kokanee	-	10,500,000	-	65,625	10,500,000	-	43,215,962
	3,485,500	38,992,075	-	190,664	42,477,575	-	14,850,493
	-	220,000	-	1,375	220,000	-	-
Unclassified	-	-	-	-	-	-	-
West Virginia 7/1/57 to 6/30/58	Bass	-	-	-	-	-	-
	Largemouth	-	66,424	-	886	66,424	37,740
	Smallmouth	-	16,000	-	211	16,000	44,260
	Bluegill	-	81,751	-	5,109	81,751	27,280
	Crappie	-	-	-	-	-	180,000
	Muskellunge	-	-	11,000	157	11,000	-
	Minnows	-	-	-	-	-	-
	Trout	-	-	-	-	-	3,047,555
	Rainbow	-	-	300,616	147,636	300,616	(Unclassified)
	Brook	-	-	87,051	26,147	87,051	1,124,849
Brown	-	26,500	35,003	9,128	61,503	-	
Wisconsin 1/1/56 to 12/31/56	Bass	-	-	-	-	-	1,097,553
	Largemouth	-	-	-	-	-	940,604
	Smallmouth	-	-	-	-	-	425,155
	Rock	-	-	-	-	-	5,935
	White	-	-	-	-	-	195,354

TABLE 2.--Summary of fish distribution, by species, from hatcheries of the Bureau of Sport Fisheries and Wildlife, 1957.

Species	Fry	Fingerlings	6 inches and more	Total Number	Total Weight (pounds)
Largemouth bass	329,900	14,943,260	7,325	15,280,485	29,351
Smallmouth bass	179,000	109,335	-	288,335	207
Warmouth	-	-	51	51	4
White bass	-	-	200	200	400
Bluegill	-	47,808,467	7,899	47,816,366	64,775
Redear sunfish	-	4,825,309	125	4,825,434	8,388
Black crappie	-	50,838	5	50,843	238
Channel catfish	-	857,764	128,719	986,483	23,801
Bullhead	-	25,172	4,043	29,215	1,116
Walleye	7,284,000	262,080	-	7,546,080	421
Northern pike	17,170,000	1,630,450	781	18,801,231	2,036
Total	24,962,900	70,512,675	149,148	95,624,723	130,737
Cutthroat trout	52,000	748,732	94,290	895,022	19,613
Rainbow trout	-	8,394,969	3,385,151	11,780,120	1,040,864
Kamloops trout	-	567,605	-	567,605	2,048
Steelhead trout	-	149,136	126,899	276,035	19,137
Lake trout	-	7,134	202,842	209,976	17,281
Brook trout	350,000	1,257,722	836,442	2,444,164	207,268
Brown trout	-	475,048	357,669	832,717	109,443
Grayling	-	18,027	13,090	31,117	1,433
Total	402,000	11,618,373	5,016,383	17,036,756	1,417,087
Chum salmon	2,155,330	399,880	-	2,555,210	4,176
Coho salmon	-	1,843,133	1,321	1,844,454	27,247
Sockeye salmon	-	4,347,908	272,829	4,620,737	57,914
Kokanee	-	3,441,500	-	3,441,500	559
Chinook salmon	7,177,336	45,598,468	1,868	52,777,672	333,909
Atlantic salmon	-	294,280	-	294,280	4,746
Total	9,332,666	55,925,169	276,018	65,533,853	428,551
Grand Total	34,697,566	138,056,217	5,441,549	178,195,332	1,976,375



Hebron, Ohio, National Fish Hatchery--a U. S. Bureau of Sport Fisheries and Wildlife hatchery for pondfish (BSFW photo by Clarence Brockway).



Nimbus Hatchery, Fair Oaks, California--a California Department of Fish and Game hatchery for Pacific salmon and steelhead trout (California Department of Fish and Game photo).



Powder Mill Rearing Station, New Durham, New Hampshire--a New Hampshire Fish and Game Department hatchery for trout and Atlantic salmon (New Hampshire Fish and Game Department photo by Uel Gardner).



Lonoke Hatchery, Lonoke, Arkansas--an Arkansas Game and Fish Commission hatchery for pondfish (Arkansas Game and Fish Commission photo).

TABLE 3.--Summary of fish distribution into State waters from hatcheries of 50 States and the Bureau of Sport Fisheries and Wildlife

(Figures apply to distribution periods as listed in tables 1 and 2.)

