A REVIEW OF HISTORICAL FISH PLANTING IN KOOTENAI RIVER DRAINAGE, MONTANA

Supplemental Report

A report to Montana Department of Fish, Wildlife and Parks

by

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Introduction

This supplement report is an extension of the June 1999 paper titled "A review of Historical Fish Planting in Kootenai River Drainage, Montana". .Research emphasis was directed toward determining possible sources and genetic composition of rainbow trout planted in the drainage between about 1910 through the early 1940s. Of special interest was trying to determine if some of the rainbow trout were inland rainbow trout (Columbia Basin red band trout). Cooperative hatcheries, usually natural lakes used as egg sources by private parties, but licensed by the State, may have been a major supplier of fish eggs and fish for the State. These co-ops are thought to have been permitted by fish and game laws written in 1913 or earlier lasting through the mid-1930s. This report briefly describes transportation networks available for fish distribution within the Libby hatchery district from the late 1800s through the mid-1930s. Fish planting during these years was limited by road and railroad networks. The last section lists items of general interest, paraphrased from various records.

Sources of information for this supplemental report not available for the June 1999 report included minutes of Montana Fish and Game Commission meetings for the years 1915 through 1945, daily log books for the Libby Fish Hatchery for the years 1931 through 1956, financial records of the Anaconda Hatchery from 1912 through 1914, and historical notes available through the Lincoln County Library. Fish and Game Commission meeting minutes for the years preceding 1915 could not be located. Log books for the Libby Fish Hatchery for the years 1930 through 1956 are available at the Montana Historical Library, but had been cataloged as "spawning station journals".

Other sources checked included the Mormon Church Genealogical Records. People with the last name of Drew living in Spokane, Washington, a retired Washington State Fish Hatchery worker who knew Kenneth Drew and a Harold Fletcher, Libby, Montana, who worked at the Libby Hatchery shortly before and after World War II.

The genetic makeup of rainbow trout caught from Lake Okaga in May 2000 was determined by University of Montana Wild Trout and Salmon Genetics Laboratory. Lake Okaga, a private lake, was built in 1938 and was first stocked with rainbow trout from a cooperative private source. Another private lake near Libby, Double N Lake, was built in the early 1950s and

its first fish stocking was from Lake Okaga. Unfortunately, the present owner would not let fish be taken for genetic analysis.

Transportation Network

Railroad tracks from eastern Montana through Columbia Falls into Libby and west were completed in May 1892. The first line went from Kalispell west up Ashley Creek to Marion, Montana, past Little Bitterroot Lake, through Haskell Pass into Pleasant Valley, up Island Creek past Island Lake into the Little Wolf Creek drainage. The railroad bed side hilled down Little Wolf Creek to Wolf Creek, down Wolf Creek to the Fisher River, down Fisher River to Jennings and from Jennings down the Kootenai River to Libby, Troy and points further west. In about 1908, the line from Kalispell west to Jennings was abandoned in favor of an easier route passing from Columbia Falls through Whitefish, up the Stillwater River to Stryker, down the Tobacco River to Eureka and Rexford, then down the Kootenai River to Jennings, where it joined the original track. Great Northern Railroad used this line until Libby Dam was constructed, flooding the Kootenai River valley upstream of Jennings in 1972.

The importance of knowing railroad routes is the simple fact that most of the fish planted by both the federal and state hatcheries from the 1890s through the early 1920s were transported by railroad car. In 1900, largemouth bass were planted in Kootenai River near Libby. These 300 fish were brought to Libby by railroad car from Illinois. Montana's first railroad fish car was placed into service in 1911 after the railroad line through Pleasant Valley, Wolf Creek and Fisher River had been abandoned. On April 17, 1913, Montana's railroad car picked up Kilbrennen Lake eggs at Troy and took them to Anaconda and Somers Hatcheries. This was the first recorded instance of redband trout eggs being taken into the states' hatchery system. Unfortunately, it is not known how many eggs were collected or disposition of the resultant fish, except that 4,000 Kilbrennen fish were at the Anaconda hatchery on August 9, 1913 (June 1999 report, Exhibit 6).

Completion of major roads for automobile travel included Libby to Troy in 1914, Kalispell to Libby in the 1910s, Libby to Rexford in 1923 and Rexford to Yaak and on to Troy in 1927. The original Rexford to Yaak road traversed up Dodge Creek and down the East Fork Yaak River. The present route replacing the Dodge Creek route in about 1975 traverses up Sullivan

Creek, down Porcupine Creek, joining the original road near Robinson Creek.

Other local roads passable by pack stock, wagons and early automobiles included one up the Yaak River on the eastside passing close to Kilbrennen Lake, up the Fisher River and Wolf Creek and several into the West Fisher and Libby Creek drainages. These latter two roads serviced mining properties. The Libby Hatchery also planted fish in the western half of Sanders County. Roads available for the transport of fish from Libby to the Thompson Falls/Noxon area included the Lake Creek-Bull River Road and the Thompson River Road. Opening date for the former road is not known, but probably in the late 1910s to the early 1920s. Reportedly the Thompson River County Road connecting U.S. Highway 2 and Montana 200 was built by the CCC's (Civilian Conservation Corps) in the mid to late 1930s. Construction of the ACM Private Road alongside Thompson River was started in 1948.

