

Land Use History:
Mica Creek
A tributary of the St. Joe River

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for
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It was my great good fortune to have Dorothy Dalgren (North Idaho Museum) refer me to Lewellen Stearns. His book and the conversations I had with him and his brother, Myrl, provided invaluable background into the early days on Mica Creek and the changes time has brought. His generosity with his photograph collection allowed me to include some priceless images of those early days in this report.

The continuing patience and talent of the Resource Information Team at Potlatch Corporation made possible many of the maps and photo interpretations that add significantly to the clarity and visual presentation of this research.

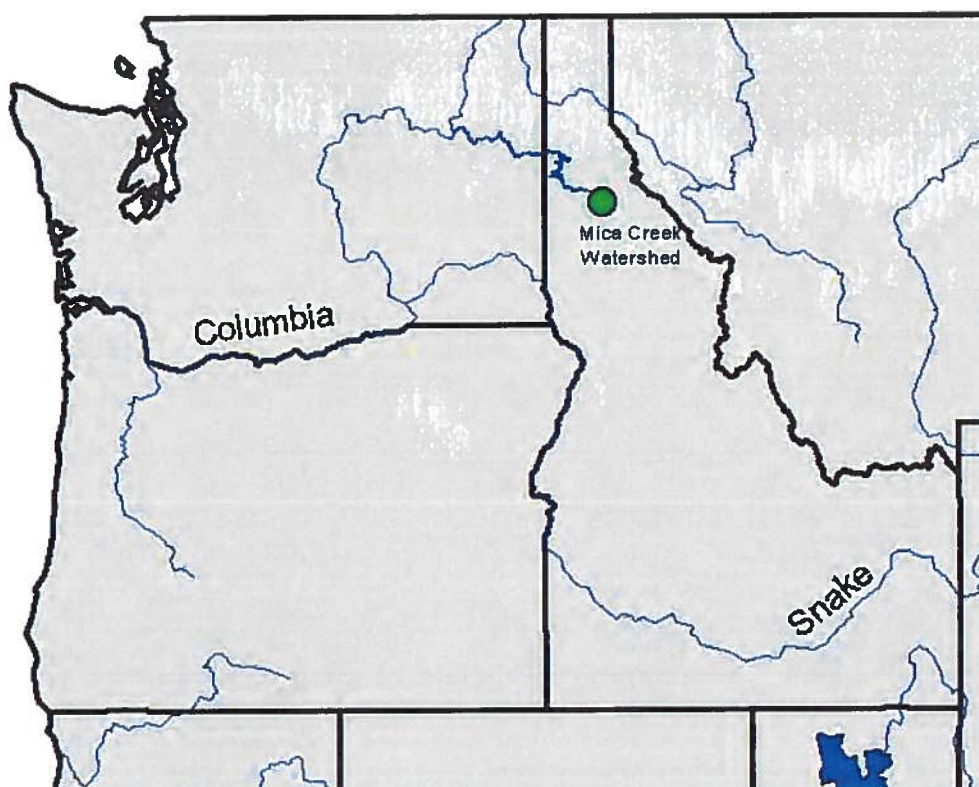
In particular, I would like to thank those who gave me comments and corrections after reviewing a draft of this project: Terry Cundy (who provided guidance throughout the entire process and edited the earliest drafts with care and tact), Tom Femreite, John Gravelle, Lew and Myrl Stearns. Their help brought this project a little closer to its goal of accuracy and completeness, and I take full responsibility for any errors or omissions that may remain.

Understanding that "land use history" is an ongoing process, I would like to encourage anyone with further information or corrections to this research to contact Terry Cundy at Potlatch Corporation in Lewiston. Telephone: (208) 799-4135 email: terry.cundy@potlatchcorp.com

Introduction to Mica Creek

Mica Creek is located in Shoshone County, Idaho southeast of St. Maries and flows predominately northeast to where it enters the St. Joe River approximately 20 miles upstream from St. Maries. At its mouth, Mica Creek is approximately 30 feet wide and 1 foot deep. The watershed lies in R1, 2 and 3E, T44 and 45 N, and just west of the Marble Creek drainage. The watershed contains approximately 32,000 acres of land, of which Potlatch Corporation owns approximately 25,000. The geology of the watershed includes quartzite and gneiss in the upper end, which is much more stable than further downstream where there seem to be pockets of schist. The elevation ranges from about 2000 feet at the mouth to approximately 5100 feet on the highest ridge.

Mouth of Mica Creek



Mica Creek Land Use Timeline

Pre-1900

- ◆ Pre-1800 Native Americans utilize resources of landscape
- ◆ ~1830 Beaver trapping increases in St. Joe region
- ◆ ~1860 Elk population in St. Joe region at very low levels
- ◆ ~1890 Homesteading establishes pack trail from St. Joe City through Mica Meadows to Marble Creek

1900

- ◆ 1900 Prospectors placer mine for gold on lower portion of Mica Creek
- ◆ 1901 Logging begins, citizens clearing debris from Mica Creek
- ◆ ~1901 McCormack's summer resort at mouth of Mica
- ◆ 1902 Bruun Homestead is rest stop on Mica Creek Trail
- ◆ ~1902 Mica Creek School on West Fork
- ◆ ~1908 Bruun cuts natural hay from Mica Meadows
- ◆ 1908 Elk population remains low in St. Joe region
- ◆ 1909 Passenger train service along St. Joe River

1910

- ◆ 1910 Fires burn areas surrounding Mica Creek
- ◆ 1911 Bruun halfway house closes
- ◆ 1911 Blackwell purchasing rights to Timber on Mica
- ◆ ~1916 Wildlife diverse in St. Joe River region
- ◆ ~1916 Freight road built from Buell ranch to Mica Meadows
- ◆ 1916 Flume construction begins
- ◆ 1916 Sawmill brought into upper drainage
- ◆ 1916 Narrow-gauge railroad installed in upper drainage
- ◆ 1916 Logging activities continue in earnest on Mica Creek
- ◆ 1917 Engineer reports inspection of finished flume
- ◆ 1918 Letter from inspecting engineer describes plans for flume extension

1920

- ◆ 1921 Individuals purchase parcels of land from state of Idaho, sell to Blackwell three years later
- ◆ 1924 Crystal Creek fire destroys camps on Mica Creek
- ◆ 1925 Fire-killed white pine is harvested for boomsticks
- ◆ 1927 Abundance of cutthroat trout in Mica Creek
- ◆ 1928 Elk are transplanted into Marble Creek from Montana

1930

- ◆ ~1930 Grazing records indicate small numbers of sheep and cattle on Mica
- ◆ 1930 Fire burns upper reaches of drainage
- ◆ 1931 Fire travels from Fernwood into upper Mica Creek drainage
- ◆ 1933 Rain-on-snow event causes flooding, damages flume beyond repair
- ◆ 1933 First aerial photo reference
- ◆ 1935 Five Year Fish and Game Report states fish density is low, suggests stocking
- ◆ 1939 ERA Blister Rust Camp on upper drainage of Mica
- ◆ 1939 USFS Blister Rust Camp above Camp 3 site

1940

- ◆ 1940 St. Joe Forest Service Fish Management Plan finds Brook trout in Mica
- ◆ 1940 Fish Stocking Records
- ◆ ~1946 Reminders of railroad and equipment removed, logging continues
- ◆ 1948 St. Joe Elk herd continues to grow despite temporary setback from severe winter

1950

- ◆ ~1950 Cattle grazing continues in Mica region
- ◆ 1956 Second aerial photo reference

1960

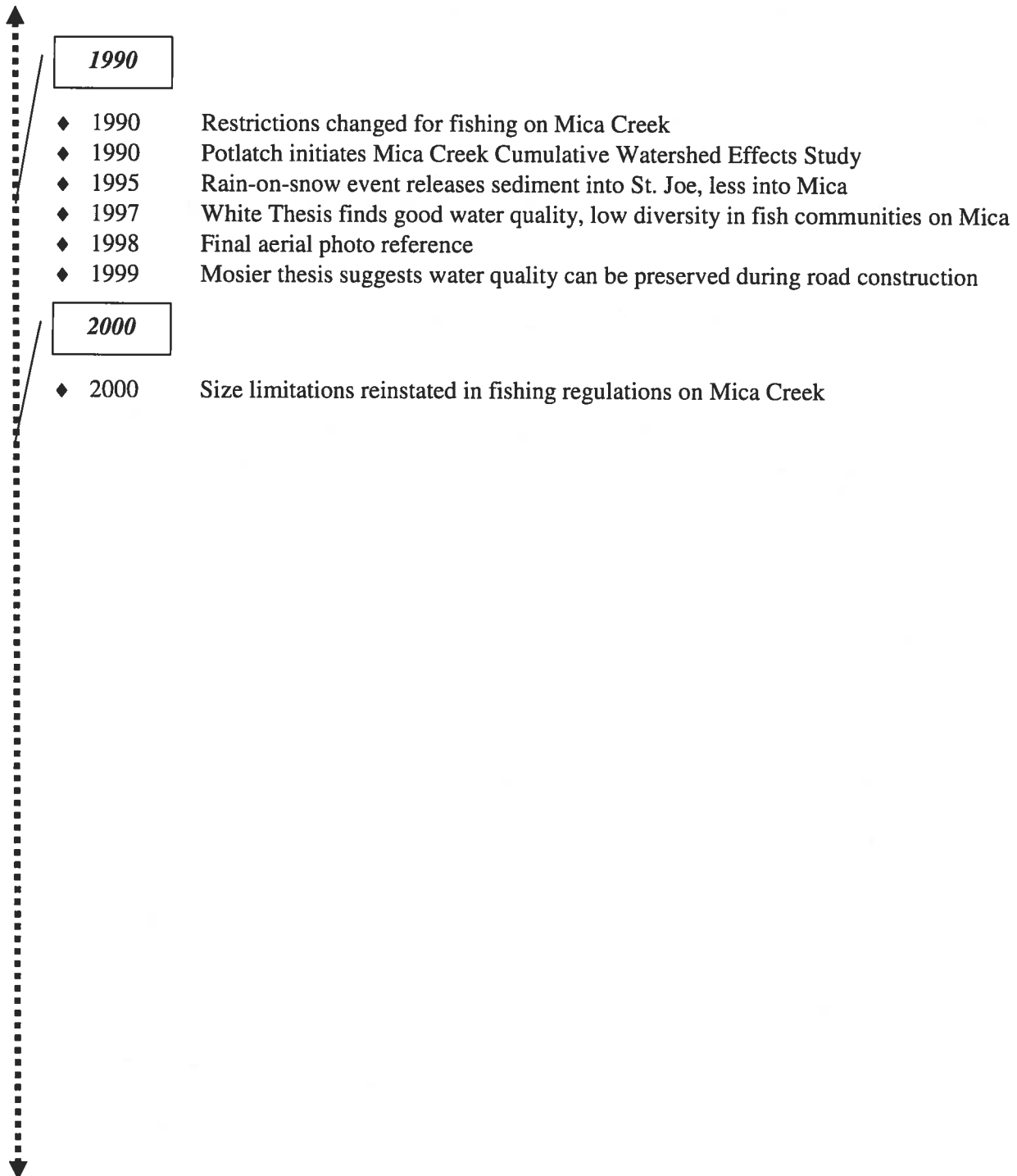
- ◆ 1963 Averett Thesis expresses concern that low summer water flows will affect trout
- ◆ 1968 Logging of mature timber continues

1970

- ◆ 1973 Mica Creek closed to fishermen
- ◆ 1976 Thurow Thesis finds that closure to angling increases fish density on Mica Creek
- ◆ 1979 Third aerial photo reference

1980

- ◆ 1981 Potlatch Corporation logs areas of middle and lower drainage
- ◆ ~1981 Elk herd and available forage declining in St. Joe Region
- ◆ 1984 Gamblin Thesis finds that St. Helens ashfall did not significantly impact trout
- ◆ 1988 Mica Creek reopened for fishing
- ◆ 1988 Rain-on-snow event releases sediment at mouth of Mica Creek



♦ ***Pre-1800 Native Americans utilize resources of landscape***

According to Crowell and Asleson in Up the Swiftwater, there is evidence that human beings have occupied the St. Joe corridor and survived there for at least five thousand years and 21 sites show the presence of Indians between the headwaters of the St. Joe and its mouth in the last one thousand years. Tribes that would have been most frequently in the area were the Coeur d'Alene and the Nez Perce. These and other tribes migrated through the area in their annual quest for the camas roots, huckleberries, fish and game the different seasons of the year yielded for their sustenance (Crowell and Asleson 1980). These activities certainly included Mica Creek to some degree.

