

Hazel Green Sewage Treatment Plant
Grant County

October 11, 1976

Galena River (Fever)

Surface acres = 100.8, Miles = 29.4, Gradient = 9.9 feet per mile.

The Galena River (Fever) drains approximately 142.7 square miles which includes the flow from eleven named streams and their tributaries. It flows through the historical lead mining district which is apparent from the many mine dumps and pock marks on the landscape throughout the watershed. As a result, much of the water received by the stream drains from old or current mines and dumps. However, aside from a few streams in its watershed which are adversely affected by such drainage within the watershed the Galena River (Fever) appears to be unaffected.

The predominant bottom types are gravel and rubble in the upper two-thirds of the stream while the lower one-third has silt with some gravel. During periods of heavy runoff the stream banks are subject to heavy erosion especially in the lower extremities where enormous water volumes are not unusual. Over 90 percent of the land in the watershed is used for agricultural purposes and the remainder is in upland hardwoods.

The lower, larger portions of the stream within the county are managed for smallmouth bass, catfish and walleyes. The upper, smaller sections of the stream contain forage fishes. Game assets within the watershed include ducks and muskrats in and along the stream and pheasants, quail, Hungarian partridge, squirrels, rabbits and deer in the uplands.

Hazel Green Sewage Treatment Plant discharges directly into the Galena River via an 11,000 foot discharge pipe.

Recommendations

From the point of discharge of the Hazel Green Sewage Treatment Plant NW $\frac{1}{4}$, SE $\frac{1}{4}$ of Section 32, T1N, R1E, and for the remainder of the Galena River the classification should be continuous fish and aquatic life.

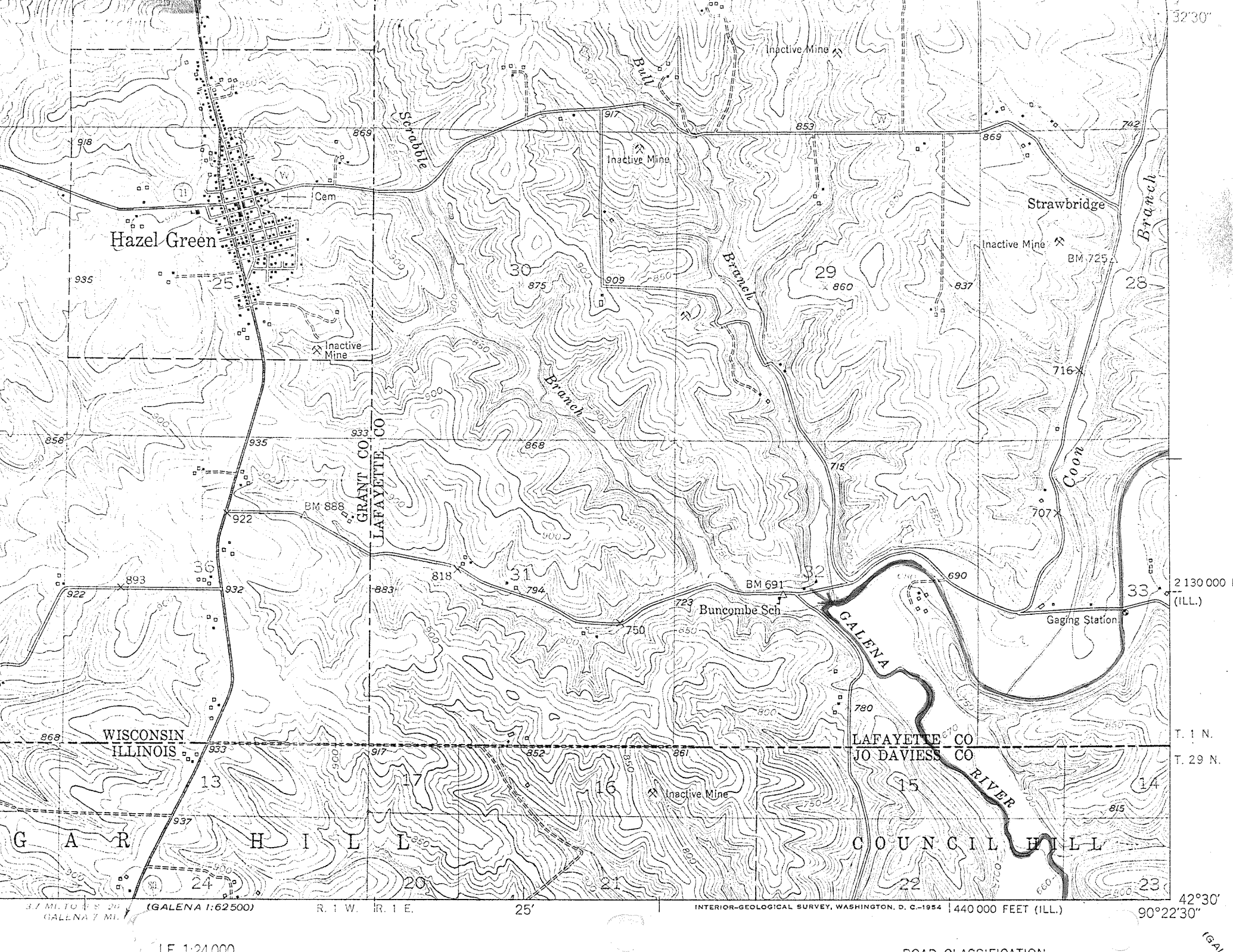
The above recommendations represent a concurrence of opinion of the stream classification team who are as follows:

