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STATE OF MONTANA

**DEPARTMENT OF
FISH AND GAME**

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ENVIRONMENTAL QUALITY
COUNCIL

Helena, Montana 59601
March 27, 1975

Mr. Dan Vichorek, Technical Writer
Department of Health and Environmental Sciences
Helena, Montana 59601

Dear Dan:

As requested, we have reviewed the environmental impact statement prepared for the Tin Cup Creek subdivision in Ravalli County.

This review was conducted by our regional office in Missoula and a copy of their comments is enclosed for your information. We thank you for the opportunity to review and comment.

Sincerely,

James A. Posewitz, Administrator
Environment & Information Division

JAP/sd
Enc

cc: Environmental Quality Council
Robert Rothweiler

STATE OF MONTANA
DEPARTMENT OF FISH AND GAME
HELENA, MONTANA

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ENVIRON. RESOURCES

Office Memorandum

TO : Wes Woodgerd Attn: Jim Posewitz DATE: March 20, 1975
FROM : Jim Ford By: Robert Rothweiler
SUBJECT: Comments on Draft Environmental Impact Statement for
 proposed Tin Cup Creek Subdivision in Ravalli County

"Summer Home Development"

"The immediate impact of summer home development upon water quality and environment can in many ways resemble that which could result from unmanaged logging activities. Whereas logging activities occur in the upland areas, summer home development activities and its associated road construction and land clearing activities occur in areas immediately adjacent to the creek. Sites near the immediate area of the creek are naturally the most attractive for home development, and alterations to the terrestrial environment in this area can have the greatest influence on stream water quality.

"Where vegetation is removed along banks of streams, higher water temperatures can be expected to result as in the case with logging activities. Organic and nutrient pollution of stream water can also result from slash and other debris produced by land clearing activities.

"The disposal of sewage from home developments along (streams) poses additional problems. The natural drainage in most of the areas where summer home development is occurring is toward the creek, and it can be expected that improperly disposed sewage will eventually find its way into the creek. This would be reflected by increased concentrations of nitrogenous compounds, phosphates, total dissolved solids and bacterial counts in the creek water.

"In the absence of a sewage collection system, the most feasible method of sewage disposal for summer homes in this area is subsurface disposal systems. The satisfactory operation of this type of system depends upon soil conditions, and proper design and construction. Regular inspections of operating units would be recommended to guarantee continued proper operation. The health department regulations for the counties require permits for the construction or alteration of subsurface disposal systems. These regulations should provide some protection to the creek, but it has been shown that nitrogenous compounds can, under certain conditions, travel for considerable distances underground. The release of these compounds to the stream would provide an additional source of nutrients for increased algal production.

"Any stream regardless of its characteristics can stand only so much pollution. Increased population and the concentration of large numbers of people in given locations have caused severe pollution in many areas."

These comments were included in a report from the University of Oklahoma under contract to the U. S. Forest Service to investigate water quality conditions of streams on Lolo National Forest. Some of the streams studied are similar to Tin Cup Creek.

Whether or not the proposed subdivision is for summer home development or year-around occupied homesites, changes in the water quality of surface and subsurface water can be expected. The author of the draft environmental impact statement indicates little "significant pollution of ground or surface water from properly installed and located subsurface drain fields."

Because of problems involved with ground waters, closed septic systems should be required for this subdivision.

Nothing is said about other sources of water contamination that originate in subdivisions. Homeowners develop the area as they would in urban areas. Lawn fertilizers, weed sprays, insecticides and other chemicals are used to change the area from a wild state to an urban condition.

Also, as the area is developed, changes will be made in the vegetative composition of the areas along the creek as prospective homeowners move in along the stream. Removal of vegetation along the stream would result in increased sedimentation and increased water temperature.

Tin Cup Creek is approximately 18 miles long; it flows from slopes on the Bitterroot Divide. The normal flow is less than 20 cfs. but this average may run higher with a moderate spring flooding. Fishing is mainly for small cutthroat. Tin Cup Creek is not a popular fishing stream, but it empties into the Bitterroot River, which is a popular fishing stream both for resident and non-resident fishermen. The water quality of the Bitterroot is dependent upon the water quality of its tributary streams. If water quality and quantity is changed in enough of these tributary streams, we can expect major changes in the Bitterroot River.

Rocky

John W. Reuss
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XXXXXXXXXXXXXXXX

Thomas J. Lynaugh

February 28, 1975

Mr. Daniel Vichorek, Technical Writer
Department of Health and Environmental Sciences
Capitol Station
Helena, Montana 59601

Dear Dan:

Receipt of your Draft Environmental Impact Statement (dated March 5, 1975) on the proposed Tin Cup Creek subdivision is acknowledged. After review of the statement by the EQC staff, it is unclear why the department is apparently unwilling to require the developer to mitigate the subdivision's impact on wildlife as a condition of department approval of the subdivision water and sewer plans. If the department bothers to ask the developer "whether he is willing to follow any of the Fish and Game Department recommendations" to mitigate impacts on wildlife, a logical follow through of this effort would be to require reasonable wildlife protection (by authority of the Montana Environmental Policy Act) just as the department requires reasonable groundwater protection (by authority of the acts controlling water and sewer systems and water pollution). We believe that, as lead agency, the department has full authority to take such action.