♦ ***~1830 Beaver trapping increases in St. Joe region***

Groups of Nez Perce, Coeur d'Alene and Spokane Indians formed large hunting parties that traveled to the Montana plains in pursuit of bison. According to Crowell and Asleson, the tribes trapped beaver in the streams along the way for trade in Helena. One trail passed the southern end of Lake Coeur d'Alene and followed the St. Joe River to cross the Bitterroot Divide near the headwaters, which took the travelers past the mouth of Mica Creek (See Map #1, page 35).

Up the Swiftwater includes the following statement regarding white trappers in the St. Joe region:

Because [white trappers] did get into nearly every major drainage in Idaho and the rest of the Northwest, we can assume that someone at sometime assuredly made it into the St. Joe country in the early trapping era. Unfortunately, no records verify that, and knowing that this was hostile Coeur d'Alene Indian territory may have discouraged the trappers from further exploration (Crowell and Asleson 1980).

♦ ***~1860 Elk population in St. Joe region at very low levels***

According to an Idaho Fish and Game report published by Thomas A. Leege in 1984, elk were native to the area and had been present in large numbers historically. The elk population had declined significantly by the 1860's, however. Leege suggests that the combination of hunting pressure by miners and Indians and a reduction in winter range may have caused the decline (Leege, Trent & Meuleman 1984).

♦ ***~1890 Homesteading establishes pack trail from St. Joe to Marble Creek***

As white settlers began to move into the Mica and Marble Creek areas, there was an increased need for a way to convey supplies and communication to them. The resulting pack trail climbed up over Coyote Butte, followed the ridge to Evergreen Mountain, then turned left at the saddle to come down a long ridge to the lower end of Mica Meadows and continue on from there into Marble Creek (See Map #2, page 36). Mail and supplies came in over this trail, which is described in Up the Swiftwater as being "heavily used" by settlers (Crowell and Asleson 1980, Russell 1979).

♦ **1900** *Prospectors placer mine for gold*

According to Charles Scribner in Bert Russell's book Hardships and Happy Times, "In about 1900 prospectors placered for gold 2 or 3 miles up Mica Creek and maybe a quarter mile up on the sidehill on the east side" (Russell 1978). Since these claims were short-lived, it can be assumed that they were not very successful.

♦ **1901** *Logging begins, citizens clearing debris from creek*

According to a brief statement in the St. Maries Courier June 11, 1901, logging had begun on Mica Creek and citizens were planning to begin cleaning out the creek in about a week in preparation for using it to transport logs to the river (St. Maries Courier 1901).

♦ **~1901** *McCormack's summer resort at mouth of Mica*

Up the Swiftwater reports a collection of buildings at the mouth of Mica Creek, creating a sort of summer resort catering to tourists and homesteaders, and states that "The saloon and bunkhouses housed weary travelers heading upriver" (Crowell and Asleson 1980).

♦ **1902** *Bruun Homestead is rest stop on Mica Creek Trail*

Frank Bruun moved his family to their Mica Creek homestead in 1902. The location of their homestead in the upper end of Mica Meadows made it a convenient rest stop for travelers coming in on the pack trail from St. Joe to the upper end of Mica Creek or the branches of Marble Creek (See Map #3, page 37). Mr. Bruun packed travelers in to the homestead, where they would rest for the night and travel on the next day. (Stearns 2000, Russell 1979).

♦ **~1902** *Mica Creek School on West Fork*

Frank Bruun built a log school up Mica Creek from his homestead in order for his children to receive some education. He brought a young boy from St. Joe to live with the Bruuns at the homestead to meet the minimum number of students the school district required in order to provide a teacher (Crowell and Asleson 1980, Russell 1979).

♦ **~1908** *Bruun cuts natural hay from Mica Meadows*

In Bert Russell's book, Swiftwater People, Florence Bruun Reynolds recalls that the natural hay grew well in Mica Meadows during the summer. Her father cut it with a scythe and brought it in by wagon for feeding their horses (Russell 1979).

♦ **1908** *Elk population remains low in St. Joe region*

According to Crowell and Asleson, the elk herd on the St. Joe around the turn of the century was probably less than a hundred head. When Knut Glover, a saloon keeper from St. Joe City, shot a bull elk near the mouth of Slate Creek in 1908, it was "an occurrence rare enough that it gave people something to talk about" (Crowell and Asleson 1980).

♦ **1909** *Passenger train service along St. Joe River*

Milwaukee Railroad service began along the St. Joe River with the completion of the turntable, roundhouse and new depot at Avery in August of 1909 (See Map #1, page 34). Passenger train service into Avery from both east and west began that same month. Loggers, settlers and visitors utilized the service to come into or through the Mica Creek area, and the railroad encouraged settlers along its territory. The Milwaukee Railroad extended its rail line from South Dakota to Seattle to compete with the already established Great Northern and Northern Pacific Railroads for the increasing freight traffic into and out of the Northwest (Bilger 1969).

♦ **1910** *Fires burn areas surrounding Mica Creek*

I found no documentation of fires within the Mica Creek drainage itself in 1910, but the areas surrounding it were heavily hit by fire during that season, one of the worst in Idaho's recorded history. As indicated on USFS fire history map (Map # 4, page 38), areas immediately west over Blackwell Hump were burned, as was a large area across the river to the north of Mica Creek. Although it was not documented as part of the 1910 fires, the area at the mouth of Mica may have been affected—see 1933 entry regarding evidence in aerial photographs (USFS map).

♦ **1911** *Bruun family leaves homestead*

Several factors may have contributed to George Bruun's decision to move his family from Mica Meadows in 1911. The Mica trail was no longer the best route through Mica Creek to the more populated Marble Creek area. Wagons could negotiate the "tote" road that had been built along the river by railroad crews as part of the railroad construction, and train service brought passengers and freight up and down the St. Joe River. These factors, combined with the disruptions to the areas surrounding Mica Creek from the 1910 fires, were enough to convince the Bruuns that it was time to move on (Stearns 1998).

♦ **1911** *Blackwell purchasing rights to timber on Mica*

In 1997 Potlatch Corporation initiated a land title search on a parcel of land on Mica Creek. The search reveals that in 1911, Blackwell Lumber Company purchased from Edward Rutledge Timber Co. "an undivided one-fourth interest in and to all the timber of every description, lying, standing or being upon all of the tracts or parcels of land" described in the deed, which is the parcel shown on the map as Parcel 1 (see map #5, page 39). In addition, Blackwell Lumber Company purchased timber rights from Milwaukee Land Company and Potlatch Lumber Company on the same property. Instead of being "an undivided one-fourth interest," however, the transactions with Milwaukee and Potlatch were to purchase "all the right, title, claim and interest of the party of the first part in and to the timber standing, lying or being upon" that same parcel of land (Chicago Title Insurance Company, 1997).

♦ ~1916 *Wildlife diverse in St. Joe River region*

Although there is little information on the Mica Creek drainage specifically, Up the Swiftwater lists the presence of an abundance of beaver, martens, otter, weasels and lynx as types of game sought by trappers in the early part of the century throughout the St. Joe area. In addition, a small population of mountain lions, bobcats, mountain goats, and moose inhabited the region, as well as muskrat, coyote, badger and red fox. The black bear population has apparently remained stable throughout the history of the area. In 1980 the Northern Region of the Forest Service, of which the St. Joe is a part, had one-fourth of all the nation's bears (Crowell and Asleson 1980).

♦ ~1916 *Freight road built from Buell ranch to Mica Meadows*

According to the memoirs of Llewelyn Stearns, who lived on Mica Creek in 1928, the Buell Ranch at Calder became a stopover point for men on their way in to the Mica Creek area for logging activities and the road-building activities that preceded them. A freight road over Calder Point connecting Calder to Mica Meadows had replaced the pack trail as the route for supplies to be brought in to Mica (See Map #3, page 37). The steepness of the trail and heaviness of a loaded wagon made the trip a long and tiring one for humans and animals (Stearns 1998).

♦ 1916 *Flume construction begins*

In May of 1916, the Rose Lake Timber Company applied to the state of Idaho to divert the course of Mica Creek for the construction of a flume for floating logs. According to the application, work was to begin on or before July 17, 1916 and be completed on or before May 18, 1917. An "Application for Permit to Appropriate the Public Waters of the State of Idaho," on file with the Department of Water Resources, includes the following remarks concerning the construction of the flume:

The first diversion of the water will be made with small dam on the SW1/4 of said section 8, 44, 2 [see 1918 entry for corrected location] and flume will have course along Mica Creek, on it [sic] present water course, arriving at the point where said Mica Creek passes through the NE corner of the SW1/4 of NW1/4 of said section. A small dam will be put in less than 8 ft. high; 100 ft. wide at top and bottom, creating a storage of about 3 acres. Thence said flume, with the added water, will continue on down the present water course of said creek ending where it empties into the St. Joe River on the middle of the north line of the NW1/4 of NW1/4 of Section 7, T. 45, R. 3, E.B.M.

The construction of the flume will be entirely of lumber, made in a "V" shape, and enough water will be used for floating logs, etc. At no point along the flume will it be over 75 ft. from the present course of the creek, the topography of the district being such that it would be impossible. At certain points said flume will pass over the creek where the bed of the creek is so crooked as to make log floating impossible, if the creek were followed.

The "Proof of Completion of Works" filed with the state shows that water was turned in to the flume November 1, 1916 "to the full extent of the works of diversion and amount of water

claimed.” It is interesting to note that the logging operation, and the diversion rights, changed hands several times during those first years. According to a letter to the state engineer in April 1918, the Rose Lake Timber Co. originally applied for the right to divert water for the flume. They were succeeded first by the Mica Creek Timber Co. and then by the St. Maries Lumber Company, all within two years (ID Dept. of Water Resources).

♦ *~1916 Sawmill brought into upper drainage*

A freight road was built over Blackwell Hump into the upper drainage of Mica Creek in order to bring in the equipment for a crude sawmill. The sawmill was assembled to generate the lumber needed for the construction of the flume, and the lumber was transported as needed down the flume itself as it was built (Russell 1979). After the flume was completed, the sawmill remained, and as construction was necessary downstream from the mill for camps, caretaker shacks, etc., lumber could be floated down the flume to where it was needed. Lew Stearns recalls the efficiency of this delivery system:

The flume was full of logs only twice per day and only for about an hour each time. The remainder of the time there was only a foot or so of water flowing down the flume. Most any time when the flume wasn't full of logs, the men who worked along it could call the pond operators at Camp 3 on their hand-cranked telephones and request whatever quantity of lumber they required. Then it was a matter of a couple of hours before the lumber would arrive (Stearns 1998).

♦ *1916 Narrow-gauge railroad installed in upper drainage*

As the flume was completed, a narrow-gauge railroad was installed for transporting logs to the head of the flume. Jim Brebner's recollection of his experience with the small railroad in 1917 is recorded in Swiftwater People:

They put me to firing the little narrow gauge locomotive. \$2.75 a day minus 75 cents for board. 10 hours a day. 6 days a week but you had to pay board on Sunday. The track was built right down in the creek so when you needed water all you had to do was take the hose out and siphon water into the boiler... [later they] gave me the job of firing the donkey instead. I was supposed to go up early in the morning and steam it up. They used the donkey to pull the empty log cars up the track for loading. The little Shay didn't have the power. But it could pull'em down all right after they were loaded and up to Camp 3 to unload in the dam (Russell 1979).

The shay locomotive pulled cars loaded with logs from throughout the upper drainage of Mica creek to the pond at the head of the flume. Lew and Myrl Stearns remember railroad lines running along the upper end and the west fork of Mica as well as along Engstrom Creek (See Map 1, page 34). The person responsible for releasing the logs from the cars had quite a challenge, as Lew Stearns explains:

The unloading operation at the pond was quite spectacular to witness, and it appeared to be quite dangerous, but no casualties were ever reported. The logs were secured to the flatcars by a chain which was wrapped around them at the midpoint. There was a latch on the chain at the level of the flatcar. One of the pond operators, usually Bill Webster during our stay at Camp 3, would release the latch by knocking it loose with a single jack. Since he was standing in front of the load of logs, at the midpoint, and on the downhill side, he had to duck under the flatcar, at the moment of release, and stay there until all the logs had rolled off above his head (Stearns 1998).

The following photo, taken in 1932, shows logs splashing into the pond at Camp 3 from rail cars pulled by a shay locomotive. The dam and the head of the flume are in the lower right corner of the photograph.