State	Fry	Fingerlings	6 inches and more	Total	
				Number	Weight (pounds)
Alabama	-	6,707,739	30	6,707,769	11,634
Alaska	1,619,000	110,000	-	1,729,000	4,870
Arizona	2,028,214	551,448	992,973	3,572,635	376,055
Arkansas	54,000	10,092,945	73,006	10,219,951	26,328
California	-	32,617,881	9,924,847	42,542,728	2,150,863
Colorado	11,929,250	2,325,776	4,984,847	19,239,873	1,219,777
Connecticut	105,000	55,505	240,577	401,082	72,323
Delaware	-	176,650	-	176,650	293
Florida	190,000	3,882,148	-	4,072,148	6,079
Georgia	400,000	12,836,116	149,321	13,385,437	85,588
Hawaii	-	79,150	-	79,150	450
Idaho	9,322,093	3,707,008	2,677,983	15,707,084	820,574
Illinois	2,618,000	1,083,734	126,673	3,828,407	34,441
Indiana	460,000	1,568,785	73,991	2,102,776	18,005
Iowa	141,027,291	6,810,460	1,197,652	149,035,403	179,138
Kansas	1,026,500	2,433,083	45,063	3,504,646	23,854
Kentucky	629,900	661,022	22,689	1,313,611	7,604
Louisiana	-	2,589,046	-	2,589,046	5,285
Maine	-	1,954,037	586,443	2,540,480	115,330
Maryland	12,000	72,321	179,972	264,293	68,079
Massachusetts	-	813,799	1,085,658	1,899,457	307,975
Michigan	206,500	1,073,444	2,436,153	3,716,097	501,331
Minnesota	139,503,000	12,609,254	1,710,601	153,822,855	439,150
Mississippi	-	12,172,289	-	12,172,289	15,743
Missouri	6,400,000	6,914,999	396,498	13,711,497	94,424

TABLE 3.--Summary of fish distribution into State waters from hatcheries of 50 States and the Bureau of Sport Fisheries and Wildlife - Continued

(Figures apply to distribution periods as listed in tables 1 and 2.)

State	Fry	Fingerlings	6 inches and more	Total	
				Number	Weight (pounds)
Montana	5,005,333	11,933,455	1,909,511	18,848,299	465,506
Nebraska	1,526,000	2,193,719	198,062	3,917,781	49,958
Nevada	65,000	1,266,778	1,127,216	2,458,994	225,867
New Hampshire	-	923,036	1,453,087	2,376,123	289,641
New Jersey	-	161,013	493,034	654,047	201,406
New Mexico	-	4,836,942	1,401,922	6,238,864	307,028
New York	99,442,500	5,295,466	3,142,467	107,880,433	608,015
North Carolina	1,454,832	4,613,271	403,951	6,472,054	137,905
North Dakota	17,445,000	2,691,083	31,076	20,167,159	10,330
Ohio	56,650,000	2,118,294	7,460	58,775,754	9,344
Oklahoma	-	3,627,545	9,585	3,637,130	11,984
Oregon	13,092,798	36,272,368	3,099,352	52,464,518	928,826
Pennsylvania	9,000	2,904,949	2,651,058	5,565,007	981,341
Rhode Island	-	7,440	57,400	64,840	28,199
South Carolina	-	8,314,897	41,125	8,356,022	17,248
South Dakota	13,950,000	1,825,212	428,142	16,203,354	132,595
Tennessee	3,937,410	3,750,315	182,506	7,870,231	84,830
Texas	10,000	18,046,911	113,472	18,170,383	47,263
Utah	4,279,455	5,357,821	2,097,092	11,734,368	820,204
Vermont	350,000	3,094,668	734,289	4,178,957	145,532
Virginia	-	1,669,969	1,037,891	2,707,860	447,417
Washington	13,723,378	134,998,546	7,442,699	156,164,623	1,774,153
West Virginia	-	788,163	535,216	1,323,379	218,820
Wisconsin	1,000,000	1,865,719	1,767,234	4,632,953	359,262
Wyoming	-	844,541	178,127	10,435,463	307,972
Dist. of Columbia	-	-	160	160	37
Totals	549,471,454	383,300,760	57,448,111	999,633,120	15,195,876

TABLE 4.--Summary of fish distribution, by species, from hatcheries of 50 States and the Bureau of Sport Fisheries and Wildlife

(For periods given in tables 1 and 2.)

Species	Fry	Fingerlings	6 inches and more	Total Number	Total Weight (pounds)
Bass					
Largemouth	1,812,863	31,996,306	139,350	33,948,519	125,107
Smallmouth	258,303	705,232	122,922	1,086,457	61,131
Rock	-	176,738	26,000	202,738	3,597
Warmouth	-	368,828	51	368,879	696
White	-	-	200	200	400
Unclassified	-	1,251,853	-	1,251,853	2,369
Buffalofish	-	5,072	-	5,072	6
Carp	-	-	1,700	1,700	5,525
Catfish					
Channel	507,500	4,245,051	221,181	4,973,732	51,357
Bullhead	-	243,533	1,358,099	1,601,632	210,445
Unclassified	46,414	2,342,202	190,470	2,579,086	88,671
Cichlid	-	200	-	200	0
Crappie	230,755	1,151,510	536,855	1,919,120	116,592
Eels	-	520,400	-	520,400	0
Goldfish	-	455	-	455	1
Grayling	1,333,183	18,812	13,747	1,365,968*	1,596
Minnnows	-	1,715,710	-	1,715,710	1,987
Muskellunge	4,152,500	108,327	21,590	4,282,417	1,499
Perch, yellow	30,458	7,401	64,986	102,845	11,095
Pickereel	-	1,084	1,687	2,771	859
Pike					
Walleye	448,505,512	7,557,379	18,392	458,523,880*	91,898
Northern	33,006,394	2,611,434	201,627	35,819,455	73,754
Salmon					
Pink	-	684,233	-	684,233	1,664
Chum	2,485,660	4,877,890	-	7,363,550	16,804
Coho	1,071,972	35,005,997	104,857	36,182,826	470,343
Sockeye	352,080	7,351,507	482,185	8,185,772	65,870
Kokanee	7,158,860	14,820,214	-	21,979,074	70,014
Chinook	10,896,923	100,933,625	144,316	111,974,864	700,115
Atlantic	-	525,035	974	526,009	7,736
Landlocked	-	284,202	375,570	659,772	21,653
Unclassified	-	-	-	358,469*	104
Shad					
Threadfin	-	30,760	-	30,760	38
Unclassified	3,461,070	-	-	3,461,070	692
Shiners					
Golden	-	1,750	-	1,750	2
Suckers	2,803,000	-	26,787	2,829,787	12,840
Sunfish					
Bluegill	930,825	68,197,929	576,534	69,705,288	183,410
Redear	40,500	6,553,589	1,236	6,595,325	10,928
Green	-	533,920	-	533,920	668
Unclassified	123,300	615,848	73,425	812,573	10,067