Influence of Private Fish Producers on State Hatcheries

The first clue to the State of Montana having private fish farmers contributing to state waters was an article published in the Eureka Journal June 16, 1914. In essence this article stated that a man by the name of W.H. Schrader had a state-issued license to operate Fish Lake near Stryker as a fish hatchery and that he had a 60-foot right-of-way around the lake and its tributaries. The entire article is shown as Exhibit 3 in the June 1999 report. A 1913 letter written by a Harold Dean describes his assigning a Carl Dowdell to assist spawn taking operations at Fish Lake. This letter is in old correspondence files located at the Flathead Lake Salmon Hatchery. A brief note from the 1912-1914 Anaconda Hatchery financial ledger states that in August 1914, Schrader at Fish Lake was paid $253.50 for fish eggs. This ledger is located at the Montana Historical Library, Helena, Montana.

Another newspaper article published April 15, 1920, in the Eureka Journal states that in the last 10 years, Fish Lake has produced 11,120,000 eggs or fry of brook trout and native trout. Eighty-five percent of these have gone to the State Fish Commission and State hatcheries for free distribution. The entire article is reprinted here as Exhibit One. Apparently, Fish Lake was operated for many years as a fish hatchery being re-licensed March 27, 1928 to a J.C. Dowdell on condition he permit public fishing in the lake. In December 1944 and January 1945, the Libby Hatchery shipped brook trout eggs to the Fish Lake Hatchery. In the mid-1990s, efforts were

REPORT GAME HOGS AT STRYKER

Following reports that came here from Stryker to the effect that great numbers of fish were being taken by parties who had been fishing through the ice at the lake near the fish hatchery, the officers of the local rod and gun club got busy and had signs posted on the lake shores, asking all true sportsmen to desist from the practice.

J. C. Dowdell, who conducts the hatchery, stated in a letter to Dr. J. F. Stout, after the signs had been sent there, that most of the violators of the law had come from the mill camp at Dickey lake, one party having made a decidedly "hoggish" haul there a few weeks ago. Another report that has reached town is to the effect that the mill hands at the lake have been slaughtering deer out of season, but it is believed that the owners of the mill are too respectable to permit of such practices.

Mr. Dowdell in his letter stated that this indiscriminate taking of trout has caused a loss of planting by the Fish commission and anglers of the western portion of the state of approximately three quarters of a million fry. In regard to his work there Mr. Dowdell says it is a matter of state record that during his ten years operation there eleven million one hundred and twenty thousand eyed eggs and small fry of the brook and native species have been produced. Eighty-five per cent of these have gone to the state fish commission and state hatcheries for free distribution.--Ten per cent have been retained, fed and restocked in the lake and five per cent have been sold to private parties.

In the face of the good work that Mr. Dowdell has been doing and the accomodations the public has enjoyed at his hands, it is indeed a shame that some have been so unsportsmanlike to abuse the privileges and it is to be hoped that illegitimate and unlawful practices such as have occurred there this winter will cease.

Phone the news to The Journal.

Exhibit One. Newspaper article published in the Eureka Journal, April 15, 1920.

made to reestablish a fish farm near Fish Lake. Fish disease problems, mostly bacterial kidney disease, proved a large problem for this operation.

Operation of the Fish Lake Hatchery was not the focus of this historical research, so nothing is known about disposition of the eggs and fry or whether the "natives" were westslope cutthroat trout or Yellowstone cutthroat trout. However, it is known that in the 1910-1920 period, Montan had only two State fish hatcheries, one at Anaconda and one at Somers. No records of fish or fish eggs transferred from Fish Lake to either hatchery were noted. This was not unexpected since most record keeping was not stated until 1931, and many of the records have disappeared.

It is suspected that the "natives" raised at Fish Lake were Yellowstone cutthroat trout. Fish Lake is a small (40-50 acres) finger lake with two very small tributaries. It may have been populated by small numbers of westslope, which in my opinion would not have provided several million eggs over a 10-year period. The date of the payment of $253.50 for eggs in 1914 would indicate the eggs were "natives", not brook trout. The price paid would indicate about a quarter million eggs. The author considers it most likely that both the brook trout and "natives" originated from the federal hatchery at Bozeman, Montana and that they were planted in Fish Lake before Montana's first hatchery went into operation in 1908. Railroad shipment of eggs or fish was possible into the Stryker area in the 1890s since the Great Northern Railroad had a spur line from Columbia Falls into the Fernie, British Columbia coal fields.

The largest and most prominent hatchery in the Kootenai River area, was Rainbow Ranch located near Troy, Montana. The owners/operators of Rainbow Ranch were Sam S. and Kenneth G. Drew. It is suspected that this was a father/son combination with Sam S. being the front person and Kenneth G., the actual hatchery operator. Sam S. Drew's name first appears in Somers Hatchery correspondence dated 1912. Kenneth G. Drew's name first appears in the Anaconda Hatchery records in 1926, showing Drew at Troy received 2,954,800 black-spotted natives from Anaconda. Sam S. Drew's name is prominent in Montana Fish and Game Commission meeting minutes while Kenneth G. Drew's name is prominent in Libby Hatchery log books.