*Shay locomotive splashing logs into the pond at Camp 3, 1932
Photo courtesy of Lew Stearns and the North Idaho Museum*

◆ 1916 *Logging activities continue in earnest on Mica Creek*

With the completion of the flume, logging began in earnest on the upper portion of the Mica Creek drainage. The location of all the camps that operated during those early years is not clear. There were at least three camps in the upper portion of the drainage, since they are recorded as having been burned in the 1924 fire (see 1924 entry). Camp 12 was apparently rebuilt, since it was in operation later on the west fork of Mica Creek, and Camp 14 was on Engstrom Creek. Camp 3 was at the head of the flume, and Camp 2 was the approximate halfway point between Camp 3 and the river. Lew and Myrl Stearns remember the abandoned buildings from Camp 1 a short distance downstream from Camp 3. Lew suggests that Camp 1, since it would have been the first camp built in the area, was the base camp from which loggers worked to clear the site for the much larger Camp 3 and cut timbers for building the dam. Camp 1 was a small camp, and was probably abandoned soon after Camp 3 was constructed. Camp 2 was constructed next and consisted mainly of a small dam. This provided enough water to flume lumber downstream as the flume was built. The buildings from Camp 5 indicate that it was a small camp about halfway between Camps 2 and 3, and it, too had been abandoned before 1928 when the Stearns family lived in the area. Map 3 on page 37 shows the locations of these camps. John Gravelle notes the remains of some type of camp just above the mouth of the West Fork on the main stem. The remnants of a bridge and horsebarn may be indications of another lumber camp or the USFS Blister Rust camp that was in this vicinity later (see 1939 entry). I found no mention of other camps on Mica Creek.

There were no chain saws or caterpillar tractors in these early days of logging. Lumberjacks used axes and cross-cut saws for the work of felling and limbing the trees and cutting them into 16' logs, then horses skidded them to the railroad landings. Chutes were used throughout the area to improve the efficiency of the skidding. Constructed of logs sawed flat on one side and then joined together in a "V" shape, the chutes allowed horses to pull several logs at once on level ground or up slight inclines. To reduce friction and facilitate moving the logs, the chutes were greased, and Myrl Stearns, who held that job for a time, recalls that the job of chute-greaser was not a pleasant one. The "grease" was lard "scraped up off the slaughterhouse floor" which had been heated to a liquid state and mixed with kerosene. The "tool" used to smear daubs of grease along the chute might well be "a logger's old sock tied to a stick." The greaser walked the length of the chutes all day, daubing alternating sides with the grease every few feet. When logs were being moved in the chutes, caution was necessary for lumberjacks working alongside the chute in downhill sections since logs could pick up speed on their own and be thrown clear. In order to give horses sure footing where the trails were muddy, corduroy landings were sometimes constructed beside the chutes. Corduroy landings were formed of logs laid tightly side by side to create a solid surface. Logs used for corduroy were the mixed species which were of little commercial value at the time. Douglas and grand fir were considered inferior to white pine and cedar, and so were used for building corduroy.

A "jammer" consisting of an A-frame crane mounted on a railroad car loaded logs onto flat cars at the rail landings. Short trains, only six or eight cars long, were then pulled by shay locomotive to be unloaded into the pond at the head of the flume at Camp 3. When the pond was full of water and logs (usually twice a day), the pond operators had the job of releasing them into the flume. Lew Stearns describes this process as he remembers viewing it in the late 1920's:

The gate in the dam at the head of the flume was about six feet wide and it was made up of a stack of four-by-sixes. Each of those four-by-sixes had holes drilled through it close to each end. The pond operators stood on either side of that gate and removed, or replaced, the four-by-sixes by means of long steel rods with hooks on one end. When the pond was full of logs, and water, the operators started removing the four-by-sixes from the gate and started feeding logs into the flume using long, steel-tipped pike poles. As the water level dropped, they removed more four-by-sixes. They spaced the logs according to size, and predicted speed, so that, hopefully, they would not overtake each other and cause a “bunching up” of several logs, which, in turn, could cause a stoppage, a log jam (Stearns 1998).



*View of Camp 3, dam and head of flume from below the dam, 1929
Photo courtesy of Lew Stearns*

Despite the best efforts of the most experienced pond operators, however, log jams did occur. When this happened, one of the flume watchers along the route of the flume would call the pond on the hand-cranked telephone and tell the pond operators to stop sending logs. Lumberjacks would then come to the jam with their peavies and begin the work of untangling the logs. Most of the logs would be dumped over the side to be picked up in the fall with a special piece of equipment designed for the job. This consisted of an A-frame type hoist mounted to a platform that fit into the flume and could be floated down to where the logs had been left, used to pick them up and return them to the flume, then floated to the next spot.

According to Mr. Stearns, the water released with the logs from the pond at Camp 3 was not sufficient to float the logs down the entire 11 miles of flume. There was another dam downstream at the site of Camp 2, and he explains how it was utilized:

The pond at Camp 2 was about half the size of the one at Camp 3 so the logs were started down the last leg of their journey as soon as they started arriving from Camp 3, along with a considerable amount of the water that had brought them that far. Even that fresh supply of water was not enough to make up for the loss due to leakage and splashing so a small feeder dam introduced additional water at The Meadows which was halfway between Camp 3 and Camp 2. That being the case, there had to be another feeder dam at the halfway point between Camp 2 and the river. The shack there was called, simply, Halfway House... There was a watchman stationed at The Meadows and another one at Halfway House to monitor the flow of logs and to operate the feeder dams (Stearns 1998).

Every log sent down the flume was stamped with an identifying mark by the company doing the logging. At the mouth of the flume, the logs splashed into the St. Joe River, but often hung up along the banks until the high water of spring, when they would be driven down the river to St. Maries. There they would be sorted, surrounded with high-floating boomsticks, and taken by tugboat to the designated mill for processing (Stearns, 2000).

♦ 1917 *Engineer reports inspection of finished flume*

Although his report was not filed with the State Engineer until the following year, engineer U.B. Hough inspected the completed Mica creek flume in May of 1917. At that time, he reports, about 4 million feet of logs have already been floated to the St. Joe River in the flume. His report gives the following description of the flume:

This flume is now in use and had been used to convey some 4 million [feet of] logs to the St. Joe River when I inspected it. The amount of water used is about 60 second feet but may use in case of flood 150 second feet.

The Mica Creek Flume is a V shaped flume with 48" sides at an angle of 45 from the vertical, commencing in the SW1/4 of SW1/4 of Sect. 4-T-44N-R2E B.M. and extending to the St. Joe River in the SW1/4 of SW1/4 of Sect. 6-T-45N-R3-E B.M. a distance of 10 miles approx.

The flume work is of 4"x 6" sides and 4"x 6" sills projecting on one side to support a running board along the flume. The lining is of 1-1/2" plank doubled to prevent loss of water. The workmanship on the flume has been good and presents a good substantial appearance.

The grades of the flume vary, being as high as 5% in some parts and as low as 1% in others.

The diversion dam is constructed of heavy timber frame work spaced 8' on center with longitudinal sleepers supporting a double layer of planking on the upstream face. The dam is some 300 feet in length and at its highest point will impound 14

feet of water forming a pond of some three acres for the collection of logs preparatory to sluicing.

The water of Mica Creek finds its way into the St. Joe River at nearly the same place as the flume discharges.

Map #6 (page 39) accompanied Mr. Hough's report and shows the location of the flume (ID Dept of Water Resources).



Loggers working to clear a log jam in flume. Note construction of sides, sills extending on right side, and running board on sills.

Photo courtesy of Lew Stearns.

♦ 1918 *Letter from inspecting engineer describes plans for flume extension*

A letter from engineer U.B. Hough, inspecting engineer for the Mica flume, to Fred A. Wilkie, State Engineer, attempts to explain discrepancies in the water use records regarding the place the flume begins. According to Mr. Hough, the flume, as built in 1916, commenced in the SW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 4, T44N, R2E (See his map, Map #6, page 40). He states further that the company plans to extend the flume into the SW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 8 of T44N, R2E during the following year. There is no evidence that this actually occurred, and the Section 4 location

coincides with the memories and photographs of the Stearns brothers' time on Mica in the late 1920's (ID Dept. of Water Resource, Stearns 2000).

♦ **1921** *Individuals purchase parcels of land from State of Idaho, sell to Blackwell three years later*

The title search Potlatch Corporation initiated in 1997 shows that sections of the land on which Blackwell Lumber Company had purchased timber rights in 1911 were purchased by individuals from the State of Idaho in 1921. The parcel referred to on Map #5 (page 39) as Parcel 3 was purchased from the State of Idaho by an individual named R.G. Kelluhauser on October 17, 1921. Parcel 4 was purchased on the same date by an individual named Jacob Liebl. Three years later, Blackwell Lumber Company purchased both parcels 3 and 4 from those individuals. Parcel #2 was also purchased by Blackwell Lumber Company in 1924, but the title search does not list its prior owner (Chicago Title Insurance Co, 1997).

♦ **1924** *Crystal Creek fire destroys camps on Mica Creek*

The St. Maries Gazette-Record reported on July 17, 1924 that a fire began on the Blackwell railroad. It then headed east over the hill into the Mica creek area, destroying camps 10, 11 and 12 of the St. Maries Lumber Company before continuing eastward. The fire burned mostly cut-over land, but some green timber was destroyed. W.J. Ross, fire warden for the Coeur d'Alene Timber Protective Association, is quoted as stating that approximately 275 men were in the Mica creek district fighting the fire (St. Maries Gazette Record 1924).

♦ **1925** *Fire-killed white pine is harvested for boomsticks*

Charlie Boyce worked on Mica Creek the winter of 1925-6 cutting "boomsticks" for the St. Joe Boom Co. Boomsticks are logs that are chained end-to-end to corral logs at river and lake landings and to encircle logs for towing by tugboat on the river. In Russell's book, Swiftwater People, Boyce explains: "Dry white pine breaks pretty easy but it floats high and makes good boomsticks. This was beautiful fire-killed timber. We cut lots of trees 90 feet long with 14 inch tops and we'd get a 50 footer and a 40 footer out of each one" (Russell 1979).

♦ **1927** *Abundance of cutthroat trout in Mica Creek*

The diversion dam at the head of the flume had been in place since 1916, but apparently the amount of water it allowed to continue to flow in the creek was sufficient for cutthroat trout to flourish. When Lew Stearns first came to Mica Creek in 1927, he remembers being impressed with the amount of fish he and his brother could catch from it using artificial flies:

Dad exaggerated a little when he said that the fish in Mica Creek were so hungry that you had to hide behind a tree to bait your hook. A six mile hike on a mountain road would seem like quite a journey for a seven year old, but I can only remember that I arrived at the creek with my fish pole ready for action and that I had a couple of fair sized cutthroat trout on the bank before Dad and Myrl could get their equipment assembled.

♦ **1928** *Elk are transplanted into Marble Creek from Montana*

A group of local sportsmen paid to have 36 elk brought in to the Marble Creek area, just east of Mica Creek, from Yellowstone National Park in 1928. The logging and fires that had cleared large areas of timber in the first three decades of the century had greatly increased the amount of brush available for elk grazing. This made the transplanting of elk well-timed and successful at helping to increase the number of elk throughout the St. Joe area. A wildlife report by the U.S. Forest Service in 1932-34 indicated a population increase of eighteen percent. Crowell and Asleson report that after an additional 74 elk were brought to Kellogg in 1938, the elk population grew through the years until the population in 1980 was estimated to be between three and four thousand animals in the St. Joe region (Crowell and Asleson 1980).

♦ **~1930** *Grazing records indicate small numbers of sheep and cattle on Mica*

The grazing records of the St. Joe Ranger District indicate that a few ranchers held grazing permits for small (40 head+) groups of cattle and sheep in the Mica Creek area during the 1930's, 40's and 50's (St. Joe Ranger District Grazing Records).

♦ **1930** *Fire burns upper reaches of drainage*

According to an article that appeared in the St. Maries Gazette on September 4, 1930, a large number of fires had appeared in the St. Maries area that week. Although most were quickly controlled, the article states that "there appears to be a certainty that at least some of these fires have been started intentionally; and it is possible that in some cases those who lit them were hopeful that the blaze would cover large areas." Already limited by the Depression, the job market was further constricted by the hot, dry weather, creating a tense situation: "Whispers have been frequently heard during the summer that employment would be available to many men if large forest fires should necessitate proportionately large fire fighting forces. At least one fire in this section during the past week is practically known to have been set, and undoubtedly for no other reason than to provide work."

