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state of utah

DIVISION OF WILDLIFE RESOURCES

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DIVISION OF
OIL, GAS & MINING

Mr. Cleon Feight, Director
Utah Division of Oil, Gas & Mining
1588 W. North Temple
Salt Lake City, Utah 84116

Attention: Mary Ann Wright

Dear Cleon:

As per Mary Ann Wright's request for documentation of damage to the fishery in Eccles Creek by past and current mining practices at the Belina Mine. The following data is provided for your use. On August 20-21, 1979, an intensive electrofishing study was conducted at eight preselected stations In Eccles Canyon. The purpose of this activity was to assess the current parameters of the area's cutthroat fishery and make a numerical comparison to the information taken in 1971. Several years ago, Valley Camp Coal Company established a river crossing and access road to their Belina Mine. Unfortunately, poor engineering practices were employed resulting in several mud slides during the spring season that have imparted Eccles Creek with sediment.

Due to Eccles Creek's size, we do not consider this water of significant value for a sport fishery; however, there is great value from the standpoint of reproduction and rearing of cutthroat trout. The ultimate value of this fishery is in the self-sustaining cutthroat provided for Scofield Reservoir.

It is interesting to note the opening weekend cutthroat harvest percentage from Scofield Reservoir in 1979, the first year open after the 1977 eradication program. On the opening weekend, cutthroat contributed 2 percent to the total harvest. The 1978 rainbow stocking program totaled 619,000 fingerlings. Assuming a reservoir species composition similar to the harvest percentage and a 50 percent mortality of the 1978 fingerling plants, Scofield Reservoir had approximately 6,300 cutthroat at the beginning of the season. These cutthroat though are a result of production from tributary waters that include Eccles Creek.

Our 1979 fall netting work showed the cutthroat contributed approximately 5 percent to the fish population at that time. These fish were all produced in the drainage and migrated into the reservoir. The significance of this information is not so much in the

exact cutthroat population, but in the fact that a significant cutthroat contribution is being made to Scofield Reservoir from the drainage. It is quite evident that a good population exists even though the majority of the Scofield drainage was chemically treated in 1977, and is presently not productively active. Streams like Eccles were not treated and are currently the source of Scofield's wild cutthroat trout.

Electrofishing Results

1-1. The first station was located .3 miles above Mud Creek and included .1 of a mile. Totally, 27 fish were taken ranging from 77 to 258 mm. The smallest fish were 1+ age group and the largest, 4+. The majority were 1+ fish. No 0+ were recovered, which we assume was due to their small size. In comparing our results to that found in 1971, we note very little change in the number of fish recovered (35 in 1971). Size also is comparable. Prior to the 1977 eradication program, a considerable amount of electrofishing was done in this area. No counts were recorded; however, my visual assessment was that many more cutthroat were present then than now. Unfortunately, no confirmation exists of this.

1-1a. To substantiate the above station's results, a second like transect was electrofished .1 miles above the first or .4 miles above the confluence with Mud Creek. Slightly fewer fish were taken (22) than at the first station. The age composition and fish size also was comparable to the first station.

Based on this information collected, the initial .5 miles, which is characterized as a meandering meadow stream, has a fair cutthroat population comprised of age classes 1+ through 4+. The majority of the fishery being the 1+ age class. During the period of survey, the stream in this area was flowing 1 1/2 to 2 cfs and was 50 degrees. A bottom composition analysis was not conducted; however, based on visual observation, sedimentation has increased from the 5 percent figure monitored in 1971.

1-2. The third station was located just below the slide zone created ultimately as a result of Valley Camp's Belina Mine road. This station is .1 miles long and is approximately 1 1/2 miles above the confluence at Mud Creek. The flow at this station was 1 1/2 cfs. Cutthroat trout ranging from 86 to 242 mm were recovered representing age classes 1+ through 4+. At this station, the majority of the 21 fish recovered were 2+ fish followed closely by the 1+ group. In reviewing the 1971 material, we see our present population is only one-third of that found then when 64 fish were taken. Silt made up 19 percent of the bottom composition in 1971. As a result of the slide zone, sedimentation has increased significantly and has negatively impacted reproduction.