The Rainbow Ranch Hatchery was located on three private lakes near Troy named Slee,

Duck and Lower lakes. Rainbow Ranch advertised that brook trout, black-spotted natives and rainbow trout were available. Fish and Game Commission records also makes it very clear that the Drews had cooperative agreements with the State to spawn rainbow and brook trout from Alvord Lake and Kilbrennen Lake from at least 1921 through 1934 and received a share of the brook trout eggs taken from Alvord Lake in exchange for lake access from 1935 through about 1945. Apparently, Kenneth Drew moved his operation from Troy to a site on the Little Spokane River near Spokane, Washington, in the early 1940s. He also became part-owner with an Elmer Phillips of two private lakes near Woodworth, Montana, in 1945 and sole owner in 1946. Apparently, the Drew Hatchery in Spokane was active for at least 35-40 years after it was moved from Troy. The last known activity of Sam S. Drew was as supervisor of the Fish and Game Department, West Yellowstone fish traps, following WW II until about 1949.

Some effort was made to locate Kenneth Drew or his heirs. The Mormon Church Genealogy Records were checked with no trace of Mr. Drew. A letter of inquiry with a stamped return envelope was sent to all seven of the Drews listed in the Spokane telephone directory. The only return letter with any information is as follows:

Dear Mr. Huston:

> I am sorry that it took me so long to answer your letter, but a million things got in the way. I never knew him, although I would get calls from Norway about 2 or 3 in the morning asking if I would send them some fish. I guess that because my full name was in the phone book and he only had his initials (K.G. Drew) is why I'd get his calls.
>
> I tried to find out about him, but those who worked in the fish hatchery here didn't seem to know much, other than he did run a fish hatchery on the little Spokane. I was the only Drew in the phone book for years until he showed up. Sorry that I couldn't be of more help. Hope that you eventually find out the information that you need.

Sincerely
Ken Drew

A Jim Morrow, retired State of Washington hatchery worker who worked at the State Fish Hatchery located upstream from Drews' Spokane Hatchery, was contacted. He stated he knew Drew very casually, liked him, but didn't know anything professionally. He did remember Drew advertising brook trout, rainbow trout and Montana Black-spotted natives. He also stated

that Drews' Hatchery had been purchased by Washington and turned into a State park. Tim Vaughan, retired Washington Water Power Company Fishery Biologist, knew Kenneth Drew professionally when Vaughan was a partner in the Harriman Trout Farm located near St. Ignatius, Montana, in the late 1940s. Mr. Vaughan thought Drew was a scoundrel and shyster not to be trusted. Arthur N. Whitney, deceased former chief of Montana's Fishery Division also knew Drew through Drew's Woodward, Montana Fish Lake operation. Mr. Whitney's opinion of Drew was the same as Mr. Vaughan's. Harold Fletcher who currently lives in Libby, worked at the Libby Hatchery shortly before and after WW II. He clearly remembers Drew as a dishonest cheat. He remembers a favorite ploy of Drew's was to have the State spawning crew on Alvord Lake increase the numbers of eggs collected so that he could receive more eggs under the 20 percent agreement.

The best history of the Drews' operations in Montana were found in the minutes of the Fish and Game Commission and in the Libby Hatchery log books. The first Commission minutes listed here will be from 1933 which explains the Drews' agreements with the State from 1921 through possibly the early 1940s. Other Commission minutes and Libby log book entries will be listed in chronological order.

COMMISSION MINUTES:

1. May 13, 1933. S.S. Drew has contract with State on Alvord Lake on a 50-50 basis. The State agreed to hire a watchman on Alvord Lake for threes months and pay Drew for an additional three months with eastern brook trout eggs (Note: Apparently Alvord Lake was closed to fishing and watchmen were needed to keep poachers away.)
2. October 10, 1933. Drew is only person in State with a cooperative license and this situation is not really good.
3. December 9, 1933. The Troy Rod and Gun Club favored the State taking over Alvord and Kilbrennen Lakes spawning from the Drews. The spawning cooperative agreement for these two lakes had been in effect since 1921. However, the Commission did agree to a Drew proposal that in exchange for land

access to Alvord Lake, the Drews would receive 20 percent of the brook trout eggs collected. (Note: This 20 percent agreement may have been in effect through the mid-1940s).

4. January 8, 1921. Secretary to ask Eli Melton for clarification of a bill from Mr. Drew for eggs from Alvord Lake. (Note: Eli Melton was foreman of the Somers Hatchery.)

5. January 16, 1927. Libby Rod and Gun Club asked Commission to buy eastern brook from Drew at Troy and Commission secretary to write Drew of Troy demanding he ship eastern brook eggs to Big Timber State Hatchery.

6. April 8, 1927. Motion by Mr. Wilson. "I move that Mr. S.S. Drew be permitted to take eggs from the waters of Kilbrennen Lake on the basis of fifty-fifty, the State to receive for its share, rainbow eggs or eastern brook eggs. Seconded by Mr. Kelly. Carried."