Dennis Iverson, District Engineer
Gene Van Dyck, Area Fish Manager
Tom Bainbridge, District Biologist
Roger Schlessner, Natural Resources Technician

Respectfully submitted,


Tom Bainbridge
Stream Classification Coordinator

TB:cb



32°30'

2 130 000
(ILL.)

T. 1 N.
T. 29 N.

42°30'
90°22'30"

3.7 MI. TO S. 20' (GALENA 1:62 500)

R. 1 W. R. 1 E.

25'

INTERIOR-GEOLOGICAL SURVEY, WASHINGTON, D. C.-1954 | 440 000 FEET (ILL.)

1:24 000

ROAD CLASSIFICATION

Hazel Green STP
Grant County

May 17, 1979

Scrabble Branch

Scrabble Branch is presently being considered as an alternate discharge site for the Hazel Green STP. Scrabble Branch has a Q_{710} of .37 cfs at a town road bridge in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 32, T 1N, R 1E.

The Scrabble Branch originates in the NE $\frac{1}{4}$ SW $\frac{1}{4}$ of Sec. 30, T 1N, R 1E, with the influx of several springs. Most of the streambank is grass lined and erosion is not a severe problem. The stream is buffered by wooded pasture and at the time of the survey, cattle were impacting only a small section of the stream.

The substrate consists of gravel-rubble with some siltation occurring in low gradient areas and pools. There are many riffles and runs but pools are somewhat limited. Good fish habitat is lacking in some areas but where it is present fish are abundant.

The fishery is characterized as one of an abundance of minnows, chubs and white suckers, with a small population of smallmouth bass and brown trout. Fish management shocked approximately 600 ft. of the SW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 32, T 1N, R 1E with the following results: 5 trout ranging from 10.5 inches to 14.9 inches and 6 smallmouth bass fingerlings ranging from 4.0 inches to 6.4 inches.

Especially noticeable was the abundance of watercress present throughout the stream reach. Some sections of the stream had watercress across its entire width. Also notable was the exceptionally high water quality of the stream. Water clarity was better than any stream in the vicinity.

The benthic community was both abundant and of good quality. There were good populations of caddis flies, especially Hydropsyche spp, Cheumatopsyche spp. and Chimarra spp. Also abundant were mayflies and chironomids along with a number of black fly larvae and freshwater shrimp.

Although good fish habitat is somewhat lacking, fish management could easily improve it through habitat development. Because the stream has excellent water quality, a good benthic community and the possibility exists that the smallmouth bass or trout fishery will be expanded, the entire stream reach should be protected.