The Belina Mine road crossing located .1 mile above station three (1.6 miles above Mud Creek) is an extremely wide area made to accommodate the turn that the coal trucks must make. A 100 foot culvert was installed to carry the creek at this point, which in all probability has created a upstream migrational block to the spring spawning activity of the cutthroat.

1-3. A station was established covering 1/4 mile between the Belina road crossing and South Fork Creek. We were interested in looking closely at this area in light of the culvert blocking the stream and a series of beaver dams and high 3-6 foot falls. Totally, 28 cutthroat were collected in this zone ranging from 85 to 226 mm. The majority of the fish were 2+ age class. More fish were taken in the lower reaches of this station than in the upper zone. However, fish were taken all the way to South Fork Canyon. Fish of the year (22-25 mm) cutthroat were observed in the lower 100 feet of this section indicating reproduction is occurring. We concluded after walking this reach that no upstream migration is occurring and that all reproduction is a result of resident adult fish. Stream flow at the time of sampling was 1 cfs.

1-1. A 300 foot station was electrofished extending from Eccles Creek up South Fork Canyon. The flow in this stream was .6 cfs with a temperature of 46 degrees. The drainage is characterized by a series of beaver dam ponds spreading out in grassy meadows with willow overhang. The canyon is narrow with a steep gradient higher in the drainage.

Two fish were recovered indicating at least a minimal population exists in this area from a fishery position. We consider the stream flow contribution to the main stem of Eccles Creek the most important part of South Fork Canyon.

1-4. On the main Eccles Creek stem, .1 mile above South Fork, a 300 foot station was electrofished. Estimated flow in this reach was .6 cfs. Gradient was beginning to increase as progress was made up the canyon. No beaver ponds were encountered. Seven fish were taken ranging from 80 to 285 mm. The majority of the fish were 1+ age group.

1-1. A 150 foot transect was located on the Upper South Fork of the main Eccles Creek beginning at its confluence with the upper middle and north forks and extending upward. Distance from Mud Creek at this point is approximately 2.5 miles. Flow was recorded at .3 cfs. The gradient was becoming quite steep. It was concluded that upper South Fork is of no significant fishery value other than the water contributed to Eccles Creek.

1-5. Beginning at the confluence of the upper Three Forks and extending upstream on the middle stem 150 feet, the final electrofishing transect was established. Flow was estimated at .3 cfs. No fish were recovered, and we concluded no fishery value exists in the upper middle fork of Eccles Creek other than the water contributed to Eccles Creek to maintain downstream habitat.

The character of the upper North Fork is such that it is obvious that no fishery values exist other than flow of water into Eccles Creek.

Summary

1. A viable self-sustaining cutthroat fishery exists from the confluence with Mud Creek to the Belina Mine road crossing approximately 1.6 road miles. Probably an additional one-half mile of stream can be added for stream meander.

2. As a result of the severe mud slide associated with the Belina Mine road, the downstream habitat in that area has at least temporarily deteriorated to a point that substantially fewer fish were found now compared to earlier preslide survey work.

3. Above the Belina road crossing to the confluence of the upper forks (.9 road miles), a self-sustaining cutthroat fishery exists, which is of less value than the lower stream reach.

4. Above the confluence of the upper forks, no fishery value exists other than the value of the water for the downstream fishery.

5. The primary importance of Eccles Creek is the contribution being made to the wild cutthroat fishery in Scofield Reservoir. To a lesser degree, some fishing occurs on the stream itself, especially in the lower reaches.

6. Serious eneroachment problems from the road between the Scofield - Clear Creek highway and the Belina Mine exist along Eccles Creek.

Recommendations

1. In light of the low flow, no water should be diverted from Eccles Creek as minimum conditions exist now.

2. In the vicinity of the proposed Coastal States development, we recommend piping the flow of the three upper forks down to a point approximately 150 yards below their confluence. By doing this the potential for coal material to impact the stream would be lessened.

3. Precautions should be taken in developing any roads to minimize stream impact and existing impacts alleviated.

4. Immediate reclamation proceedures should be enacted to stabilize the mud slide caused by the Belina mine access road.

5. Current coal haulage by the Belina Mine should be modified such that blow coal does not leave the trucks and ultimately be washed into Eccles or Mud Creeks.

Sincerely,

Larry J. Wilson, Supervisor
Southeastern Region

LJW:JCL:LBD:cs

cc: Darrell Nish
Clark Johnson