Failure to acknowledge this alternative in the draft impact statement seems to us to be a disservice to the public and other agencies. A formal response by you or by the department's legal counsel (for insertion in the final EIS) would be helpful in clarifying this important point of law.

Sincerely,

Ronald J. Schleyer
EIS Coordinator

RJS/cnc



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Office Copy
Department of Health and Environmental Sciences
STATE OF MONTANA HELENA, MONTANA 59601
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John S. Anderson M.D.
DIRECTOR

March 5, 1975

FEB 27 1975

ENVIRONMENTAL QUALITY
COUNCIL

Honorable Tom Judge, Governor, State of Montana, Helena
Environmental Quality Council, Helena
Department of Fish and Game, Helena
Montana Outdoors, Department of Fish and Game, Helena
Department of Natural Resources and Conservation, Helena
Department of State Lands, Helena
Department of Intergovernmental Relations, Division of
Planning, Helena
U. S. Forest Service, Hamilton
Environmental Information Center, Box 12, Helena
Doris Milner, Route 1, Box 1410, Hamilton
Don Aldrich, 410 Woodworth Avenue, Missoula
Bill Kendall, 715 Beverly Street, Missoula
Tonia Bloom, 710 North Seventh, Hamilton
City-County Planning Department, Courthouse, Hamilton
County Health Department, Courthouse, Hamilton
Board of County Commissioners, Courthouse, Hamilton
Luke Wise, Western Development Company, Box 48, Darby
Hay Joslin, Ravalli Republican, Hamilton
Western News, Hamilton
Microbiology Department, Montana State University, Bozeman
Citizens Advocate, State Capitol, Helena
Montana State Library, Helena
Paul T. Richards, 902 North Park, Helena
Student Environmental Research Center, Room 212 Venture
Center, University of Montana, Missoula
C. W. Gonder, 823 East Call Street, Livingston
Mrs. Winifred Lucky, 420 South Sixth, Livingston
Mrs. Vel Jansen, 430 South Sixth, Livingston
Northern Rockies Action Group, #9 Placer Street, Helena
Environmental Studies Department, University of Montana,
Missoula

Attached is the draft environmental impact statement for
the proposed Tin Cup Creek Subdivision in Ravalli County.
Your comments should be sent within 30 days of the above
date.

Sincerely,

Daniel Vichorek
Daniel Vichorek
Technical Writer
Environmental Sciences Division

FEB 27 1975

MONTANA DEPARTMENT OF HEALTH
AND
ENVIRONMENTAL SCIENCESENVIRONMENTAL QUALITY
COUNCIL

March 5, 1975

DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR
TIN CUP CREEK SUBDIVISION,
RAVALLI COUNTY, MONTANA

Pursuant to the Montana Environmental Policy Act, Section 69-6504(b)(3); the act controlling both public and private water supply and sewage disposal for subdivisions, Section 69-5001 through 69-5009; and the act controlling water pollution, Section 69-4801 through 69-4827, the following draft environmental impact statement was prepared by the Environmental Sciences Division, Department of Health and Environmental Sciences, concerning the Tin Cup Creek Subdivision in Ravalli County, Montana, for which a request has been received for subdivision plat approval.

Location

As shown on the attached map, this subdivision is located about 1.5 miles southwest of Darby in Ravalli County.

Description of the proposed project

This subdivision would cover approximately 250 acres which would be subdivided into 46 lots of slightly over five acres each. Water supply would be through individual wells. A well producing ten gallons per minute at a depth of 81 feet has been drilled on the property.

Sewage disposal would be through individual septic tanks and subsurface drainfields. According to data supplied by the developer, percolation rates vary from 8.33 to 40.83 minutes per inch. These rates would allow the design and installation of drainfields adequate to accommodate the sewage generated.

Groundwater is known to be too high for drainfields in some portions of the property. The developer acknowledges that groundwater was found above the six-foot limit in 12 of the 56 soil profile holes dug on the land. Where groundwater was too high, further testing was done and lot lines adjusted sufficiently to allow enough area for installation of a noncontaminating drainfield on each lot, according to the engineering consultant for the developer. A plat delineating the high water area has been submitted to the department.

Three creeks, Spoon Creek, Tin Cup Creek, and Little Tin Cup Creek, run through the property and contribute in part to the high groundwater problem. No drainfields would be allowed within 100 feet of any of these streams or in the high groundwater area.

All utility lines would be underground.