Recommendations

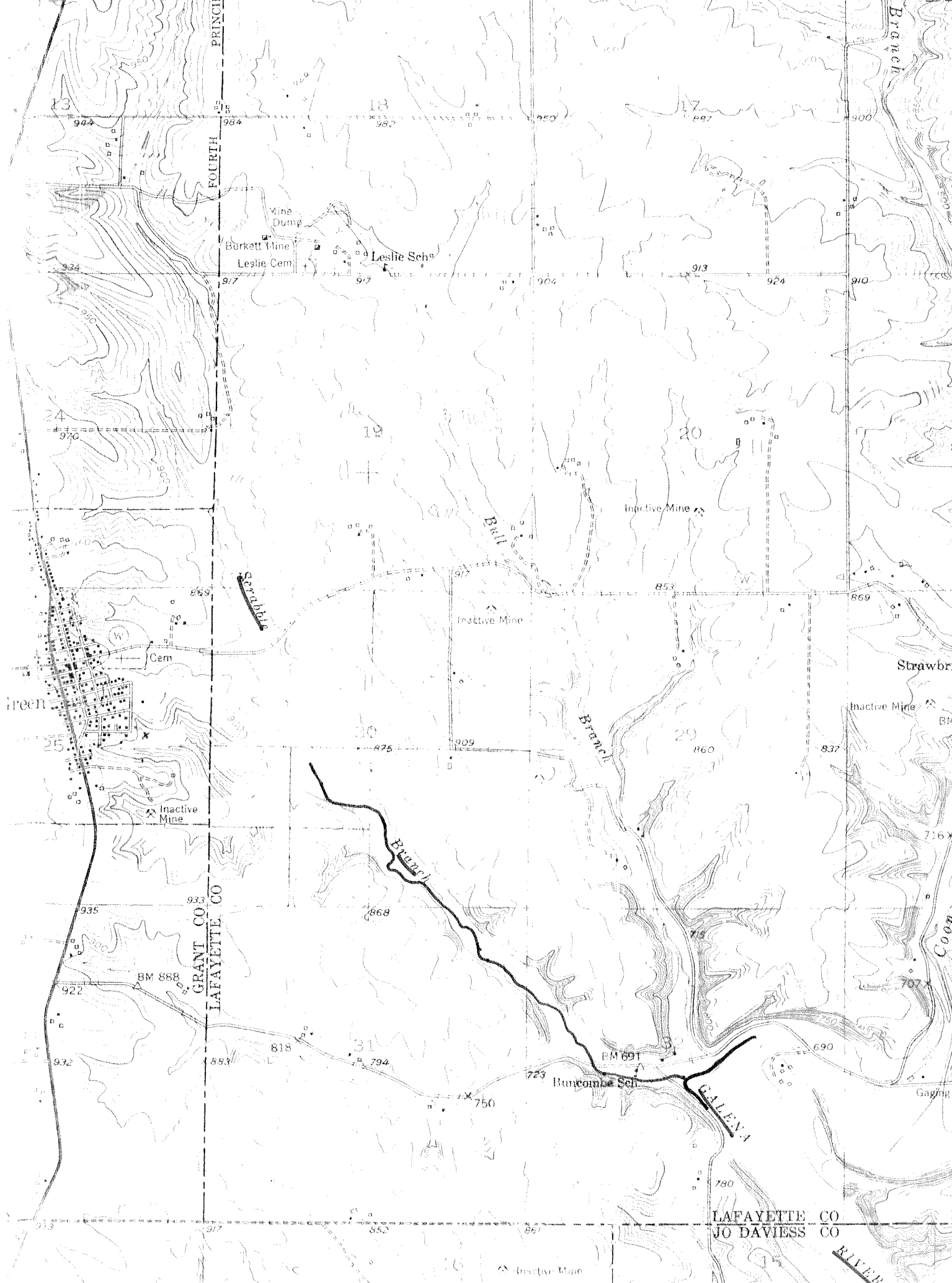
From the headwaters of the Scrabble Branch in the NE $\frac{1}{4}$ SW $\frac{1}{4}$, Sec. 30, T 1N, R 1E to the juncture with the Galena River the classification should be continuous fish and aquatic life.

The above recommendations represent a concurrence of opinion of the stream classification team who are as follows:

Dave Lewandowski, District Engineer
Tom Bainbridge, District Biologist
Gene Van Dyck, Area Fish Manager
Roger Schlessner, Environmental Specialist

Respectfully submitted,


Roger Schlessner
Water Quality Specialist



FOURTH PRINCIPAL

Burkett Mine
Leslie Cem

Leslie Sch

Scrubble

BM 888

GRANT CO
LAFAYETTE CO

BM 691

Buncombe Sch

LAFAYETTE CO
JO DAVIESS CO

RIVER