*See footnote at end of table.

TABLE 4.--Summary of fish distribution, by species, from hatcheries of 50 States and the Bureau of Sport Fisheries and Wildlife - Continued

(For periods given in tables 1 and 2.)

Species	Fry	Fingerlings	6 inches and more	Total Number	Total Weight (pounds)
Tilapia	-	2,700	-	2,700	3
Trout					
Cutthroat	6,742,279	6,109,015	456,450	14,430,046*	116,087
Rainbow	16,782,214	53,032,099	35,855,493	109,837,314*	8,715,714
Kamloops	579,472	638,555	84,871	1,302,898	16,391
Steelhead	426,740	4,124,641	3,010,450	7,561,831	391,774
Golden	47,100	149,928	888	250,335*	93
Lake	540,000	1,549,578	960,682	3,217,077*	92,578
Mackinaw	-	94,000	-	94,000	70
Splake	-	24,689	4,550	37,039*	1,163
Brook	2,560,345	14,321,137	5,275,272	22,726,234*	1,349,955
Brown	972,232	5,753,512	4,200,683	11,451,604*	1,005,351
Unclassified	-	1,836,880	2,894,031	4,730,911	1,083,757
Whitefish	1,613,000	-	-	1,613,000	32
Miscellaneous	-	220,000	-	220,000	1,375
Totals	549,471,454	383,300,760	57,448,111	999,633,120*	15,195,876

*Report of sizes incomplete, therefore total column does not balance with size columns.

TABLE 5.--Capital invested in State and Federal fish-cultural facilities and cost of operations

(All figures in thousands of dollars.)

State	Capital Investment			Cost of Operations (Individual year)		
	1/ 1936	2/3/ 1948	4/ 1958	1936	1948	1958 2/
Alabama	40	125	16	9	26	44
Alaska	-	-	100	-	-	35
Arizona	42	650	332	12	161	307
Arkansas	-	279	287	-	110	53
California	750	1,500	7,237	306	1,140	1,614
Colorado	1,086	5,000	2,403	79	857	801
Connecticut	167	109	316	63	233	121
Delaware	-	-	1	-	-	4
Florida	15	115	6	7	25	27
Georgia	-	250	388	-	41	80
Hawaii	-	-	10	-	-	4
Idaho	-	800	644	-	112	425
Illinois	125	-	207	30	148	106
Indiana	350	20	200	40	154	114
Iowa	500	5	506 ^{6/}	88	156	191 ^{8/}
Kansas	-	250	47	-	21	36 ^{8/}
Kentucky	-	450	24	-	43	12

See footnotes at end of table.

TABLE 5.--Capital invested in State and Federal fish-cultural facilities and cost of operations - Continued

(All figures in thousands of dollars.)

State	Capital Investment			Cost of Operations (Individual year)		
	1/	2/3/	4/	1936	1948	1958 5/
Louisiana	197	-	500	16	-	30
Maine	-	2,500	1,520	-	673	340
Maryland	48	250	75	15	127	58
Massachusetts	-	-	-	27	160	291
Michigan	1,196	1,857	518	275	1,062	703 8/
Minnesota	415	1,700	1,260	112	388	443 8/
Mississippi	-	-	-	-	-	-
Missouri	316	-	186	40	144	185
Montana	266	-	431	71	530	290
Nebraska	170	539	650	28	166	174
Nevada	-	200	250	-	44	168
New Hampshire	225	-	251	99	728	350
New Jersey	500	1,250	50	85	311	239
New Mexico	98	28	179	68	251	325
New York	500	1,050	1,779	281	935	831
North Carolina	150	700	60	29	239	177
North Dakota	1	4	26	4	19	18
Ohio	400	300	50	150	154	114
Oklahoma	-	965	25	-	136	92
Oregon	212	3,200	4,955	91	1,059	1,183
Pennsylvania	1,940	1,790	660	252	1,332	1,109
Rhode Island	-	50	90	-	27	46
South Carolina	245	-	145	6	62	36
South Dakota	100	-	47	30	29	95
Tennessee	40	-	446	3	-	80
Texas	500	2,475	709	42	191	242
Utah	-	343	400	33	972	454
Vermont	78	-	400	54	-	149 8/
Virginia	150	-	277	46	266	177
Washington	1,200	4,600	9,914	93	1,705	1,247
West Virginia	175	775	220	33	129	139
Wisconsin	900	-	589	171	1,324	409
Wyoming	136	1,000	1,795	35	216	400
	13,233	35,129	41,181	2,823	16,606	14,568
Bureau of Sport Fisheries and Wildlife	7/	12,384	9,433	7/	2,717	3,084
Totals	13,233	47,513	50,614	2,823	19,323	17,652

1/ Progressive Fish Culturist, July 1937, pp. 1-38.