7. February 4, 1928. S.S. Drew report on eggs taken from Kilbrennen and Alvord Lakes was read. He stated he owed the State $812.12 worth of rainbow eggs or that amount. The Commission opted to take the eggs, not money.

8. October 24, 1929. A letter from S.S. Drew asking for cutthroat eggs. Commission will sell or trade if excess is available.

9. July 9, 1930. The Department shipped S.S. Drew at Troy, 3.5 million native eggs in exchange for 2 million rainbow eggs. Drew was not able to dispose of all of the native eggs and wanted out of the two million rainbow egg part of the deal. Dr. Treece was assigned to make an agreement with Drew. (Note: Dr. Treece was Superintendent of Hatcheries for the Department and no trace of any agreement was found.)

10. December 18, 1930. Drew at Troy spawned brook trout, State's share about one million. State will plant 50 percent in waters with eastern brook and sell the others.

11. July 2, 1931. Commission made exchange with S.S. Drew; 2,000,000 trout eggs for 2,000,000 rainbow eggs next year.

12. January 23, 1940. The Department got 826,420 rainbow eggs from Drew. (Note: Apparently, the Drews had developed an early spawning rainbow trout. Two letters between the Helena office and Somers Hatchery details the shipment of early rainbow eggs from the Drews to Somers Hatchery in 1940. These letters are reproduced in the June 1999 report as Exhibit 7.)

Exhibit 6 in the June 1999 report also contains information pertaining to the Drews and/or Kilbrennen Lake. Three short newspaper articles published in 1913 details shipment of Kilbrennen Lake rainbow eggs to the Somers and Anaconda Hatcheries via Montan's railroad fish car. A June 24, 1922 letter from Helena to Somers instructs the Somers Hatchery to dispatch a man to pick up rainbow trout fry that belong to the State from Drew at Kilbrennen Lake. Newspaper articles published in 1925 and 1932 describe fish planting by S.S. Drew in the Yaak with Kilbrennen Lake rainbow trout.

LIBBY HATCHERY LOG BOOKS:

1. Went to Drews for troughs. (Note: Libby Hatchery was being constructed and apparently the State borrowed/bought equipment from Drews' Hatchery at Troy.)
2. April 13 and 19, 1933. Picked eggs for Yaak Pond.
3. August 12, 1933. Got rainbow from Drew. (Note: No number of fish given.)
4. April 18, 1935. Got 353,468 rainbow eggs from Drew.
5. March 28, 1936. Got rainbow eggs from K.G. Drew. (Note: No numbers were written down on log book.)
6. April 26, 1937. Drew delivered 202,862 rainbow eggs.
7. June 2, 1939. Got 65,000 rainbow from K.G. Drew.
8. March 2, 1942. Got 81,872 rainbow eggs from Drew.
9. March 15, 1942. Received 135,110 rainbow eggs from Drew.
10. March 18, 1942. Received 78,995 rainbow trout eggs from Drew.
11. April 10, 1943. K.G. Drew got Libby Hatchery 130,000 rainbow eggs from Massachusetts.

This April 10, 1943 entry in the Libby Hatchery log books is the last entry describing the

Drews and rainbow trout. However, between 1941 and 1945 there are several entries describing transactions between the Libby Hatchery and the Drews about eastern brook trout. These entries are described later in this report.

The Commission meeting minutes and entries in the Libby Hatchery log books clearly identify a relationship between the Drews and Montana's State hatchery system. Apparently, this relationship lasted from 1921 through 1945 and included rainbow trout and brook trout from two cooperative lakes, Alvord and Kilbrennen, and three private lakes known as the "Rainbow Ranch".

Tables 2 and 3 in the June 1999 report show the numbers of cutthroat and rainbow trout planted by the Libby Hatchery in 1931 through 1939 versus the number of eggs shipped to Libby from other State hatcheries. For the years of 1931 through 1939, the Libby Hatchery reportedly planted 6,581,586 cutthroat trout within its planting area. During the same time period, the Somers and Anaconda Hatcheries shipped Libby Hatchery 7,174,808 eyed cutthroat trout eggs. The number of eggs shipped in more-or-less cover the number of eggs or fish planted out.

During the same time frame, the Libby Hatchery planted out 3,477,296 rainbow trout, but received only 2,153,648 eggs from the State's Somers and Anaconda Hatcheries, a shortage of about 1.325 million assuming no egg to planting mortality. It is believed that most of the missing eggs were obtained from the Drews, either directly from Kilbrennen Lake or from their Rainbow Ranch operation. The Libby Hatchery log books show that they got 110,000 rainbow eggs from Idaho in 1933, an unknown amount from Drew in 1933, 353,468 from Drew in 1935, an unknown number in 1936, 202,862 in 1937 and 65,000 in 1939. Commission meeting minutes also show that Drew supplied the Montana hatchery system with rainbow eggs in 1928, 1930 and 1932. It is not known which hatcheries these eggs went to.