One of the fires that was not quickly contained began in Rutledge Timber Company cuttings near the head of Toles Creek and crossed the divide into the upper reaches of the Mica Creek drainage. The Gazette article estimated that at the time the article was written some 2,000 acres had been burned over. Although the fire was still burning when the article went to print, it was reported to be surrounded and was expected to be controlled soon. Camps and railroad equipment seem to have been spared, and no lives were lost (St. Maries Gazette-Record, 1930).

♦ **1931** *Fire travels from Fernwood into upper Mica Creek drainage*

An article in the St. Maries Gazette reports a fire was started in the Fernwood vicinity on August 31, 1931 (St. Maries Gazette, 1931). Although the article does not mention the direction in which the fire burned, it does say that it traveled at least seven miles. Aerial photos taken in

1933 suggest that the damage from this fire may have combined with that from the 1930 and 1924 fires to create one large burned-over area in the upper end of the Mica Creek watershed (see 1933 entry and Map #7, page 41).

◆ **1933** *Rain-on-snow event causes flooding, damages flume beyond repair*

Late in 1933, a rain-on-snow event caused flooding throughout North Idaho, including the Mica Creek landscape. The flooding damaged the Mica Creek flume, after which it was not repaired or used again. A 200-man CCC camp at Herrick, across the St. Joe River from Mica Creek, suffered severe flooding, and the cable bridge used to reach it was destroyed (Russell 1979, Stearns 2000).

◆ **1933** *First Aerial Photo Reference*

Aerial photographs taken in 1933 reveal that most of the upper drainage is denuded of timber. Since these photographs do not reproduce well in small formats, Map #7 (page 41) provides an interpretation of aerial photos from 1933, 1956, 1979 and 1998. The 1924, 1930 and 1931 fires appear as one burn zone. Sections 7, 8 and 9 of T3E, R45N at the mouth of Mica Creek where it joins the St. Joe River also show very little timber present. It is not clear whether this is from logging or an undocumented fire. Fire records from the Forest Service indicate that 1910 fires burned areas across the river from the mouth of Mica Creek (See 1910 entry and Map #4, page 37). The evidence in these photos might indicate that this area at the mouth of Mica Creek was also burned. Although my research found no written record of steam donkeys being used to skid logs on Mica, their distinctive impact on the landscape is evident in these aerial photographs near Blackwell Hump, in sections 1, 2, 12, and 13 of T1E, R44N. John Gravelle reports ground evidence of their presence on the upper end of the West Fork: "Cable is found on the ground, and the troughs where the logs were skidded are still evident." Steam donkeys used for logging had a large upright boiler and drums for winding cables. These were mounted on railroad wheels for use along a railroad line or on wood sleds with six-foot-wide runners if they were to be hauled to locations out in the woods. The donkey would be anchored to large trees and its cable would be strung up to a mile out to the logs. The powerful donkey engine was then used to drag the large logs back to the landing. The process of dragging several logs along the same straight line to the anchored donkey left straight, "cartwheel" lines in the landscape like those seen in the following photograph from the 1933 series. Since these "cartwheels" come to a point near the gently curved white line of the railroad, this evidence suggests that donkeys were used to skid logs to railroad landings along Blackwell Hump. Note also the thick overstory of timber in the upper section of this sample photograph, as compared to the barren landscape in the lower section. The area of this photograph shows a portion of the northern edge of the burned-over section of Mica Creek, and provides an example of the impact of fire on the upper Mica drainage. (U of I Photos).



*1933 Aerial Photograph of Section 1, T44N, R1E and surrounding area
Photo from University of Idaho Collection*

◆ **1935 *Five Year Fish and Game Report – St. Joe National Forest***

The fish and game report for the St. Joe National Forest, generated in 1935, asserts that all accessible waters of the St. Joe are fished heavily each year, and that the fish supply is below what it should be. The report does not list specific fish densities, but lists Mica Creek as having 30 miles of fish-bearing length, with “good” food conditions, “clear” water condition and “medium” degree fished. It also lists Mica as being “fair” for degree stocked, with Cutthroat, Dolly Varden and Whitefish listed as the species present. The plan suggests stocking Cutthroat and Rainbow, 60,000 per year, and remarks that Mica has “good planting sites.” In addition, the report urges caution in planting Brook and Dolly Varden trout throughout the St. Joe National Forest only in land-locked lakes or barren streams because of their cannibalistic tendencies (St. Joe National Forest 1935).

◆ **1939** *ERA Blister Rust Camp on upper drainage of Mica*

As part of Roosevelt's Emergency Relief Act, men from Seattle and Spokane were brought to a camp on the upper end of Mica Creek near Tyler's Ridge to pull ribes for blister rust control (See Map #3, page 37). Tom Femreite, who was a supervisor at the camp, recalls that the men were "skid row types," not the young men the CCC and Forest Service were hiring, but mature men, many of them alcoholics. There were around 120 men in the tent camp, which was in operation throughout the summer of 1939. They worked short days, only four to six hours, and were paid around \$40 per month. They went out on the upper ridges and worked their way down the slopes, pulling the wild gooseberry and currant bushes (ribes) that act as an alternate host to the blister rust disease that killed the majority of white pine not only in the Northwest, but throughout the country. Camps like this one were created throughout the northwest. Although the method may have slowed the destruction of the blister rust disease somewhat, it proved to be ineffective in eliminating it, and the resulting mortality of the white pine forest was as high as 90% (Femreite 2000).

◆ **1939** *USFS Blister Rust Camp above Camp 3 site*

In addition to the ERA camp on Tyler's Ridge, in 1939 the Forest Service had a tent camp on Mica Creek, approximately a half-mile upstream from the site of Camp 3 (See Map #3, page 37). Lew Stearns worked in the Mica Creek camp during the summer of 1939 and was surprised at the difference in the landscape since his time there in the late 1920's:

It was a disappointing sight. The dam was gone. The camp buildings had fallen down. Most of the trees were gone... I remembered fishing in a forested area. Now the hillsides had only low brush, and dust. What hadn't been logged off had been burned off (Stearns, p. 198).

The Blister Rust crews worked most of June, July, August and early September. The early season was wet and cool, but for most of the summer the weather was hot enough for the young men to work without shirts. Camps like this one on Mica Creek provided summer work and college tuition money for hundreds of young men.

◆ **1940** *St. Joe Forest Service Fish Management Plan*

The USDA Forest Service Tentative Fish Management Plan for the St. Joe National Forest, written in 1940 by David J. Maclay, lists Mica Creek as having Cutthroat, Whitefish, Dolly Varden and Brook trout present (Maclay 1940). Since Brook trout were not listed as being present in the 1935 St. Joe National Forest Report, it may be assumed that they were introduced to the stream in the interim.

◆ **1940** *Fish Stocking Records*

The fish stocking records available from the Idaho Department of Fish and Game for Mica Creek are unclear because of the presence of another Mica Creek in nearby Kootenai County. The early historic records did not clearly identify the county and location to make it possible to identify which Mica Creek was stocked. Following is a list of the stocking records that are clearly identified as Mica Creek in Shoshone County:

Mica Creek, Shoshone County Fish Stocking Records
(Idaho Department of Fish & Game, Historic Stocking Records)

Year	Number	Species
1940	21040	Cutthroat Trout
1944	24000	Cutthroat Trout
1946	16000	Cutthroat Trout
1950	3000	Cutthroat Trout
1951	1808	Rainbow
1957	24780	Brook Trout
1958	30000	Brook Trout
1959	30000	Brook Trout

Following is a list of plantings which may or may not be in Shoshone County:

Year	Number	Species
1916	15000	Brook Trout
1920	10000	Cutthroat Trout
1920	10000	Rainbow
1921	15000	Brook Trout
1921	12000	Rainbow
1921	30000	Brook Trout
1922	18500	Cutthroat Trout
1922	18500	Cutthroat Trout
1922	18500	Cutthroat Trout
1922	5000	Brook Trout
1922	16000	Brook Trout
1929	25000	Brook Trout
1930	30000	Brook Trout
1931	20000	Brook Trout
1933	25000	Brook Trout
1937	40000	Cutthroat Trout

◆ ~1946 *Remainders of railroad and equipment removed, logging continues*

According to Bill Cochran, who began working in the Mica Creek area for Milwaukee Land Company in 1946, the remains of the abandoned rail system were sold for scrap and removed about the same time he began work in the area. At that time, the area was being logged for mixed timber—larch, grand fir, Douglas fir—having been logged for white pine and cedar during previous years. During this period, loggers used caterpillar tractors and jammers to bring logs to landings, then trucks to deliver them from the landings to the mills. The bulk of the logging occurred in winter while there was snow on the ground, decking the logs until spring when there was less snow but the roads were still solid enough to truck them out. Operations were shut down when the ground was soft (Cochran, 2000).

◆ **1948** *Elk herd continues to grow despite temporary setback from severe winter*

The increasing size of the elk herd in the St. Joe Region suffered a setback with severe weather conditions in the winter of 1948-9. An article in the Idaho Wildlife Review, written by game biologist Ray Rogers in 1957, estimates up to 40% of the elk herd was lost. His article goes on to state, however, that the elk herd quickly overcame this setback and continued to grow despite increased hunting pressure (Rogers, 1957).

◆ **~1950** *Cattle grazing continues in Mica region*

When he was working in the Mica Creek region for the Milwaukee Land Company from the late 1940's through several decades, Bill Cochran supervised grazing permits for Milwaukee, the USFS, and other owners. He recalls there being approximately 150 head of cattle grazing in the meadows area during that time (Cochran, 2000).

◆ **1956** *Second aerial photo reference*

In the 1956 series of aerial photographs taken by Potlatch, the upper portion of the Mica Creek drainage is no longer a barren burn area, but shows a covering of new growth timber. Logging activity and roads are apparent to the west of the main creek, particularly north of Engstrom Creek. See Map #7 on page 41 for an interpretation of the evidence from this series of aerial photographs.

◆ **1963** *Averett Thesis*

In his master's thesis titled Studies of Two Races of Cutthroat Trout in Northern Idaho, Robert C. Averett noted an increase in fishing pressure on Mica and other streams. He states: "the cutthroat trout, without the aid of man, and certainly despite his hindrance, has managed to survive and maintain itself in the St. Joe River." He expresses concern, however, over the future of the cutthroat trout without human help, particularly with regard to maintaining adequate summer flows in the tributary streams. His research recorded a high flow of 161 cfs in April, 1962 and a low flow of 8 cfs on Mica Creek in September of 1961. Although these measurements may not be the extremes for the year, he asserts that they are close to them. As part of his concern about low flow in summer, Averett refers to the fact that "Mica Creek water is diverted from the stream for late summer pasture irrigation," as a possible impediment for the fish (Averett 1963). I was unable to locate any information about this diversion for irrigation. It seems that either Mr. Averett was misinformed or the diversion was a fairly minor one since people working in that area at about that same time were not aware of it.

◆ **1968** *Logging of mature timber continues*

Dick Hallisy, who worked as a contract supervisor and logging foreman on Mica Creek in the late 60's and early 70's, helped to plan and build the roads that connected Mica Creek with Huckleberry and Evergreen Mountains in 1968-69. At about this same time, the road was built out of Mica Meadows to Coddington Peak. In 1972-73 a road was constructed out of Mica into Norton Creek. These roads were built with a bulldozer, shoving timber off the right-of-way,

with occasional steel culverts forming stream crossings, although Hallisy does not remember crossing the creek very often. He does recall one draw where a wood culvert was installed to cross a small tributary on the east side of Mica Creek. The skidding crew laid two big cedar trees (approximately three and a half feet in diameter) five or six feet apart along the sides of the creek. They then took a big old rotten cedar, split the shell into pieces eight to nine feet long and laid them across to cover the stream, nailing them down to the trees. Eventually this wooden culvert was replaced with one of steel. "Pit run" rock, which is not crushed, was applied to the roads in places. Many were simply dirt roads, although they improved access for logging the central area of the Mica Creek drainage. Hallisy recalls that the old roads had been built with multiple switchbacks and 16-20% grades in places going down to the old highways. (See map #1 for locations).