2/ Progressive Fish Culturist, January 1949, pp. 31-69; October 1949, pp. 253-262.

3/ Estimates of replacement cost.

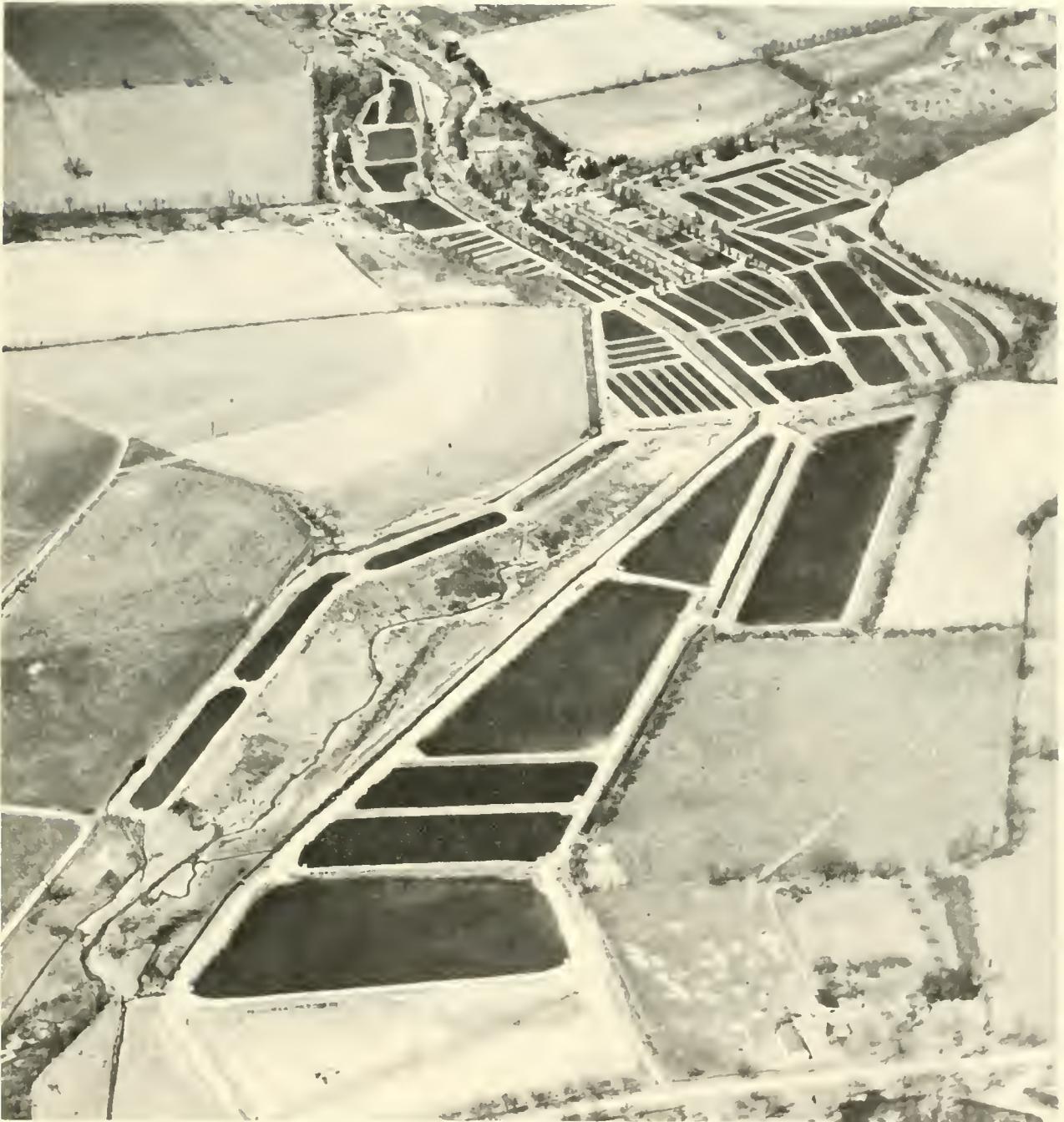
4/ Capital invested during 1949-1958, inclusive.

5/ Unless otherwise noted, data are supplied for periods listed in table 1.

6/ Inventory reported as \$511,170 as of 1953.

7/ Data not available.

8/ Fiscal year 7/1/57 to 6/30/58



Charles O. Hayford State Fish Hatchery, Hackettstown, New Jersey--a New Jersey Division of Fish and Game hatchery for trout and pondfish (New Jersey Division of Fish and Game photo).