The genetic structure of the Drew rainbow trout, whether from Kilbrennen Lake or Rainbow Ranch, cannot be determined with finality. However, recent genetic analysis of fish from most streams and lakes in the Kootenai River drainage downstream from Libby Dam, allows judgments. Genetic analysis of rainbow trout collected from Kilbrennen Lake and Kilbrennen Creek downstream of the lake indicated that the largest genetic component was redband trout followed by coastal rainbow and very small amounts of westslope cutthroat.

Fish planting records show that in 1945, 1,960 five inch long rainbow trout were planted in Kilbrennen Lake, while in 1950, 25,000 five-inch rainbows were planted. Origin of both years fish is unknown, but it is likely that the 1945 fish were from Little Bitterroot Lake while the 1950 fish were from the Arlee Hatchery brood stock. The Arlee brood stock is coastal rainbow trout while genetic analysis of Little Bitterroot Lake fish done in the 1980s indicated they were a mix of coastal rainbow and redband trout. Cutthroat trout fry were planted in the lake in 1955 and 1956 and 1,810 westslope cutthroat trout averaging 6.3 inches were stocked in 1988.

It is highly likely that Kilbrennen Lake was populated by pure redband trout until compromised by the 1945 and 1950 coastal rainbow plants. It is also very likely that the "Rainbow Ranch" brood stock was obtained from Kilbrennen prior to the Drews losing their spawning license in 1934.

Wee Lake, a headwater lake in Arbo Creek was planted one time only by the U.S. Forest Service with 10,000 "rainbow" fingerlings in 1931. Genetic testing in the 1990s determined fish from Wee Lake were pure redband trout. It could not be determined if this lake was barren when planted, but the outlet stream is very steep (20% gradient) for the first mile below the lake and for its last mile before entering the Yaak River below Yaak Falls. Information indicates that the Libby Hatchery had coastal rainbow trout eggs from the Somers station and the possibility of rainbow eggs from the Drews in 1931. If the fish horse-packed into Wee Lake had been coastal rainbow, it would be expected coastal genes would still be present some 60 years later even if the lake's aboriginal population was redband trout.

The last indirect evidence that the Drews' Rainbow Ranch rainbow trout were in fact redband trout, is derived from analysis of trout collected from Lake Okaga in May 2000. Okaga Lake, located on Windy Creek tributary to the East Fork Yaak River, was constructed by damming the creek during the fall/winter of 1937-1938. Elmer Phillips, the owner, had been employed as a fish hatchery worker at the Somers Hatchery and at the first Libby Hatchery on Cedar Creek west of Libby in the 1920s. He was foreman of the Libby Hatchery from 1931 through 1935 and Superintendent of Fisheries in Helena from 1935 through 1937 and again in 1941 through 1945. Mr. Philips obtained "rainbow" trout eggs from the Rainbow Ranch, hatched them at the Libby Hatchery and planted 110,000 fry in Lake Okaga on May 7, 1938. It is

believed that these fish plus what was trapped in Windy Creek when dammed, were the only fish planted from 1938 to at least 1961. In 1961, Lake Okaga was sold to the Neils family of Libby (J. Neils Lumber Company) and then by the latter to a Mr. J.E. Davis (Estuary Corporation) in 1979. What, if anything, was planted into Lake Okaga from 1961 through 1978 has not been determined. However, it is known that fish from Lake Okaga were the first to be planted into Double N Lake located east of Libby. Double N Lake was built by the Neils family in the mid-1950s by damming Getner Creek. Double N Lake was also sold to another party about 1979.

A letter from Clint Mills, Lake Okaga caretaker is shown as Exhibit Two. This letter shows the source of and sizes of rainbow trout stocked into Lake Okaga from 1979 through 1994. It is believed that all the planted fish were of coastal rainbow stock. The fish listed from Sikokini Springs Trout Farm originated from Montana's Arlee Hatchery brood stock and this brood stock was founded from Missouri rainbow and Donaldson rainbow. It could be called a hybrid rainbow. This rainbow also carries a genetic marker considered specific to this brood stock.

In May 2000, 30 rainbow trout averaging 16-17 inches long were collected from Lake Okaga for genetic analysis and disease testing. The U.S. Fish and Wildlife laboratory at Bozeman, Montana, did the disease analysis and the University of Montana Wild Trout and Salmon Genetics Laboratory performed the genetic analysis. The disease testing showed the fish were clean. The genetic analysis showed that the sample was comprised of mostly redband trout genetic material with some coastal rainbow trout genes. The coastal genetic material also included the marker specific to the Arlee brood stock. This genetic analysis is considered proof that the founding fish were redband trout and that the Drews' Rainbow Ranch rainbow trout were in fact redband trout.

Items of General Interest

FROM LINCOLN COUNTY LIBRARY:

1. Libby Creek and its tributaries reported as being good fishing for natives up to 1½ pounds in the 1880s. (Can it be assumed that the "natives" were redband trout?)
2. Streams and lakes planted by Libby Rod and Gun Club providing good fisheries.