According to Hallisy, most of what they were logging was mature timber—larch, Douglas fir, grand fir and some cedar—leaving the young trees room to grow. He doesn't recall any line skidding, only the use of caterpillar tractors to skid the logs to the truck landings. Cat skidding meant that skid roads were a maximum of a quarter of a mile apart, resulting in an average skid of only 200 yards. Hallisy does not recall ever skidding across Mica Creek or landing logs within 150 feet of it. He does recall using "snow roads" in the winter to cross the creek. Built of snow with just a little dirt mixed in, snow roads created a crossing that cats could use without interfering with the flow of the stream beneath. In spring, when the snow road melted, there was very little evidence that a crossing had been made over the creek. Although logging operations were not pursued during periods when the ground was soft, occasionally tactics were employed to work with the weather to extend operations a little longer on the dirt roads. Hallisy recalls one winter when warm weather surprised his crew, and they trucked the logs out at night in smaller loads in order to use lighter loads and freezing nighttime temperatures to keep the roads solid and get the logs out before the season ended. The snow on the ground off the roads allowed the loggers to log during the day, and the nighttime trucking kept the trucks from breaking up the frost in the ground on the roads and maintained solid road surfaces (Hallisy, 2000).

♦ 1973 *Mica Creek closed to fishermen*

In 1973, Mica Creek was closed for fishing. It remained closed for ten years (Horner, 1999).

♦ 1976 *Thurrow Thesis*

Russell Thurrow's Master's thesis for the University of Idaho in 1976, titled The Effects of Closure to Angling on Cutthroat Trout Populations in Tributaries of the St. Joe River, Idaho, compared trout densities on four closed streams with those on two open streams and two streams with special regulations. His study included 5 transects of Mica Creek as one of the four streams closed to anglers; figures for fish on Mica Creek are shown below. Thurrow concludes that closure to angling did increase fish density. He also notes the high density of brook trout as compared to cutthroat (over 70 percent of the trout observed in Mica Creek were brook trout, even after 2 years of closure), but suggests that this did not necessarily indicate that brook trout were dominating the system in a competitive sense. Environmental factors and an interactive segregation in the Meadows may have contributed to this situation as well (Thurrow 1976).

**Mean Number of Fish Counted per Transect
Mica Creek**

Year/Location	CT fry	CT w/o fry	BK fry	BK w/o fry	a RB fry	a RB w/o fry	DV fry	DV w/o fry	Total w/o fry
1973/lower	3.8	4.4	---	1.0	---	.8	---	---	5.4
1973/middle	15.2	6.6	---	.6	---	---	---	---	7.2
1973/upper	.6	3.6	15	14	---	---	---	---	17.6
1974/lower	4.0	7.6	---	.4	---	---	---	---	8
1974/middle	31.8	10.0	0.2	0.2	---	0.2	---	0.4	10.8
1974/upper	0.4	7.6	14.2	21.2	---	---	---	---	28.8
1975/lower	5.2	7.8	---	0.6	---	---	---	---	8.4
1975/middle	23.8	23.4	---	1.4	---	---	---	0.2	25
1975/upper	3.6	4.2	9.8	19.6	---	---	---	---	23.8

CT = cutthroat trout, BK = brook trout, a RB = adipose clip rainbow, DV = Dolly Varden

**Densities of Age 1 and Older Cutthroat Trout Observed in Test Sections
(per 100 ft.²)**

Location	1973	1974	1975	% Change
Lower	.25	.43	.47	88.0
Middle	.29	.40	.96	231.0
Upper	.33	.58	.32	-3.0
BT - Upper	1.27	1.61	1.51	18.9

**Densities of Age 1 and Older Cutthroat Trout Observed in Test Sections
(per 100 ft.³)**

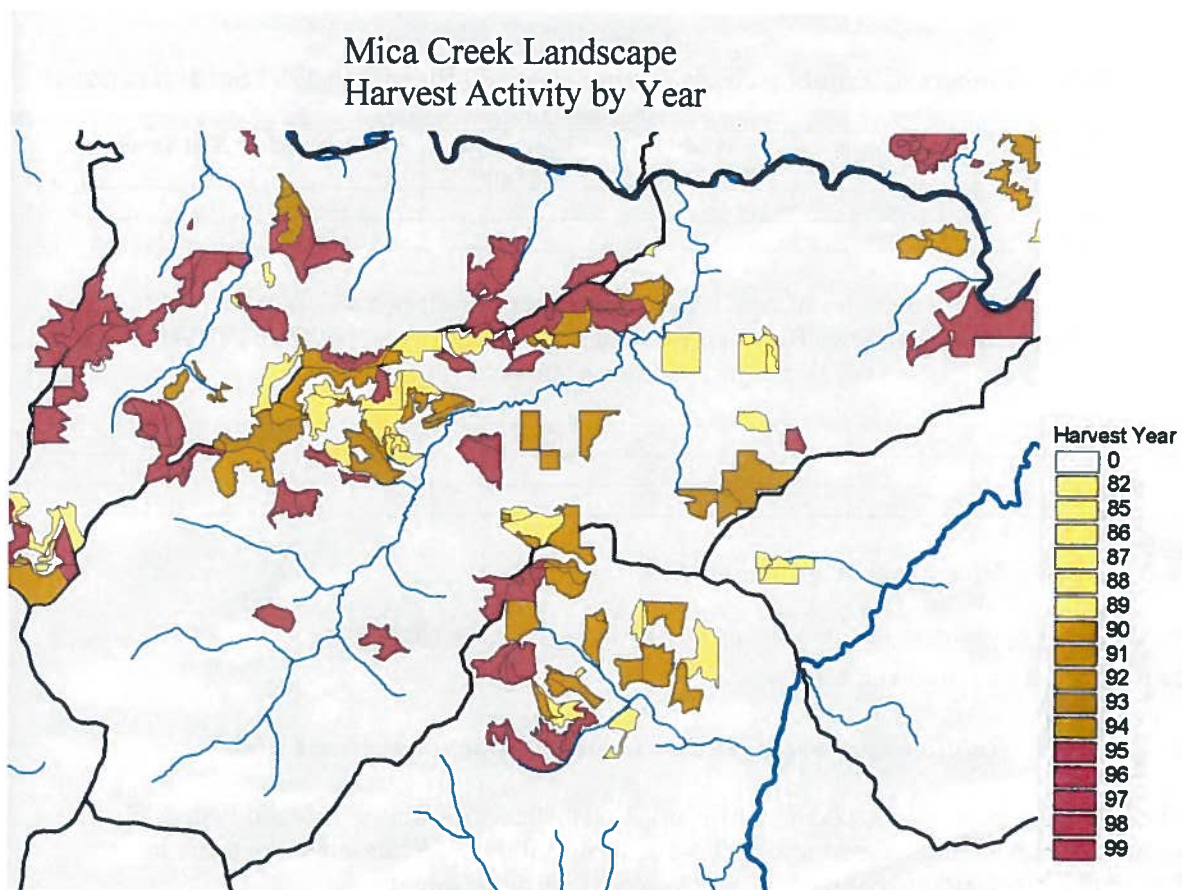
Location	1973	1974	1975	% Change
Lower	.18	.31	.33	83.3
Middle	.15	.20	.46	206.7
Upper	.30	.52	.29	-3.3
BT - Upper	1.15	1.47	1.35	17.4

♦ **1979** *Third aerial photo reference*

The aerial photos taken in 1979 show a dense covering of timber in the formerly burned-over area of the upper drainage. In addition, there is evidence of logging activity and new roads in the northeastern portion of the drainage, and in the area east of the confluence of Mica and Engstrom Creeks. Map #7 on page 41 provides an interpretation of the evidence seen in these photographs.

♦ **1981** *Potlatch Corporation logs areas of middle and lower drainage*

By 1981, Potlatch Corporation had acquired the majority of the land ownership on Mica Creek. The following map gives a breakdown of Potlatch's logging activity between 1982 and 1999 (Potlatch, 2000).



◆ **~1981 *Elk herd and available forage declining in St. Joe Region***

Thomas A. Leege's 1984 Fish and Game report states that the elk herd reached peak levels about mid-century in the St. Joe Region. In a letter to the editor of the St. Maries Gazette Record in 1981, Homer Hartman of the USFS suggests that the peak occurred about 1969. Both authors assert that the herds and the available forage for winter grazing were decreasing throughout the region in the 1980's (Leege, 1984; Hartman, 1981).

◆ **1984 *Gamblin Thesis***

Mark S. Gamblin conducted research on Mica Creek for his 1984 Master of Science thesis for Idaho State University. As part of his study of the effects of Mount St. Helens ashfall on trout in tributaries of the St. Joe River, Gamblin compared his research in two locations on Mica Creek in 1982 to Thurow's figures from those locations in 1973-5. His findings do not indicate any significant impact on trout in St. Joe tributaries from Mount St. Helens ashfall. The site locations on Mica Creek were .6 and 3.0 miles from the mouth of the stream. Gamblin examined five transects in each location, with the following results (Gamblin 1984):

Mean Numbers of Trout (excluding young-of-year) Present in 1982 Study Transects

Location	Cutthroat Trout	Wild Rainbow	Hatchery Rainbow	Brook Trout	Bull Trout
Lower	4.8	0.2	---	0.4	0.2
Middle	5.4	---	---	1.6	0.4

**Densities of Age I and Older Wild Trout per 100m² and
Analysis of Variance Between Densities of Fish Observed in Snorkel Transects
(1973-75 figures are based on research by Thurow)**

Location	1973	1974	1975	1981	1982	F-ratio	Significance
Lower	12.70	6.02	6.56	---	6.58	1.23	No
Middle	3.94	4.62	11.00	---	6.84	12.94	Yes

♦ **1988 Mica Creek reopened for fishing**

Fish and Game regulations allowed fishing on Mica Creek in 1988, with a limit of 3 fish, none to be under 8" long (Horner 1999).

♦ **1989 Rain-on-snow event releases sediment at mouth of Mica Creek**

The following photograph, taken by Conservation Officer Bill Carter of Idaho Fish & Game, shows sediment being washed into the St. Joe River following a rain-on-snow event in December, 1989 (Photo courtesy of Ed Horner, ID Fish & Game).

*Photo of impact of
rain-on-snow event at
mouth of Mica Creek*

*Taken by
C.O. Bill Carter
of ID Fish & Game
December 1989*



♦ **1990 Restrictions changed for fishing on Mica Creek**

In 1990, the regulations for fishing on Mica Creek changed to allow a season from July 1 through November 30 and a limit of 6 fish (Horner 1999).

◆ **1990 Potlatch initiates Mica Creek Cumulative Watershed Effects Study**

In 1990, Potlatch Corporation initiated its study of the effects of modern forest practices on stream resources. According to the report presented to the Watershed Management Committee of the Water Resources Engineering Division/ASCE in 1995:

Previous studies generally have confounding effects of both increased sediment and increased flow. This experiment is designed to create large hydrologic changes in an area of low sediment production to isolate the effects of increased water yield and storm flows on channel characteristics. Furthermore, this work utilizes a nested sampling system whereby the effects of forest practices can be traced downstream (McGreer, Cundy & Gravelle, 1995).