TABLE 6.--Fish food purchased by 50 States and the Bureau of Sport Fisheries and Wildlife

State	1948 1/		1958 2/				Total	Cost
	Pounds 3/	Cost	Pellets	Other Dry Foods	Meats, Fish & Misc.	Total		
Alabama	30,000	\$ 6,750	0	0	0	0	\$ 0	
Alaska	-	-	2,000	-	6,000	8,000	1,200	
Arizona	350,170	21,010	682,944	-	-	682,944	86,010	
Arkansas	-	-	-	-	-	-	2,318	
California	2,353,342	141,081	1,581,085	-	5,678,012	7,259,097	544,359	
Colorado	1,000,000	84,621	2,090,000	-	500,000	2,590,000	282,388	
Connecticut	130,000	33,263	136,000	-	90,000	226,000	17,151	
Delaware	-	-	0	0	0	0	0	
Florida	-	-	0	0	0	0	0	
Georgia	4,800	1,200	15,000	64,000	64,000	143,000	16,085	
Hawaii	-	-	200	100	600	900	150	
Idaho	-	35,080	1,149,400	-	854,580	2,003,980	173,915	
Illinois	-	300	5,000	100	800	5,900	725	
Indiana	32,000	1,484	22,000	150	11,168	33,318	3,200	
Iowa	-	5,200	57,850	-	63,600	121,450	9,255	
Kansas	16,000	1,120	4,500	24,000	-	28,500	2,303	
Kentucky	-	608	-	-	-	-	1,176	
Louisiana	-	-	0	0	0	0	0	
Maine	1,300,000	81,000	90,000	-	450,000	540,000	65,000	
Maryland	100,000	16,000	-	-	-	-	15,000	
Massachusetts	900,000	75,000	38,624	135,055	1,058,170	1,231,849	112,576	
Michigan	2,191,778	165,000	846,550	-	476,550	1,323,100	107,000	
Minnesota	297,683	20,791	202,836	-	53,000	255,836	30,000	
Mississippi	-	-	0	0	0	0	0	
Missouri	338,000	19,135	510,000	-	19,200	529,200	65,103	
Montana	415,470	41,547	237,394	57,322	364,448	659,164	56,526	
Nebraska	95,192	11,123	50,000	5,300	39,599	94,899	8,615	
Nevada	21,600	2,592	270,089	-	76,088	346,177	38,312	
New Hampshire	614,666	54,978	120,000	226,400	408,433	754,833	84,297	
New Jersey	1,100,000	95,042	21,000	-	908,679	929,679	80,025	
New Mexico	435,067	26,628	514,350	-	-	514,350	61,300	
New York	1,300,000	124,830	419,000	9,000	1,514,288	1,942,288	212,811	
North Carolina	122,116	14,995	120,000	50,000	10,709	180,709	26,050	

See footnotes at end of table.

TABLE 6.--Fish food purchased by 50 States and the Bureau of Sport Fisheries and Wildlife - Continued

State	1948 ^{1/}		1958 ^{2/}				Cost
	Pounds ^{3/}	Cost	Pellets	Other Dry Foods	Meats, Fish & Misc.	Total	
North Dakota	-	\$ -	0	0	0	0	\$ 0
Ohio	-	-	-	-	-	855	855
Oklahoma	100,000	1,000	10,000	2,000	5,000	17,000	2,000
Oregon Fish Comm. Game Comm.	2,225,766	174,304	81,310	1,29,930	1,645,537	1,856,777	149,801
Pennsylvania	4,095,222	312,225	633,474	-	1,162,113	1,795,587	267,681
Rhode Island	160,000	17,000	90,000	-	23,000	113,000	167,126
South Carolina	37,000	-	-	-	-	-	18,000
South Dakota	-	5,798	-	-	-	-	5,000
Tennessee	-	-	120,000	-	5,000	125,000	12,500
Texas	-	12,589	-	-	67,600	182,845	17,680
Utah	4,140,500	165,620	1,613,990	115,245	-	1,729,235	20,631
Vermont	-	-	16,400	40,760	207,005	264,165	183,241
Virginia	578,760	39,915	117,300	-	1,244,354	1,361,654	49,575
Washington	-	-	-	-	-	-	73,233
Dept. Fisheries	2,929,300	152,931	-	209,238	1,576,152	1,785,390	115,702
Dept. Game	-	-	1,000,000	200,000	1,000,000	2,200,000	250,000
West Virginia	250,358	20,110	217,044	-	216,837	433,881	45,216
Wisconsin	-	60,000	603,289	-	256,431	859,720	75,288
Wyoming	44,942	8,990	433,015	-	25,736	458,751	60,005
Bureau of Sport Fisheries and Wildlife	27,709,732	\$2,050,860	14,121,644	1,268,600	20,082,689	35,472,933	\$3,616,384
Total	2,040,943	142,878	2,213,172	1,013,402	2,757,633	5,984,214	574,573
	29,750,675	\$2,193,738	16,334,823	2,282,002	22,840,322	41,457,147	\$4,190,957

^{1/} Progressive Fish Culturist, January and October 1949.

^{2/} For periods shown in table 5.

^{3/} Fish food not classified.