FROM FISH AND GAME COMMISSION MEETING MINUTES:

1. October 27, 1915. Carl Dowdell and Schrader planted 115,000 native trout in

22 April 1994

Montana Department of Fish Wildlife and Parks
490 North Meridian Road
Kalispell, Montana 59901

ATTN: Sgt Mack Long

Dear Mack:

Per our phone-con pertaining to the Lake Okaga fish pond license; following is an itinerary of my re-stocking procedures of the lake since Mr. J.E. Davis (Estuary Corp) purchased the property in 1979:

DATE	NR/SIZE/LBS	TYPE	SOURCE
1979	Did NOT restock		
1980	DO		
19 Jun 81	2600-1½ to 3#	Hybrid RB	Stampede Lake, Naples, ID trout fr Soap Lake, WA
20 May 82	1000-1½ to 3#	RB	Trout Lodge, McMillan, WA
27 May 83	680-1½ to 3#	RB	Crystal Lakes, Fortine, MT
30 Jul 84	800#-8" to 6#	Donaldson	Stampede Lake, Naples, ID
23 Jun 85	1000#-2 to 4#	Donaldson	Stampede Lake, Naples, ID
27 Jun 86	300#-12"	RB	Crystal Lakes, Fortine, MT
10 May 87	1000#-1½ to 3#	Hybrid RB	Stampede Lake, Naples, ID trout fr Soap Lake, WA
15 May 88	5000-4½ to 6"	RB	Sikokini Springs Trout Farm Col Falls, MT
21 May 89	3000-4½ to 6"	RB	DO
10 Jun 90	500-10 to 12" & 50#		
	2 to 3#	RB	DO
2 Jun 91	1000-4½ to 6" & 300#		
	1½ to 3#	RB	DO
May 92	DO	RB	DO
1993	Did NOT restock		
1994	No current plans for re-stocking		

One (1), aprox 1½# cutthroat(very nice condition) was caught thru the ice in Feb 86. Don't know how it got there!!

The trout go up Windy Creek aprox 1 mile (still on Okaga property), in the spring to spawn. We get a considerable amount of reproduction. A few go into the spillway to spawn; however, after hatch they (the fingerlings) must return to the lake, as the spillway gates are closed at that time to save maximum water for hydro operation. With the exception of a few, I'm sure get thru the hydro system.

During the 1980 - 81 high water periods, several trout washed out the spillway, and down the East Fork of the Yaak. Fishermen informed me they caught some of them near the mouth of the East Fork. In late 1981, I remodeled the spillway, screens and gates; therefore, fish were unable to pass thru thereafter.

Exhibit Two. Letter from Clint Mills to Sgt. Mack Long, MDFWP.

Fish Lake.

2. October 27, 1915. Contracting for native eyed fish eggs will be left with Eli Melton. (Note: Eli Melton was at the Somers Hatchery.)
3. March 25, 1916. Arrangements made to take spawn at Howard Lake.
4. June 10, 1916. Commission secretary to make arrangements with Dowdell and Schrader about spawn taking at Howard Lake, (Note: Howard Lake is a headwater lake in the Libby Creek drainage about 2-3 miles upstream from an area on Libby Creek called "Old Town". Old Town is the original townsite for Libby, established around 1880 within the Libby Creek mining district. No other records of Howard Lake spawning were found so it is unknown if eggs were or were not collected. It is believed that Howard Lake would have been populated by redband trout.)
5. July 9, 1918. Game and Fish Commission surrendered purchase rights of Fish Lake fish to the Butte Anglers Club. (Note: The Butte Anglers Club operated their own fish hatchery in the Columbia Gardens and probably planted as many fish in southwest Montana as did the Anaconda Hatchery.)
6. March 21, 1919. The Commission to buy all available native eggs from Dowdell at the price of $1.25 per thousand.
7. May 7, 1921. Eastern brook trout were not to be planted in the Madison River upstream of the town of McAllister. (Note: McAllister is located near Ennis Lake and was the site for collection of rainbow trout eggs by the federal hatchery at Bozeman.)
8. April 27, 1923. Mr. Edwards to take spawn at Little Bitterroot Lake and give State 50% of that taken.
9. October 10, 1924. Commission agreed to purchase 500,000 eastern brook trout eggs from Carl Dowdell at $1.00 per thousand.
10. February 11, 1926. Motion to build a hatchery on Cedar Creek near Libby passed. Equipment for this new hatchery was to be scavenged from a station on Lake Mary Ronan.
11. February 11, 1926. Motion was passed against any expansion of roads into the

South Fork Flathead as this area was very natural.

12. March 27, 1926. Arrangements made for a private party to take spawn from Marshall, Jocko and Rainbow lakes located near Seeley Lake. The State to get 50% of the eggs collected. (Note: Whether any eggs were obtained from these sources has not been determined.)

13. April 8, 1927. Commission issued private pond license to George S. Congdon, Phillipsburg for Medicine Lake.

14. December 12, 1927. Rexford Power and Light instructed to install fish ladder on their dam. (Note: This dam was located on the Tobacco River upstream from the present town of Rexford, but within the area flooded by Lake Koocanusa. The author saw remnants of this dam during pre-impoundment surveys in the late 1960s. What its effects were on the fishery is not known.)

15. March 27, 1928. Reissued J.C. Dowdell private pond license on Fish Lake, even though it is illegal, on condition that people be allowed to fish.

16. October 25, 1928. Creating a pond by damming a creek was illegal.

17. August 25, 1930. Spokane man wanted to spawn Kilbrennen Lake, but Commission informed him of the agreement with the Drews.