The study is currently in the calibration data collection phase, although the data collected to date suggests that the pre-treatment relationships are very strong and that the study will be sufficiently sensitive to evaluate relatively small treatment effects. The following map shows the location and sites of the study area. John Gravelle gives further details:

Figure 1 shows the location of stream monitoring stations, where stream flow, water temperature, suspend sediment samples and nutrient samples are taken. Some of the stations also collect air temperature and precipitation. Additional

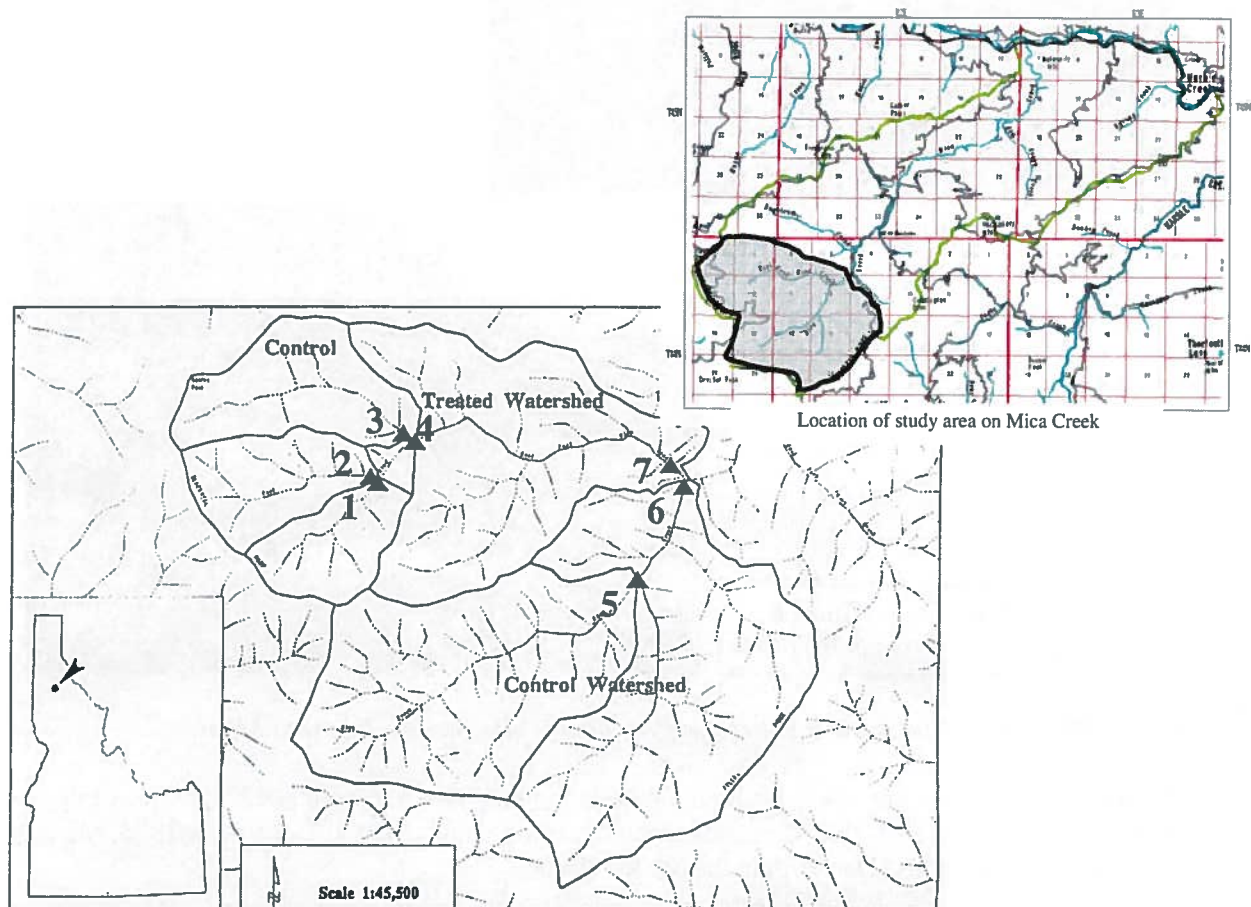


Figure 1. Location and site map of the Mica Creek study area in northern Idaho.

stations collect weather conditions such as precipitation, wind speed and snowmelt in order to better monitor atmospheric conditions throughout the year and especially during flood events. In conjunction with the beginning of the study, the Soil Conservation Service also installed an automated monitoring station to record snow water equivalent (SWE), precipitation, and air temperature near Crystal Peak. Instream habitat is also collected, as over 200 cross-sections have been monumented, surveyed, and revisited in order to attempt to measure channel streambed changes over time. Biological data concerning macroinvertebrate and fish populations are also conducted on an annual basis (Gravelle, 2000).



Mica Study Flume 1
Photo courtesy of John Gravelle



Mica Study Flume 6
Photo courtesy of John Gravelle

◆ **1995 Rain-on-snow event releases sediment into St. Joe, less into Mica**

The following photograph, taken by John Gravelle looking over the mouth of Mica Creek into the St. Joe River, indicates that after a significant rain-on-snow event in December, 1995, Mica Creek was running much clearer than the St. Joe River.



*Mouth of Mica Creek, looking toward the St. Joe River
Following rain-on-snow event, December 1995
Photo Courtesy of John Gravelle*

◆ **1997 White Thesis**

Jody S. White conducted research on Mica Creek for his 1997 Master of Science Degree Thesis at the University of Idaho. Titled A Multi-Trophic Level Aquatic Bioassessment of a North Idaho Watershed, the thesis states that “Mica Creek was extensively logged in 1933. Since that time the watershed has had no substantial anthropogenic disturbances.” White notes that Engstrom Creek was impacted in the early 1980’s from extensive road building and logging activities, but is in the early stages of recovery. He also notes very low diversities in fish communities. Only two salmonid species, brook trout and cutthroat trout, and one cottid species, shorthead sculpin, were present. Two amphibian species, tailed frogs and Pacific giant salamanders, were present. Both amphibian species are highly intolerant to pollution, as is the shorthead sculpin. The sites in impacted Engstrom Creek had a reduced number of tailed frogs and no salamanders present. White summarizes:

All physical, chemical and biological parameters measured in the Mica Creek and surrounding watersheds indicated excellent water quality. Instream habitat quality was the one variable throughout the drainages that seemed to affect biotic conditions. Fish and benthic macroinvertebrate communities indicate a system with good to excellent biotic integrity with many community characteristics still reflecting the effects of logging in the 1930’s... Analysis of the intolerant amphibian and fish species suggests the need for continued monitoring of these sensitive species as any changes in the watershed potentially could effect their population levels (White 1997).

◆ **1998 Fourth aerial photo reference**

The 1998 series of aerial photographs shows increased logging activity throughout much of the drainage, including several stands with little or no timber evident. The upper portion of the drainage, in which Potlatch is conducting the Cumulative Watershed Effects Study, shows little evidence of logging or road building activity. See Map #7 on page 41 for interpretation of this photo series and comparison to other years.

♦ 1999 *Mosier thesis*

Della D. Mosier conducted research on the upper end of Mica Creek for her 1999 Master's thesis, titled Influence of Road Construction on Stream Water Quality in the Mica Creek Watershed, Shoshone County, Idaho. After analyzing pre-and post-construction suspended sediment loads in Mica Creek, Mosier's research indicates that water quality can be preserved during construction of logging roads if prudent management practices are implemented. She found evidence that erosion and sediment control devices during road construction were successful in protecting Mica Creek from increased sedimentation, although watershed quality was definitely altered by rills eroded into the cut and fill slopes after construction. She also noted plugged culverts which could result in a wash-out during a storm event.

Mosier stated that historical logging practices on upper Mica Creek included clearcutting, slash burning, and skidding with horses and steam donkeys. After the upper drainage had been left in "poor environmental condition" in 1933 as a result of intensive logging and fire, Mosier's 1999 observation was that it had since recovered and contained "a mixture of 60-70 year old pine, fir and spruce with some areas of old growth."

Noting a concern for skewed results due to a change in sampling design after 1997, Mosier observed that post-construction maximum turbidity measurements of Mica Creek approximate those of drinking water (0.5 NTU). With the trapping effect of filter windrows, she notes "almost insignificant quantities of soil loss (1.2 kg/m^2)" for the spur road (Mosier 1999).

♦ 2000 *Size limitations reinstated in fishing regulations on Mica Creek*

The fishing regulations for Mica Creek for 2000-2001 establish a season from Memorial Day through November 30, with a limit of two fish. In addition, the fish must be less than 8 inches or over 16 inches long (Horner 1999).



Looking upstream to Camp 3 dam and head of flume, 1929
Photo courtesy of Lew Stearns



Looking upstream site of Camp 3 dam and head of flume, 2000
Road in lower right corner is approximately the same location as railroad in 1929 photo.