TABLE 7.--Hatchery and fishery research and management by 50 States and the Bureau of Sport Fisheries and Wildlife

State	1948 Research ^{1/}			Hatchery Research & Mgt. 1958. ^{2/}			Research & Fishery Mgt. 1958 ^{3/}		
	Personnel	Expenditures	Total	Administrators	Field Personnel	Annual Payroll	Administrators	Field Personnel	Annual Payroll
Alabama	2	\$ 5,000		0	0	\$	1	4	\$ 32,000
Alaska	-	-		1	0	1,000	3	8	60,000
Arizona	-	5,625		0	0	0	0	0	0
Arkansas	4	25,000		1	2	10,050	1	6	32,550
California	13	61,243		1	2	23,500	0	0	0
Colorado	12	40,000		1	0	5,700	2	11	68,928
Connecticut	10	24,305		0	0	0	3	9	62,184
Delaware	-	-		0	0	0	0	0	0
Florida	2	8,000		1	0	1,000	0	5	23,000
Georgia	0	0		0	0	0	1	0	7,272
Hawaii	-	-		0	1	4,296	0	0	0
Idaho	2	10,000		1	0	4,800	1	6	30,000
Illinois	3	34,000		0	0	0	1	19	84,075
Indiana	15	14,266		0	0	0	0	0	0
Iowa	3	13,000		0	1	1,000	2	23	106,545
Kansas	3	5,000		0	0	0	0	3	15,755
Kentucky	7	6,730		0	0	0	2	8	33,483
Louisiana	-	-		1	2	8,190	1	5	18,900
Maine	4	17,570		0	0	0	0	0	0
Maryland	1	3,000		1	20	20,000	1	20	30,000
Massachusetts	1	10,000		0	0	0	3	12	66,572
Michigan	74	156,570		1	2	15,000	22	60	502,500
Minnesota	24	44,668		1	0	8,021	20	185	491,853
Mississippi	-	-		0	0	0	1	2	14,000
Missouri	3	32,666		0	0	0	1	4	9,360
Montana	-	18,475		0	1	2,338	1	18	43,039
Nebraska	1	6,201		0	0	0	0	0	0
Nevada	1	5,500		1	1	6,666	0	0	0
New Hampshire	7	8,871		0	3	14,307	0	0	0
New Jersey	0	0		0	1	-	1	4	20,175
New Mexico	1	6,000		0	0	0	0	0	0
New York	-	-		1	1	12,176	14	71	316,098
North Carolina	8	14,500		0	0	0	0	0	0
North Dakota	0	0		0	0	0	0	0	0
Ohio	36	183,659		0	0	0	-	-	450,330

See footnotes at end of table

TABLE 7.--Hatchery and fishery research and management by 50 States and the Bureau of Sport Fisheries and Wildlife - Continued

State	1948 Research ^{1/}		Hatchery Research & Mgt. 1958 ^{2/}			Research & Fishery Mgt. 1958 ^{3/}		
	Personnel	Expenditures	Administrators	Field Personnel	Annual Payroll	Administrators	Field Personnel	Annual Payroll
Oklahoma	2	\$ 10,843	0	0	\$ 0	1	6	\$ 32,900
Oregon Fish Comm.	15	119,744	1 4/	3 4/	18,869	0	0	0
Game Comm.			7	11	15,000	4	20	131,300
Pennsylvania	5	23,337	3	14	57,981	2	15	78,268
Rhode Island	3	7,500	0	0	0	0	0	0
South Carolina	-	-	0	0	0	0	0	0
South Dakota	-	-	0	0	0	0	0	0
Tennessee	-	-	0	0	0	1	0	-
Texas	4	20,878	-	-	5,115	2	10	83,162
Utah	5	3,500	0	0	0	2	7	16,239
Vermont	-	-	0	0	0	0	1	4,976
Virginia	5	5,000	0	0	0	0	0	0
Washington								
Dept. Fisheries	14	95,866	1	2	13,200	2	10	72,000
Dept. Game			0	0	0	3	14	80,000
West Virginia	3	11,000	0	0	0	0	1	4,920
Wisconsin	-	98,143	0	6	9,435	2	65	505,563
Wyoming	6	25,428	1	3	3,656	2	14	89,751
	299	\$1,181,088	25 4/	76 4/	\$261,300	103 4/	642 4/	\$3,617,698
Bureau of Sport Fisheries and Wildlife	70	391,028	2 4/	47	267,770	2 4/	29	180,240
Totals	369	\$1,572,116	27 4/	123	\$529,070	105 4/	671 4/	\$3,797,938

^{1/} Research not differentiated; data from some States incomplete or lacking.

^{2/} Disease, nutrition etc., but not studies of stocking results.

^{3/} Formulation of stocking programs, survival of hatchery fish, rehabilitation of waters, etc.; not D-J projects and land acquisition.

^{4/} Includes personnel on part-time or divided activity basis.