18. June 1, 1932. Commission opened Yaak River to falls, Star Creek and O'Brien Creek to water intake to fishing for "ocean-run rainbow". (Note: These ocean-run rainbows would have been from Kootenay Lake, British Columbia.)

19. June 7, 1932. R.R. Hoyt has seven rearing ponds near Thompson Falls and wants to raise fish on shares, he also has a fur farm. (Note: Apparently the Commission had an extensive system of private ponds being used to rear fish. The Libby log states that 100,000 rainbow trout were stocked in Hoyt's Ponds in September 1932. Other rearing ponds were located in Butte (Columbia Gardens), Missoula (Greenough Park), Ravali (Marlow Springs), Yaak River (Gus Witt's ponds and Yaak ponds). The latter two may be one and the same. The Witt's ponds were located near the mouth of Gus Creek. The Libby Hatchery planting records state that on October 24, 1931, 19,808 Wisconsin rainbow trout were planted in Witt's pond. These fish were most likely from a Wild Rose Hatchery in Wisconsin and

undoubtedly coastal rainbow trout.)

20. November 1932. Commission decided that a fish ladder over the Lake Creek Dam near Troy was not needed.

21. April 13, 1933. "It was decided that the Department would not cooperate with private hatcheries in raising fish on a 50-50 basis, as in the past, as this has not proven successful".

21. April 13, 1933. Libby Rod and Gun Club requested that Loch Leven be planted in the Kootenai River. The Commission requested a study be done by the Department. (Note: Loch Leven is an old name for brown trout. (Salmo trutta).)

22. August 12, 1939. Commission agreed to let Idaho Fish and Game trap and spawn kokanee in Bull River, but only if the eggs-fish were used in Idaho. (Note: Whether Idaho ever spawned kokanee in Bull River is not known.)

FROM ANACONDA HATCHERY FINANCIAL LEDGER:

1. August 1914. Bought eggs from Schrader at Fish Lake, $253.50.

FROM LIBBY HATCHERY LOG BOOKS:

1. May 25, 1931. Got 480,000 eggs from Somers.
2. August 10, 1931. Golden trout planted in Flower Lake.
3. September 15, 1931. Golden trout planted in Standard Lake.
4. October 25, 1933. Planted natives in East Fork Yaak, stopped at Gus Witt's pond and helped Drew release rainbow. Paul in Yaak four days.
5. December 26, 1933. Got three cases brook eggs from Drew at Troy, 426,000 eggs.
6. June 7, 1935. Got 500,000 rainbow eggs from Anaconda.
7. May 21, 1936. Sheehan to Kilbrennen Lake, moved fish traps. (Note: John Sheehan was at Libby Hatchery in 1936.)
8. May 26, and June 1, 1936. Received rainbow from Anaconda.
9. December 12, 1936. Received rainbow eggs from Springville, Utah.
10. April 15, 1938. Caldwell, Campbell to move rainbow to Bull Lake, also pick up rainbow fry belonging to Elmer Phillips at Drews' Rainbow Ranch and bring to Libby.

11. May 7, 1938. Phillips took his fish, 110,000 rainbow fry. (Note: Elmer Phillips was foreman of the Cedar Creek Hatchery and the Libby Hatchery, and was Superintendent of Hatcheries in Helena. He also built Lake Okaga by damming Windy Creek, a small tributary of the East Fork Yaak River. The fish described above was the first plant into Lake Okaga after construction was completed in spring 1938. Available information indicates that this first stocking was the sole source of rainbow trout in Lake Okaga during Phillips' ownership which extended from 1938 to 1961. The information indicates Phillips sold whole fish for human consumption, but mostly eggs. Much of his market area was in the Canadian provinces.)
12. August 29, 1938. Natives planted in Mt Henry Lake.
13. April 29 and 30, 1940. Cadwell planted Bull Lake and Spar Lake with Mackinaw.
14. August 16, 1940. Libby Creek above hatchery, dry.
15. December 12, 1941. Gave Drew 320,000 brook trout eggs.
16. December 19, 1941. Gave Drew 110,000 brook trout eggs.
17. December 27, 1941. Shipped 505,000 brook trout eggs for Drew.
18. January 2, 1942. Sent 180,000 eggs to Drew. (Note: No species was listed, but undoubtedly these eggs were brook trout.)
19. January 5 and 12, 1944. Ripley and Blair (5th) and Ripley and Phillips (12th), made shipments of eggs for K.G. Drew. (Note: Again, no species listed, but undoubtedly brook trout eggs.)
20. November 13, 1944. Ripley packed and shipped 300,000 eggs for K.G. Drew in Spokane. (Note: Again no species listed, but undoubtedly eggs were brook trout.)
21. December 20, 1944. The Fish Lake Hatchery was shipped 300,000 brook trout eggs, but were charged to the Clarence Ripley account at Arlee.
22. December 23, 1944. One million brook trout eggs were shipped to New Brunswich, Canada for K.G. Drew.
23. January 11, 1945. Ripley shipped 125,000 eggs to Klink account via C. Ripley, Arlee.
24. January 15, 1945. Ripley shipped 213,000 brook trout eggs to Drew in Spokane.