***35-Year Time Lapses at
the site of Camp 3***

*All photos courtesy of
Lew Stearns*

1928



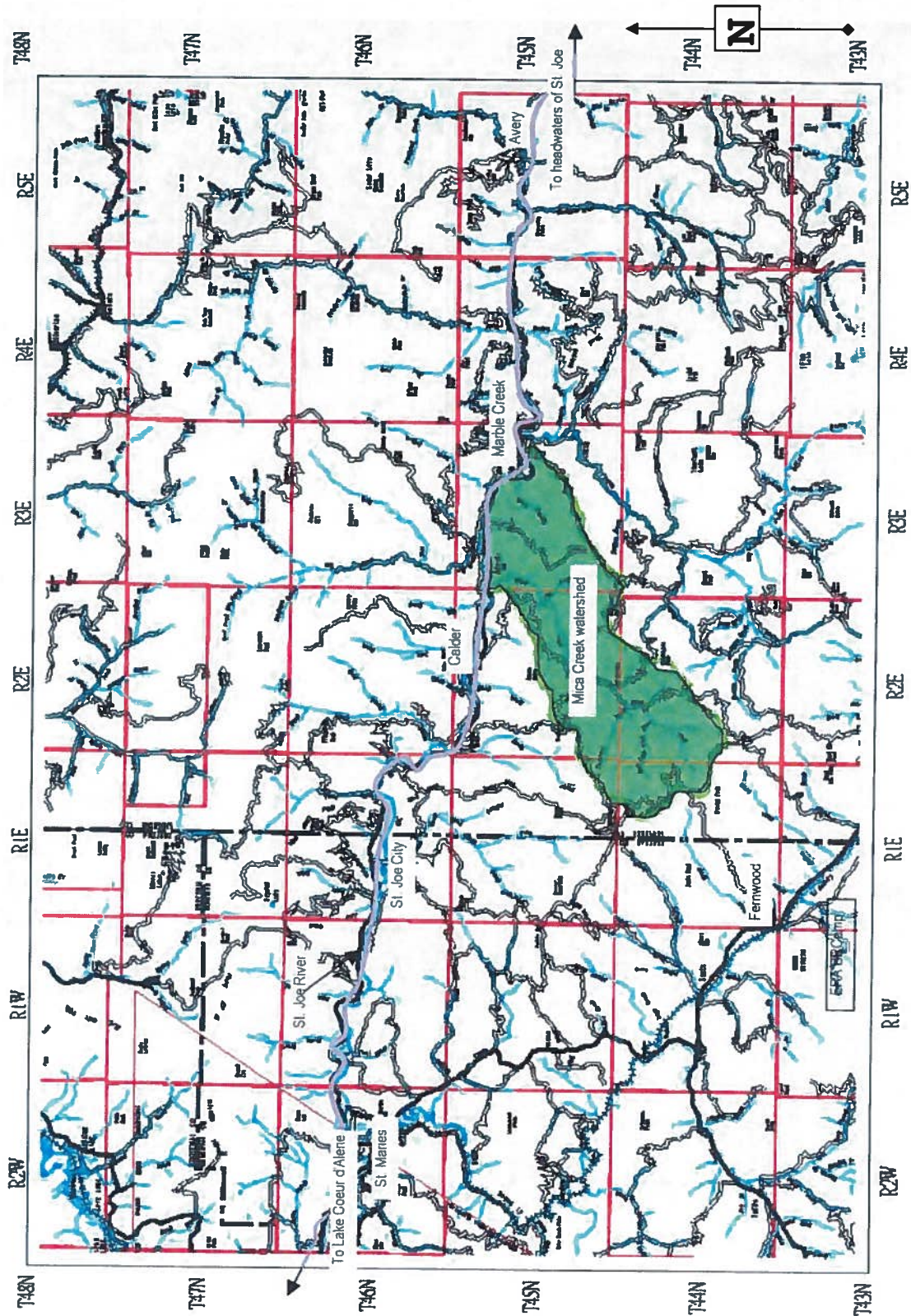
1963

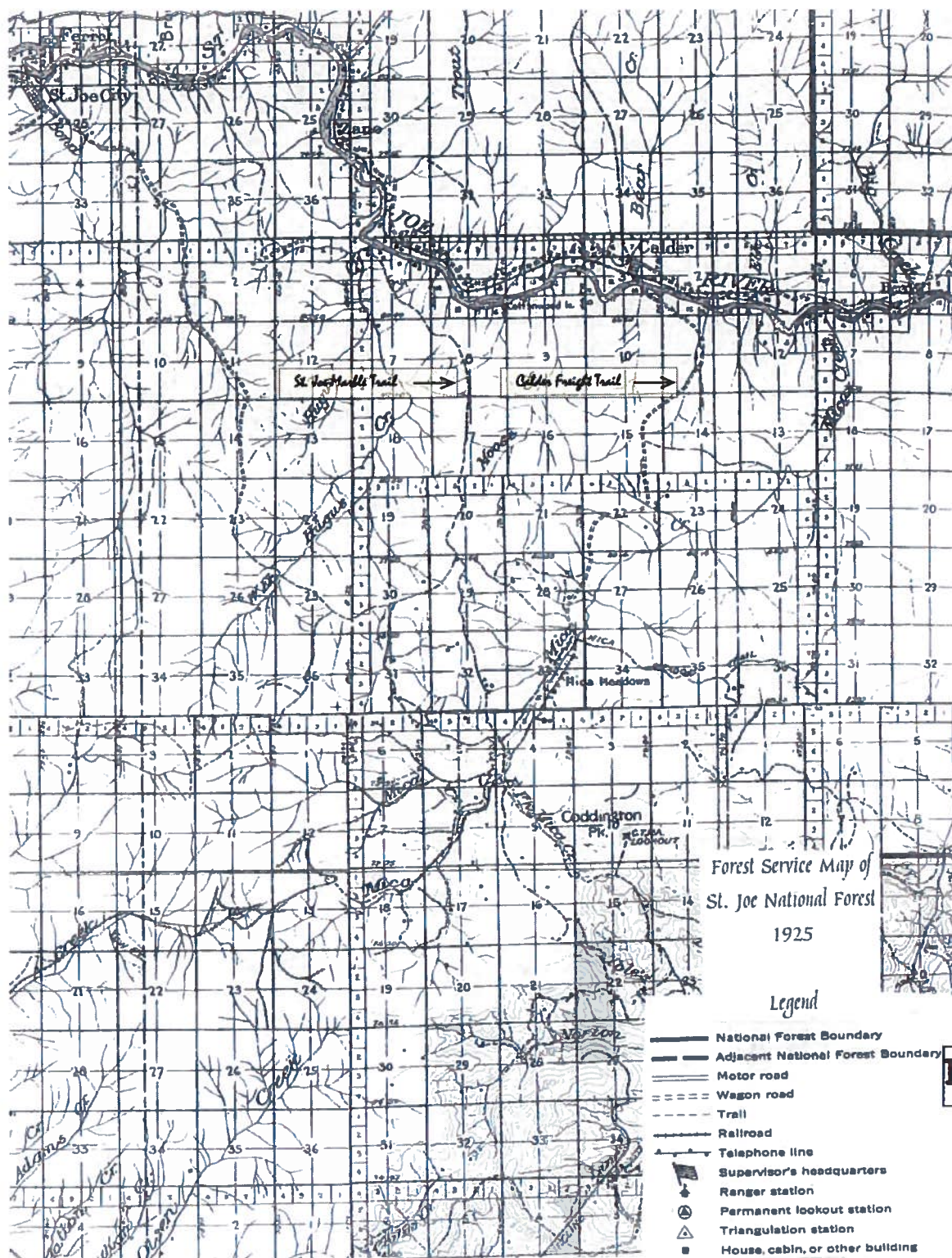
1999



Mica Creek Watershed and Surrounding Area

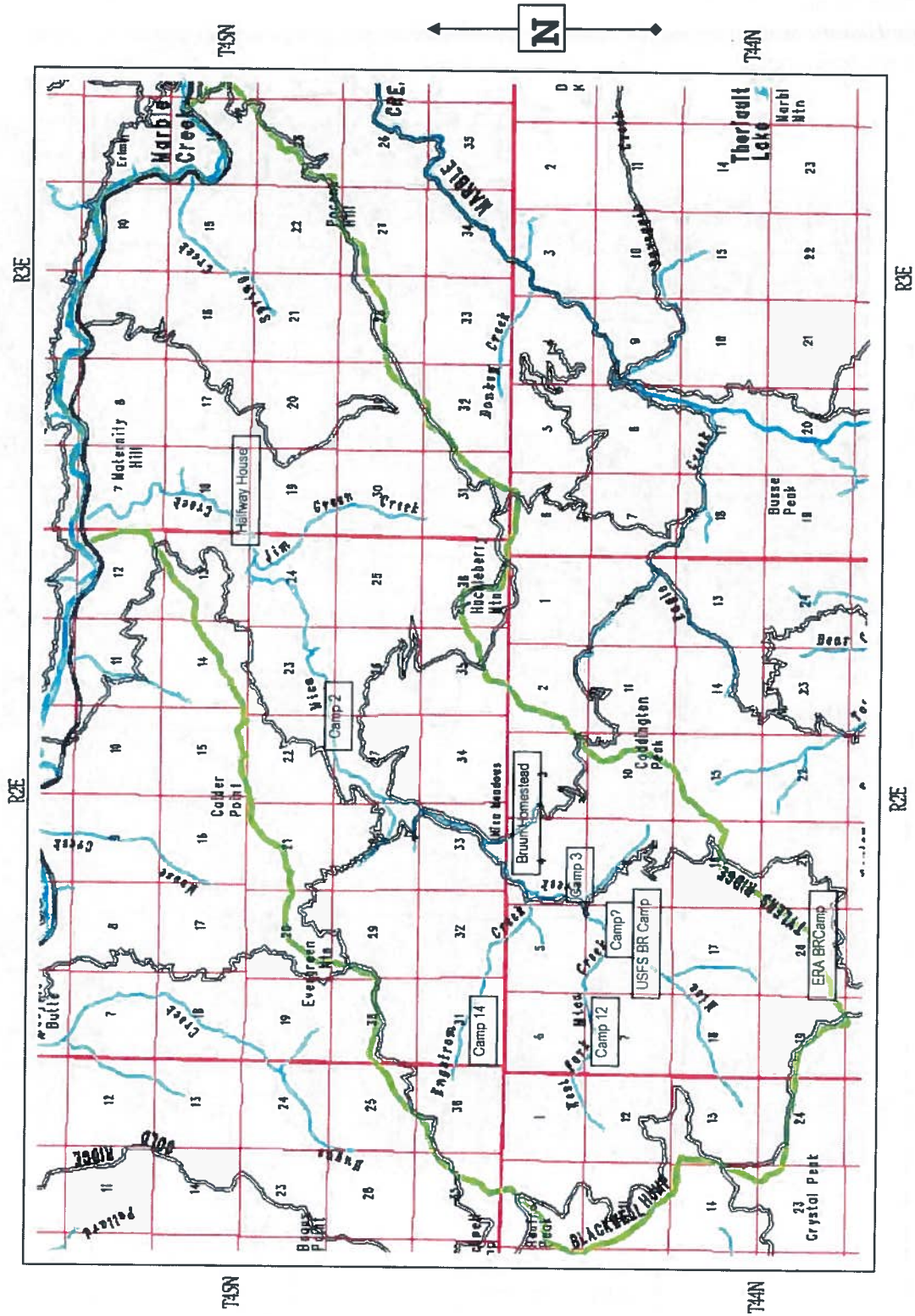
Map 1





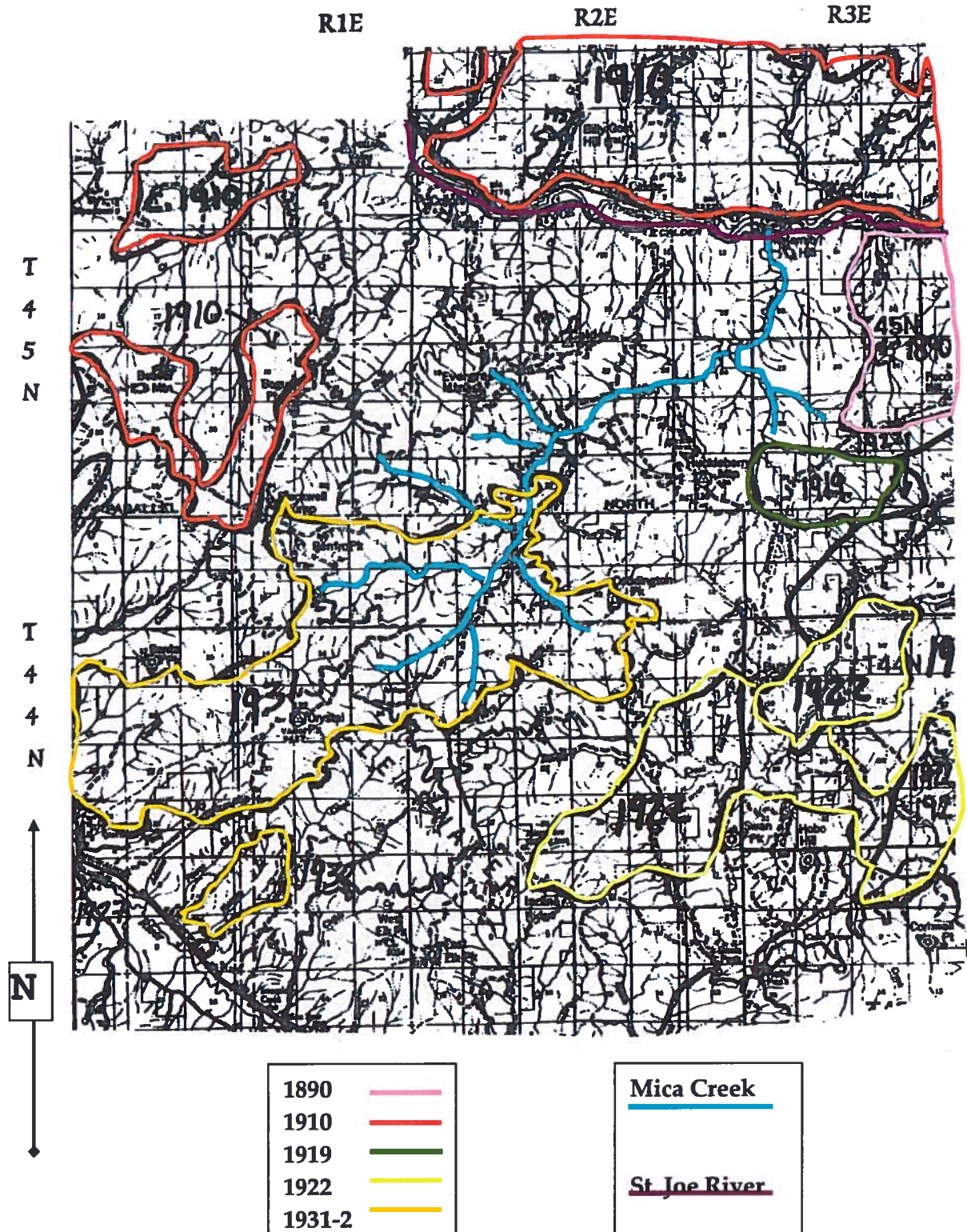
Mica Creek Watershed

Map 3



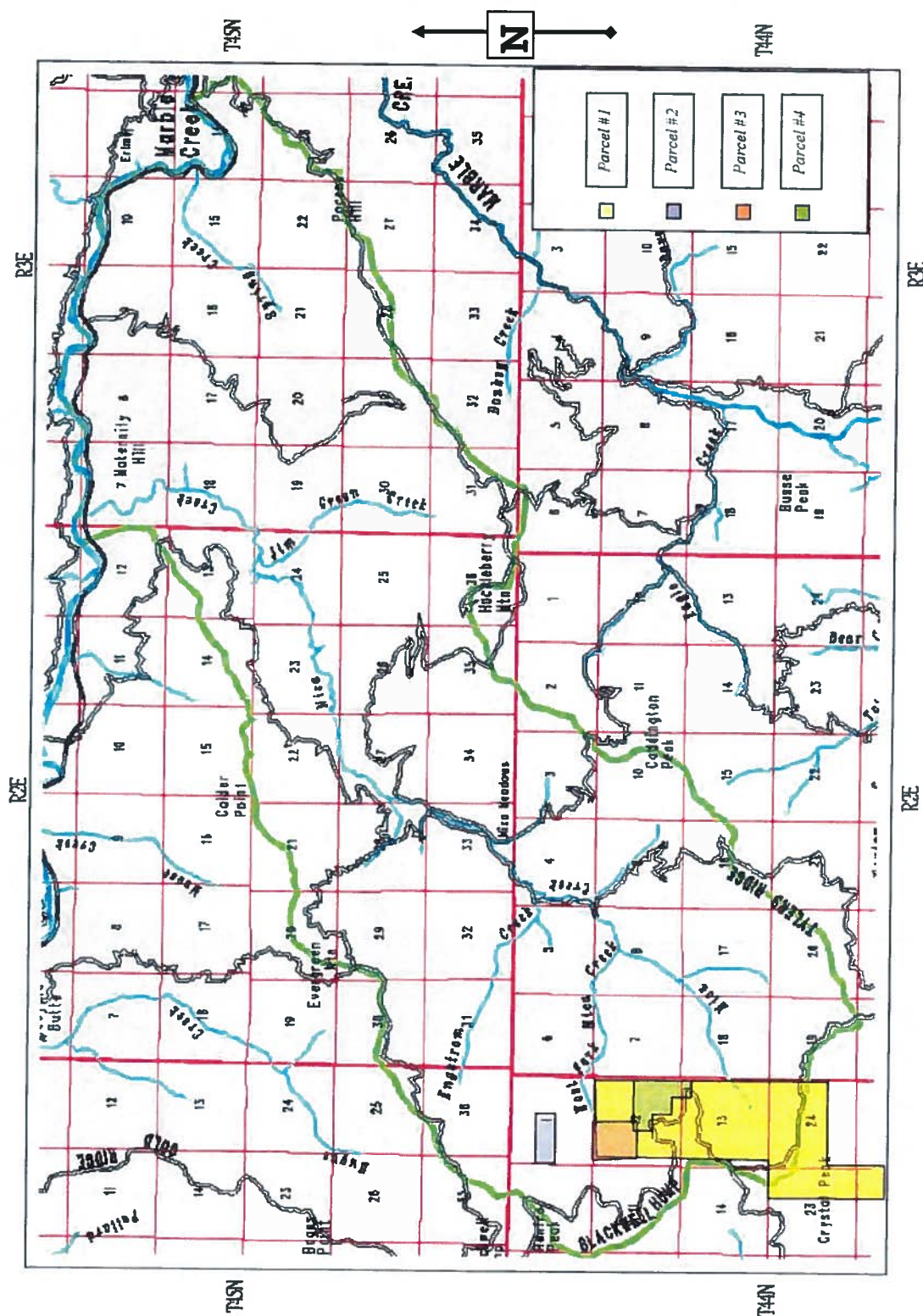
Map 4

St. Joe Ranger District
Fire History Map
Mica Creek Area



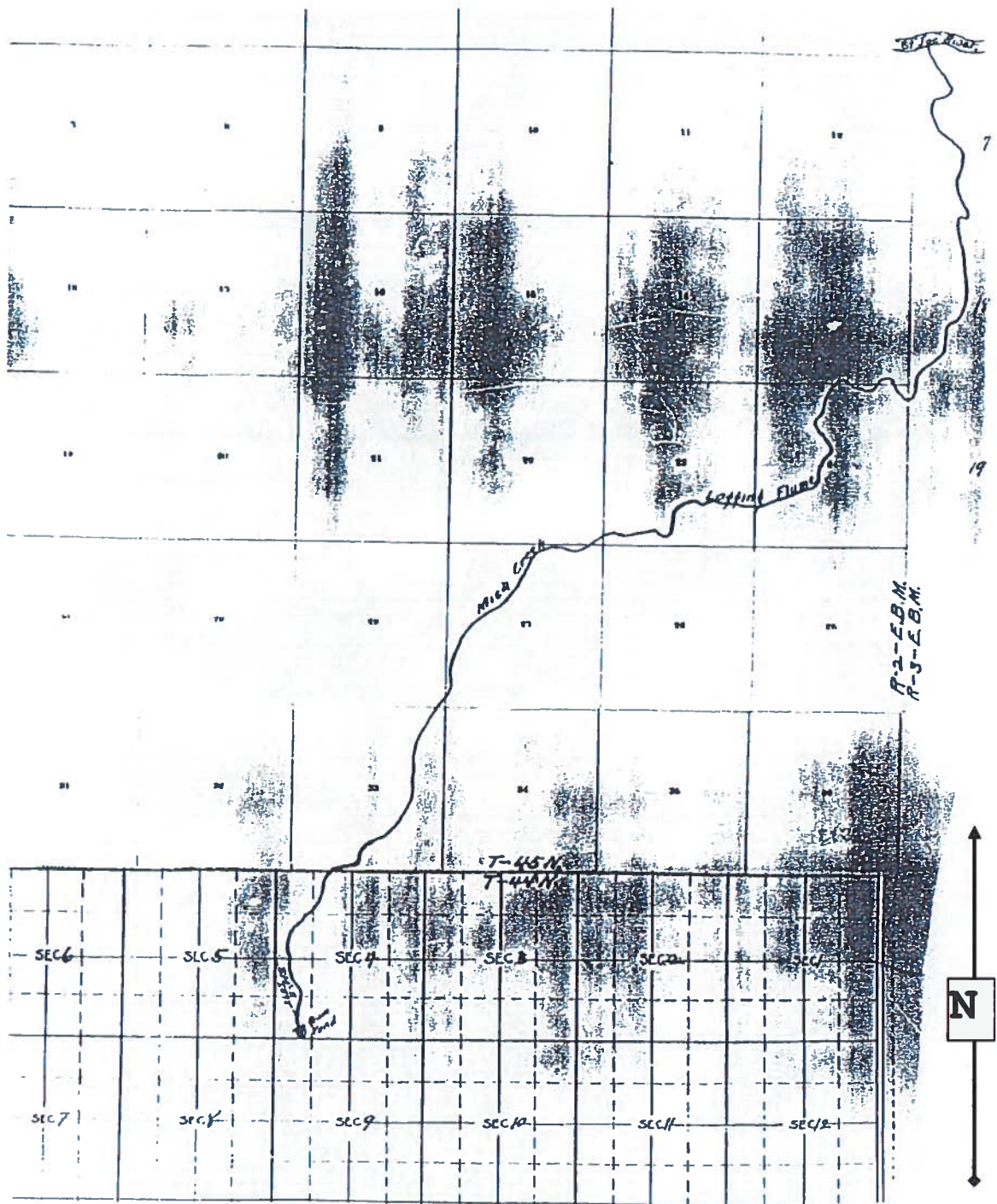
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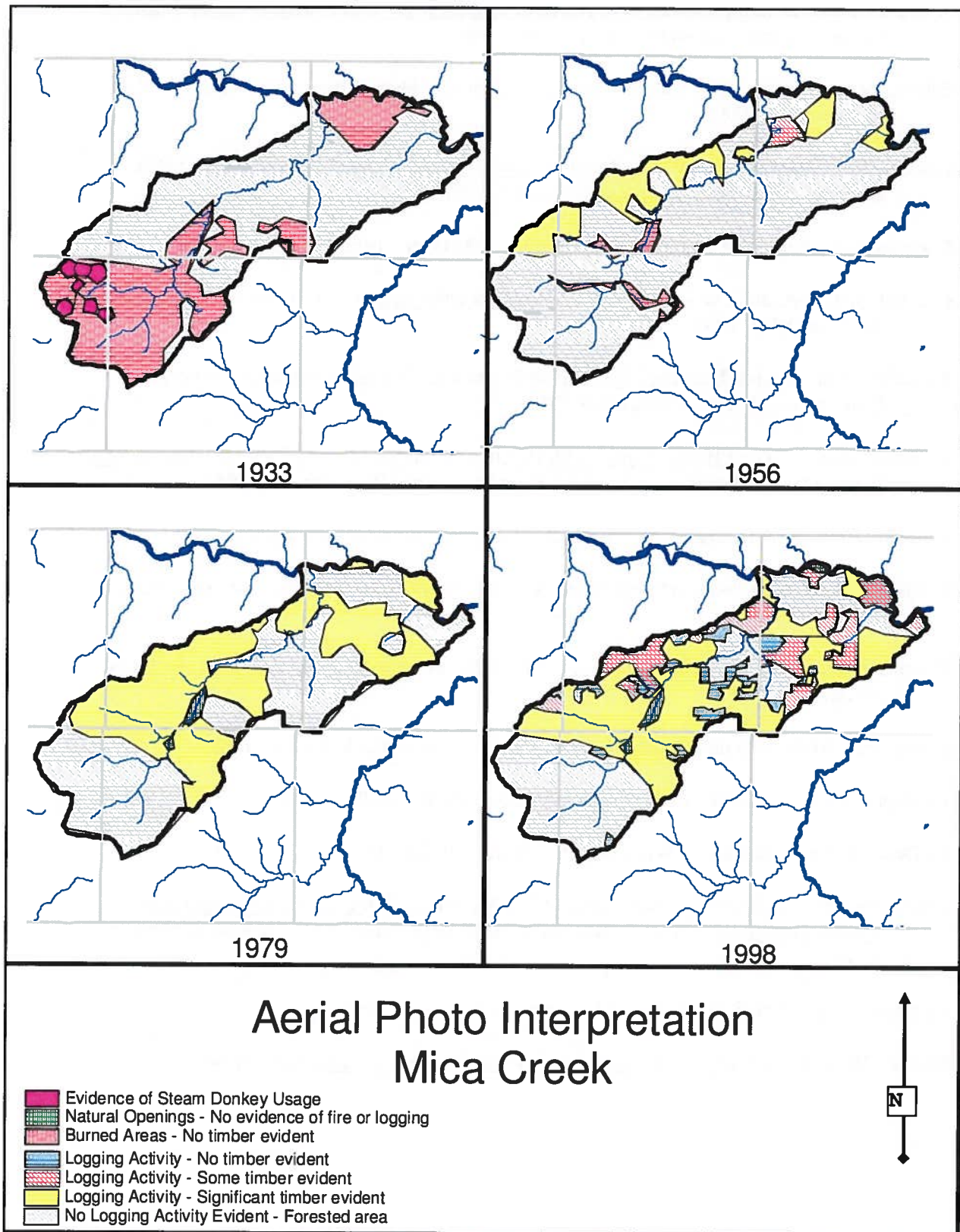
Map 5



Map 6

U. B. Hough, Engineer
Map of Flume Location - 1917





Mica Creek Sources

Averett, Robert Craig. Studies of Two Races of Cutthroat Trout in Northern Idaho. Master's thesis, University of Idaho. Moscow, ID: 1963.

Bilger, Harry Edward. A History of Railroads in Idaho. Master's thesis, University of Idaho. Moscow, ID: 1969.

Chicago Title Insurance Company. Recorded Document Guarantee #13 0050 036 00003. Executed for Potlatch Corporation July 11, 1997.

Cochran, Bill. Retired Milwaukee Land Company Manager. Telephone Interview, 2000.

Crowell, Sandra A. and David O. Asleson. Up the Swiftwater. A & P Business Service Printers, Spokane, WA: 1980.

Femreite, Tom. Retired Logging Superintendent and Administrative Manager for Potlatch Corporation. Personal Interviews: 2000.

Gamblin, Mark S. The Effects of Mount St. Helens Ashfall on Trout in Tributaries of the St. Joe River, Idaho. Master's thesis, Idaho State University. Pocatello, ID: 1984.

Gravelle, John. Pine Orchard, Inc. Personal Interviews and written comments: 2000.

Hallisy, Dick, Retired Potlatch Corporation contract supervisor and logging foreman. Personal Interviews, 2000.

Hartman, Homer, Retired USFS Employee. St. Maries Gazette Record, *Letters to the Editor*. March 18, 1981.

