

Post Office Box 47
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July 11, 1980

350 East Gobbi Street
 Ukiah, California 95482

Dear Mr. Carroll:

Thank you for your letter requesting information on the fishery of Lake Mendocino. The following is a list of fishes planted in Lake Mendocino by the Department of Fish and Game

| <u>Year</u> | <u>Month</u> | <u>Species</u> | <u>Number</u> | <u>Size</u> |
|-------------|--------------|----------------|---------------|---------------|
| 1957 | NA | LMB | Unknown | Unknown |
| 1957 | NA | BCR | Unknown | Unknown |
| 1957 | December | RT | 130,334 | 8.4/oz. |
| 1958 | April | SH | 581 | 5-6 lbs. each |
| | June | SH | 45,110 | 130/oz. |
| | Dec | SH | 14,748 | 4.5-6.0/oz. |
| 1959 | Jan | RT | 80,064 | 2.7/oz. |
| | Feb | RT | 225,008 | 11.5/oz. |
| | Feb | KOK | 100,000 | 120/oz. |
| | April | SH | 335 | 5 lbs. each |
| | April | SH | 5,372 | 4/oz. |
| | April | RT | 108,480 | 5/oz. |
| | June | RT | 200,025 | 10.5/oz. |
| | July | RT | 200,014 | 15.4/oz. |
| 1960 | March | RT | 400,011 | 6.0-8.1 oz. |
| 1961 | Jan | CCF | 840 | 1.5/oz. |
| 1963 | March | RT | 100,026 | 7-18/oz. |
| 1964 | Sept | CCF | 50,400 | 45/oz. |
| | Nov | RT | 25,000 | 15/lb. |
| | Dec | RT | 75,150 | 15/lb. |
| 1965 | Oct | RT | 50,250 | 7.5/lb. |
| | Nov | RT | 14,987 | 15.2/lb. |
| | Nov | RT | 42,929 | 9.1-9.5/lb. |
| 1967 | NA | SB | 16,055 | 6.5/lb. |
| | | SB | 4,086 | 102.5/lb. |
| 1968 | NA | SB | 21,200 | 12/lb. |
| 1969 | NA | SB | 673 | 1/lb. |
| 1970 | NA | SB | 33,450 | 223/lb. |
| 1971 | NA | SB | 40,000 | 200/lb. |
| | | SB | 293 | 6/lb. |
| 1973 | | SB | 1,600 | 6/lb. |
| | | SB | 1,300 | 2.25/lb. |

| <u>Year</u> | <u>Month</u> | <u>Species</u> | <u>Number</u> | <u>Size</u> |
|-------------|--------------|----------------|---------------|-------------|
| 1974 | NA | SB | 7,380 | 12.7/lb. |
| 1975 | | SB | 4,850 | 6.5/lb. |
| 1976 | | SB | 4,930 | 4/lb. |
| 1978 | | CCF | 2,500 | 15.9/lb. |
| 1978 | | SB | 5,028 | 4.8/lb. |
| 1979 | | CCF | 5,005 | 7/lb. |
| 1979 | | SB | 7,964 | 3.5/lb. |
| 1980 | | SB | 4,245 | 3.5/lb. |

RT = rainbow trout
 SH = steelhead
 KOK = Kokanee
 WCF = white catfish
 CCF = channel catfish
 SB = striped bass
 BCR = black crappie
 LMB = largemouth bass

Smallmouth hake, threadfin shad, and Mississippi silverside were not introduced by the Department. Smallmouth apparently migrated into the lake from Potter Valley and now comprise a large percentage of the black basses in the lake. Threadfin and silverside were introduced from unknown sources.

Advances have been made in managing the lake with yearling striped bass reared in our hatchery at Elk Grove.

Prior to 1972, stripers of varying sizes were procured from the Tracy Screens or fish rescues and stocked at high densities. No largemouth bass greater than 9 inches was recorded during the 1972 electrofishing survey, and smallmouth bass were observed from the catch. (This may reflect intense [sic] predation in the late sixties due to the absence of TFS). After 1972, stripers were planted at such lower densities, at relatively [sic] sizes, and during the spring from Central Valley Hatchery, Threadfin shad became established in the interim. Adult largemouth bass have been making steady gains each year, and have increased from negligible numbers to the point where, in 1976, they occurred at a rate of 223 YOY/mile Shoreline. Largemouth bass 1976 young-of-the-year occurred 103/mile.

Creel censuses and use counts were conducted at Lake Mendocino from November 1, 1974, to October 31, 1975. The census was run 4 weekend days and 2 to 4 week days 2400 hours. Angler use and harvest from 2400 to 0600 was assumed to be zero. The following use and harvest data were generated from that census: (Confidence limits have not been determined for these data.)

| | |
|--|-------------------|
| Total estimated angler hours (all species) | = 96,812 hours |
| Total estimated SB angler hours | = 72,870 hours |
| Percent effort directed toward SB | = 79% |
| Mean largemouth of an SB angler day | = 3.3 hours |
| Total SB angler days | = 22,028 |
| Mean SB catch/SB angler hour | = 0.064 SB/SS hr. |

| | |
|--|-------------------------|
| Mean number SB reeled/SB day | 0.21 SB |
| Mean fork length of reeled SB | 22.4 inches |
| Mean weight of reeled SB | 4.48 lbs. |
| Total estimated catch of SB | 4,689 SB |
| Total estimated weight of SB catch | 21,007 lbs. |
| Total weight reeled SB/surface acre | 12.28 lbs./surface acre |
| 1/ Total lbs. SB planted prior to census | 6,151 lbs. |
| Ratio of SB lbs. harvested during census to total SB lbs. planted | 3.4/1 |

1/ Due to problems aging SB in the catch because of variable stocking sizes, dates, and life histories it was impossible to document which plant (s) yielded SB to the 1974-75 catch. Therefore the total pounds of stripers planted prior to the survey was used to calculate a minimum weight-in/weight-out ratio. (Natural reproduction has thus far not been documented at Lake Mendocino; therefore, all recruitment is assumed to have resulted directly from stocked fish.

A total of 219 legal-size (16" T.L.) stripers were trapped in Merwin traps during the spring and fall of 1975 and tagged with \$5.00 reward tags. A significant unknown mortality occurred during this operation; therefore, the angler return rates should be considered as a minimum estimate of the actual harvest rate. From these tags, a total of 20 (9.1%) were caught by anglers while 23 (10.5%) were returned from dead fish. Returns are now considered to be complete.

A total of 117 legal-size stripers was similarly tagged during the fall of 1976. Due to improved trapping and tagging technique, handling mortality is thought to be near zero. To date, only one tag has been returned from a dead fish and 44 (38%) returned from angler-caught fish. Returns are thought to be incomplete.

Stomach contents were examined from 188 angler-caught stripers. The data from these analyses are presented in Table X. Note the high incidence of aquatic insects taken by stripers during the winter, anchovy cut-bait taken during the spring, and a pronounced switch to a piscivorous diet during the fall. No black bass or catfish were recorded from any of these stomachs.

If you have any further questions, please write or call (707) 944 2443.

Sincerely,

Larry E. Week
Fishery Biologist
Region 3

LEW:mb

Enclosure

bcc Lt. McClain