25. May 3, 1945. Ripley gave K.G. Drew 31,900 brook trout fry. (Note: The transactions listed in items 19-25 are, at this time, unexplainable. Apparently K.G. Drew had moved his hatchery to a site on the Little Spokane River in Spokane, Washington. The Klink mentioned in item 23 operated a private hatchery on Fish Lake at Stryker and Clarence Ripley was manager of the State hatchery in Libby and a private hatchery in Arlee. The Arlee Hatchery was purchased by the State in 1948 and Ripley was retained as the manager until he was replaced by Vernon Campbell in the early 1950s. Harold Fletcher who currently lives in Libby, worked at the Libby Hatchery shortly before and shortly after WW II. He remembers being advised by Clarence Ripley in 1946 about an impending scandal and investigation into hatchery operations and that he should resign to avoid being implicated. Whether this investigation occurred is not known. Could it have evolved around illegal egg shipments?)

Conclusions

1. Historical records presented here indicate that private and cooperative fish hatcheries played an important role in providing fish to Montana Fish and Game Department for fish planting activities throughout much of western Montana from about 1910 through the mid-1940s.

2. Fish species provided by private and cooperative hatcheries included eastern brook trout, "natives" thought to be mostly Yellowstone cutthroat trout and redband trout.

3. Effects of the two non-native species mentioned in item two and coastal rainbow trout upon native trouts and chars (westslope cutthroat, redband trout and bull trout) vary considerably. Genetic analysis of many stream and lake fish populations in the Kootenai River drainage have found no pure Yellowstone cutthroat and only six populations containing Yellowstone cutthroat influence. Yellowstone genetic material was found in Kootenai River trout at three sites; near the Canadian border, near Libby and near Troy. Boulder Creek contained westslope and westslope Yellowstone cutthroat hybrids. It is strongly suspected that Boulder Lake, headwater source of Boulder Creek is also populated by a westslope X Yellowstone cutthroat hybrid. Other streams containing westslope cutthroat trout hybridized with Yellowstone cutthroat include East Fork Pipe Creek, O'Brien Creek and Hellroaring Creek.

Boulder Creek is a tributary of Lake Kocanusa. East Fork Pipe and O'Brien Creek are Kootenai River tributaries and Hellroaring Creek is tributary to Yaak River above Yaak Falls. One Cabinet Wilderness lake, Lower Bramlett, in the West Fisher River drainage was found to contain fish that were redband X Yellowstone hybrids. The author believes that both species were of hatchery origin and that Bramlett Lake was originally barren of fish.

During the years of 1931 through 1960, the Montana Fish and Game Department planted 10,312,907 cutthroat trout in waters in the Kootenai River drainage.

Effects upon native trouts and char of planting eastern brook trout, have been severe. From 1931 through 1960, the Department planted 5,233,597 brook trout in the drainage. Prior to 1931, several more million brook trout may have been planted. Brook trout have established viable populations in most lower elevations, low gradient streams in the Kootenai system. In several areas or streams, they have totally displaced the native fish. Examples include Five Mile Creek, sections of Wolf Creek near Fairview, sections of Lake Creek above and below the Troy ASARCO mine road-crossing and Pine Creek near Troy. Brook trout have replaced much of the redband trout potential of Kilbrennen Lake. Brook trout/bull trout hybrids, have been found in North Fork Keelar Creek and Quartz Creek. Keelar Creek is used by Bull Lake bull trout, while Quartz Creek is a major spawning area for Kootenai River bull trout.

From 1931 through 1960, the Libby Hatchery also planted 2,824,591 coastal rainbow trout and an unknown number of redband trout in their planting district. An unknown number of rainbow trout and redband trout were also planted prior to 1931. Effects of these fish upon native populations are muddier than that for Yellowstone cutthroat and brook trout. However, it is believed that any fish population analyzed as redband X rainbow hybrids within the Kootenai River drainage, downstream of Libby Dam, can be blamed on past hatchery practices.

Genetic analysis of a few other so-called rainbow trout populations have yielded redband X rainbow hybrids. Chief among these were Lake Mary Ronan and Little Bitterroot Lake that once were used as rainbow trout egg sources for the entire state. Fish from Lena Lake, a headwater lake in the Bob Marshall Wilderness, were also analyzed as coastal rainbow X redband rainbow hybrids. Determining statewide ramifications of redband influence would require considerable genetic testing of numerous rainbow trout populations.

4. Did planting of redband trout by the Libby Hatchery have any affect on native

redband populations and did it expand the range of redband trout? A most difficult question to answer without knowing what waters were planted with which fish. It is believed that planting of redband trout did not expand their range. The best example may be the Wolf Creek drainage where redband trout have been found in the mainstream and five small tributaries. The tributaries are Calix, Tamarack, Dry, Little Wolf and Weigel Creeks. Wolf Creek appears very frequently on planting records receiving many thousands of brook trout and rainbow trout through the years. None of the tributaries are named as having received rainbow trout plants. It is doubtful fish from Wolf Creek proper, moved into these small tributaries.