Horner, Ed. Idaho Fish and Game, Coeur d'Alene, ID. Personal Interview, 1999.

ID Dept of Fish and Game. Historic Stocking Records. Boise, ID: 2000.

ID Dept. of Water Resources, Water Rights Records. Boise, ID.

Leege, Thomas A., Tracey T. Trent and G. Allyn Meulman. Project number W-160-R Job Completion Report. Wildlife Research, Idaho Department of Fish & Game, Published 1984.

Logsdon, Henry. USFS St. Maries, ID. Personal interviews: 1999-2000.

Maclay, David J. Tentative Fish Management Plan, St. Joe National Forest. 1940.

Mosier, Della D. Influence of Road Construction on Stream Water Quality in the Mica Creek Watershed, Shoshone County, Idaho. Master's thesis, University of Idaho. Moscow, ID: 1999.

Potlatch Corporation, Harvest Activity Records: 2000.

Potlatch Corporation, Photograph Archives.

Rogers, Ray. *The St. Joe Elk Herd*. Idaho Wildlife Review. Idaho Fish & Game, July-August, 1957.

Russell, Bert. Hardships and Happy Times. Lacon Publishers, Harrison, ID: 1978.

Russell, Bert. Swiftwater People. Lacon Publishers, Harrison, ID: 1979.

Stearns, Llewelyn. I Think We Saw the Good Years! Second Edition. Privately published, Pico Rivera, CA: 1998.

Stearns, Llewelyn. Personal Interviews: 2000.

Stearns, Myrl. Personal Interviews: 2000.

St. Joe National Forest. Five Year Fish and Game Report. 1935.

St. Joe Ranger District. Grazing Records. St. Maries, ID.

St. Joe Ranger District. Fire History Map. St. Maries, ID: 2000.

St. Maries Gazette-Record. St. Maries, ID

St. Maries Courier. St. Maries, ID

Thurrow, Russell F. The Effects of Closure to Angling on Cutthroat Trout Populations in Tributaries of the St. Joe River, Idaho. Master's thesis, University of Idaho. Moscow, ID: 1976.

University of Idaho. Photo Archives. Moscow, ID: 2000.

White, Jody Scott. A Multi-Trophic Level Aquatic Bioassessment of a North Idaho Watershed. Master's Thesis, University of Idaho. Moscow, ID: 1997.