TABLE 8. --Fish-cultural personnel and payrolls reported by 50 States and the Bureau of Sport Fisheries and Wildlife

State	1936			1948			1958 ¹							
	Total Personnel	Total Payroll	Admin-istrators	Fish Culturalists	Labor-ers	Total Personnel	Admin-istrators	Fish Culturalists	Labor-ers	Total Personnel	Admin-istrators	Fish Culturalists	Labor-ers	Total Payroll
Alabama	59	\$ 6,124	3	2	10	15	3 ² / ₂	5 ² / ₂	-	8 ² / ₂	3 ² / ₂	5 ² / ₂	-	\$ 24,500
Alaska (State)	-	-	-	-	-	-	2 ² / ₂	5 ² / ₂	1 ² / ₂	8 ² / ₂	2 ² / ₂	5 ² / ₂	1 ² / ₂	30,000
Alaska (Federal)	-	-	-	-	-	-	0	1	-	1	0	1	-	-
Arizona	5	7,510	6	8	7	21	2	4	21	27	2	4	21	117,608
Arkansas	-	-	2	4	12	18	1	3	10	14	1	3	10	40,400
California	118	165,899	6	126	-	132	12	130	16	158	12	130	16	768,474
Colorado	30	49,250	2	90	-	92	4	82	20 ² / ₂	106 ² / ₂	4	82	20 ² / ₂	325,212
Connecticut	29	30,500	2	12	8	22	2 ² / ₂	16 ² / ₂	-	18	2 ² / ₂	16 ² / ₂	-	71,794
Delaware	-	-	-	-	-	-	-	1 ² / ₂	2	3 ² / ₂	-	1 ² / ₂	2	3,500
Florida	5	4,446	1	2	8	11	-	2	2	4	-	2	2	16,000
Georgia	-	-	2	-	8	10	1	6	6	13	1	6	6	40,800
Hawaii	-	-	-	-	-	-	-	1	-	1	-	1	-	3,660
Idaho	-	-	1	24	7	32	1	23	16	40	1	23	16	177,364
Illinois	5	9,000	1	7	-	8	1	1	13	15	1	1	13	48,410
Indiana	22	-	1	-	31	32	1	7	27	35 ² / ₂	1	7	27	86,119
Iowa	88	34,560	1	5	40	46	4	10	30	44 ² / ₂	4	10	30	111,451
Kansas	-	-	-	1	3	4	-	2	5	7	-	2	5	21,260
Kentucky	-	-	1	3	10	14	1	2	2	5	1	2	2	8,559
Louisiana	11	15,900	-	-	-	-	1	1	5	7	1	1	5	21,150
Maine	-	-	2	32	10	44	2	40	-	42	2	40	-	172,787
Maryland	10	7,499	1	3	2	6	2	3	4	9	2	3	4	38,000
Massachusetts	16	36,904	3	16	12	31	1 ² / ₂	12	22	35	1 ² / ₂	12	22	146,570
Michigan	118	124,283	17	102	36	155	18 ² / ₂	75	26 ² / ₂	119	18 ² / ₂	75	26 ² / ₂	473,000
Minnesota	29	35,880	17	12	50	79	10	23	37 ² / ₂	70	10	23	37 ² / ₂	368,503
Mississippi	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Missouri	28	18,600	5	12	6	23	2	16	12	30	2	16	12	86,871
Montana	27	38,388	-	-	-	-	2	36	23	61	2	36	23	168,044
Nebraska	12	15,148	2	9	15	26	5	12	-	17	5	12	-	112,641
Nevada	-	-	2	2	1	5	1	15	-	16	1	15	-	85,226
New Hampshire	38	99,237	10	27	-	37	3 ² / ₂	47	-	50	3 ² / ₂	47	-	199,901
New Jersey	180	34,000	2	8	17	27	1	2	34 ² / ₂	37 ² / ₂	1	2	34 ² / ₂	130,951
New Mexico	16	14,277	1	5	15	21	2	14	15	31	2	14	15	109,935
New York	198	165,524	18	-	135	153	3	12	154 ² / ₂	169 ² / ₂	3	12	154 ² / ₂	484,955

See footnotes at end of table

TABLE 8.--Fish-cultural personnel and payrolls reported by 50 States and the Bureau of Sport Fisheries and Wildlife - Continued

State	1936			1948			1958 ^{1/}					
	Total Personnel	Total Payroll	Total Person-nel	Admin-istrators	Fish Cultur-ists	Labor-ers	Total Person-nel	Admin-istrators	Fish Cultur-ists	Labor-ers	Total Person-nel	Total Payroll
North Carolina	13	\$ 12,359	18	2	6	10	18	1	15	6 ^{2/}	22	\$ 76,000
North Dakota	4	1,900	12	2	-	10	12	-	1	3 ^{2/}	4	15,500
Ohio	88	90,000	23	2	6	15	23	5	6	-	11	75,835
Oklahoma	11	13,680	18	1	6	11	18	1	6	24	31	61,940
Oregon Fish Comm.	58	58,116	53	3	35	15	53	2 ^{2/}	78	8	88 ^{2/}	338,006
Game Comm.	107	129,702	182	11	73	98	182	7 ^{2/}	15	48	70 ^{2/}	284,524
Pennsylvania	-	-	5	-	1	4	5	21 ^{2/}	54	97	172 ^{2/}	629,382
Rhode Island	12	7,500	15	1	1	13	15	2 ^{2/}	2	4 ^{2/}	8 ^{2/}	18,300
South Carolina	10	15,000	8	1	4	3	8	1	8	6 ^{2/}	15 ^{2/}	27,000
South Dakota	-	5,571	-	-	-	-	-	2	1	12 ^{2/}	15 ^{2/}	55,000
Tennessee	-	42,000	-	1	29	4	-	1	7	9	17	50,832
Texas	21	16,585	30	2	12	16	30	4	37	10	48	146,286
Utah	50	23,254	-	-	-	-	-	4	-	-	4	151,681
Vermont	-	20,036	32	1	11	20	32	6	4	9	19	67,882
Virginia	84	43,649	127	5	35	87	127	5	72	5	84	260,034
Washington	3	14,323	19	1	4	14	19	1 ^{2/}	23	56	80	300,000
Dept. Fisheries	100	99,184	-	-	-	-	-	2 ^{2/}	18	2	22	67,725
Dept. Game	23	19,054	30	3	8	19	30	10	17	50	77	286,264
West Virginia	1,628	\$1,524,842	1,670	145	743	782	1,670	3	30	3	36	125,866
Wisconsin	-	-	392	12	334	46	392	170	1,027	861	2,058	\$7,635,067
Wyoming	1,628	\$1,524,842	2,062	157	1,077	828	2,062	22	328	48	398	1,678,800
Bureau of Sport Fisheries and Wildlife	-	-	2,062	157	1,077	828	2,062	192	1,355	909	2,456	\$9,313,867
Total	1,628	\$1,524,842	2,062	157	1,077	828	2,062	192	1,355	909	2,456	\$9,313,867

^{1/} Data are for periods shown in table 5.

^{2/} Includes personnel on part-time or divided activity basis.

TABLE 9.--State and Federal fish hatcheries and rearing stations

(Includes rearing, egg-taking and rescue stations; nurseries and hatcheries.)

	1936 ^{1/}		1948 ^{2/}		1958	
	State	Federal	State	Federal	State ^{3/}	Federal ^{4/}
Alabama	2	1	3	3	2 ^{5/}	2
Alaska	-	-	-	-	5 ^{5/}	-
Arizona	5	-	4	1	4	1
Arkansas	1	1	3	2	3	3
California	26	3	25	1	17 ^{5/}	1
Colorado	17	3	29 ^{6/}	2	26 ^{5/}	2
Connecticut	8	-	5 ^{6/}	-	4	-
Delaware	-	-	-	-	-	-
Florida	2	-	3	1	3	1
Georgia	5	2	5	4	6	4
Hawaii	-	-	-	-	3	-
Idaho	8	2	16	3	15	1
Illinois	7	-	7	-	6	-
Indiana	5	2	13	2	10	1
Iowa	7	4	29	3	21	3
Kansas	1	-	1	1	2	1
Kentucky	4	1	6	1	2	1
Louisiana	5	1	3	1	3	1
Maine	14	2	22 ^{7/}	2	18	1
Maryland	5	-	7 ^{7/}	-	4	-
Massachusetts	6	3	8	2	6	2
Michigan	15	1	23	2	16	2
Minnesota	7	2	30	2	43	1
Mississippi	-	1	-	3	-	3
Missouri	9	2	8	2	8	1
Montana	12	4	12	4	11	4
Nebraska	4	1	4	1	4	1
Nevada	2	-	3	-	5	-
New Hampshire	11	2	8	2	9	2
New Jersey	2	-	2	-	1	-
New Mexico	6	3	5	4	5	4
New York	19	4	20	3	20	3
North Carolina	6	4	6	4	9	4
North Dakota	1	-	1	1	1	2
Ohio	12	1	10	2	7	2
Oklahoma	5	1	6	1	6	1
Oregon Fish Comm.	16	2	30	1	16	1
Game Comm.			21	-	16	-
Pennsylvania	10	1	10 ^{6/}	2	9	2
Rhode Island	2	-	2 ^{6/}	1	2	1
South Carolina	8	1	10	3	8	4
South Dakota	7	1	6	1	6	3
Tennessee	2	3	3	1	6	1
Texas	9	4	10	6	13	5
Utah	10	2	13	1	12	1

See footnotes at end of table.

TABLE 9.--State and Federal fish hatcheries and rearing stations - Continued

(Includes rearing, egg-taking and rescue stations; nurseries and hatcheries.)

	1936 ^{1/}		1948 ^{2/}		1958	
	State	Federal	State	Federal	State ^{3/}	Federal ^{4/}
Vermont	4	3	12	2	6	2
Virginia	2	3	4	4	5	4
Washington						
Dept. Fisheries	32	9	15	7	19	8
Dept. Game			23	-	23	-
West Virginia	3	2	4	3	5	3
Wisconsin	32	3	29	3	20	3
Wyoming	<u>7</u>	<u>3</u>	<u>13</u>	<u>2</u>	<u>11</u>	<u>2</u>
Total	383	88	532	97	482	95

1/ Progressive Fish Culturist 31. 1937

2/ Progressive Fish Culturist 11 (1, 4). 1949

3/ Fishery Leaflet 41 (revised May 1959).

4/ Fishery Leaflet 147 (revised January 1959).

5/ One hatchery privately owned, jointly operated.

6/ One marine fish hatchery.

7/ Three Tide Water Dept. hatcheries.



North Platte Hatchery, North Platte, Nebraska--a Nebraska Game, Forestation and Parks Commission hatchery for pondfish (Nebraska Game, Forestation and Parks Commission photo).

MBL WHOI Library - Serials



5 WHSE 00110