Vegetation cover consists of about 60 percent evergreen timber and 40 percent open meadow with grass. Topography varies from flat to steep, as can be seen on the attached map. Whether this subdivision would be occupied year-round or on a seasonal basis is open to speculation.

Solid waste would be removed by a commercial trash hauler.

Impacts

The department requested input from various agencies and received replies from the Montana Department of Fish and Game, Montana Department of Highways, U. S. Forest Service, University of Montana Department of Anthropology and Bitterroot Tomorrow.

Impacts would be heavier if the development were occupied year-round. If families with school age children were to live there, additional schooling costs would fall upon the county. These costs would be offset somewhat by the increased tax base, but usually the additional revenue is not sufficient to offset the additional costs.

Apparently, the most significant potential impact of this subdivision would be on wildlife. At present, according to the Fish and Game Department, wildlife use of the area proposed for subdivision is quite limited. *Livestock grazing in the meadows around the lower portion of Spoon Creek, the dense stands of timber to the west which restricts the growth of desirable forage, and the absence of open south exposed hills probably precludes much winter foraging at this time by game,* according to a spokesman for the Fish and Game Department.

The department noted that action by the developer could mitigate the impacts on wildlife. If a 100-foot strip of deciduous and coniferous vegetation were left along the streams, the impacts on ruffed grouse and whitetail deer would be minimized. The Fish and Game Department further recommended that lots 15 and 16, which showed signs of heavy winter use by moose and elk, could be deleted or consolidated into one 30 to 40-acre lot to minimize the impact on these big game animals. Also, it would help if the homesite on the consolidated lot were below the ridge line, the spokesman noted.

The department noted further that the area to be subdivided could receive heavier winter use by game animals if the condition of the surrounding range were to change, perhaps through continuing subdivision. Presently, good sized elk herds winter just north of Tin Cup Creek and to the south of McCoy Creek. Tag returns from elk trapped in the McCoy Creek area indicate a north-south movement through the land proposed for subdivision. Thirty to forty 5-10 acre lots would not be compatible with the potential this area has for winter range and the movements which occur through it, according to the department spokesman. Dogs from the subdivision also could have detrimental impacts on wildlife passing nearby. Before approval is granted, this department will ask the developer whether he is willing to follow any of the Fish and Game Department recommendations.

In conclusion, the department noted that although developments such as this are not considered key wintering areas, they are detrimental to wildlife by eliminating the winter range potential of the land and increasing pressure on the remaining wintering areas.

Taken in context, it should be noted that as of July 1, 1974, 50,267 of the 383,395 acres of private land in Ravalli County were subdivided into 7,560 lots.

Also, there are some small fish in the creeks on the property, and these could be detrimentally affected if excessive siltation results from the installation of culverts in the streams.

The Department of Highways stated: *We have reviewed the plat for the subject subdivision and find that it does not connect directly to any of our State Highway Routes.*

It could possibly create a traffic problem where it enters the streets of Darby and would also increase the amount of traffic on Highway 93.

The U. S. Forest Service offered the following comments: *Our concerns primarily focus in the field of fish and wildlife both of which are adequately covered in the biologist report for the proposal. The subdivision is within the gross boundary of big game winter range and must ultimately affect winter habitat adversely.*

Access to the subdivision will be provided by an existing County road in McQuirk Gulch. That road is inadequate for current traffic volume. Additional traffic load created by the subdivision will certainly be a cost to the County in reconstruction or relocation of that facility.

The subdivision borders National Forest lands on the west and south, and by its very existence will complicate and perhaps increase the cost of management. Proximity to public lands is a drawing card and in many cases used by developers in promotional advertising. Many people who will buy and build expecting near natural forms of management on public lands and will be opposed to change or extractive uses such as road building, timber harvest or grazing.

We have no objection to the proposed subdivision because of this; however, it is one of the externalized costs which should be recognized but would be hard to quantify.

The University of Montana Department of Anthropology states: *There has been no archaeological reconnaissance of the proposed Tin Creek Subdivision. Hence, there are no archaeological sites on record. This is not an area of high archaeological site density but a reconnaissance of the area would be essential to determine absence, or degree of impact of the development on archaeological sites.*

The Bitterroot Tomorrow comments dealt primarily with constructive criticism of the developer's environmental assessment.

Long-term versus short-term relationships

The use of this area for a subdivision will preclude future use for livestock grazing or future timber production. The effects on wildlife were stated above. The land use will change from grazing and timber production to seasonal home or permanent residential use. The latter being a more intensive use would thus contribute directly and indirectly to Ravalli County economy.

Irreversible and irretrievable commitment of resources

Land use for roads, buildings and other construction will be lost to future use for other purposes. Vegetation displaced would be lost, materials used in construction of dwellings and other structures will be essentially lost for other uses, and energy sources used in development would be irretrievably lost.

Alternatives available to this department

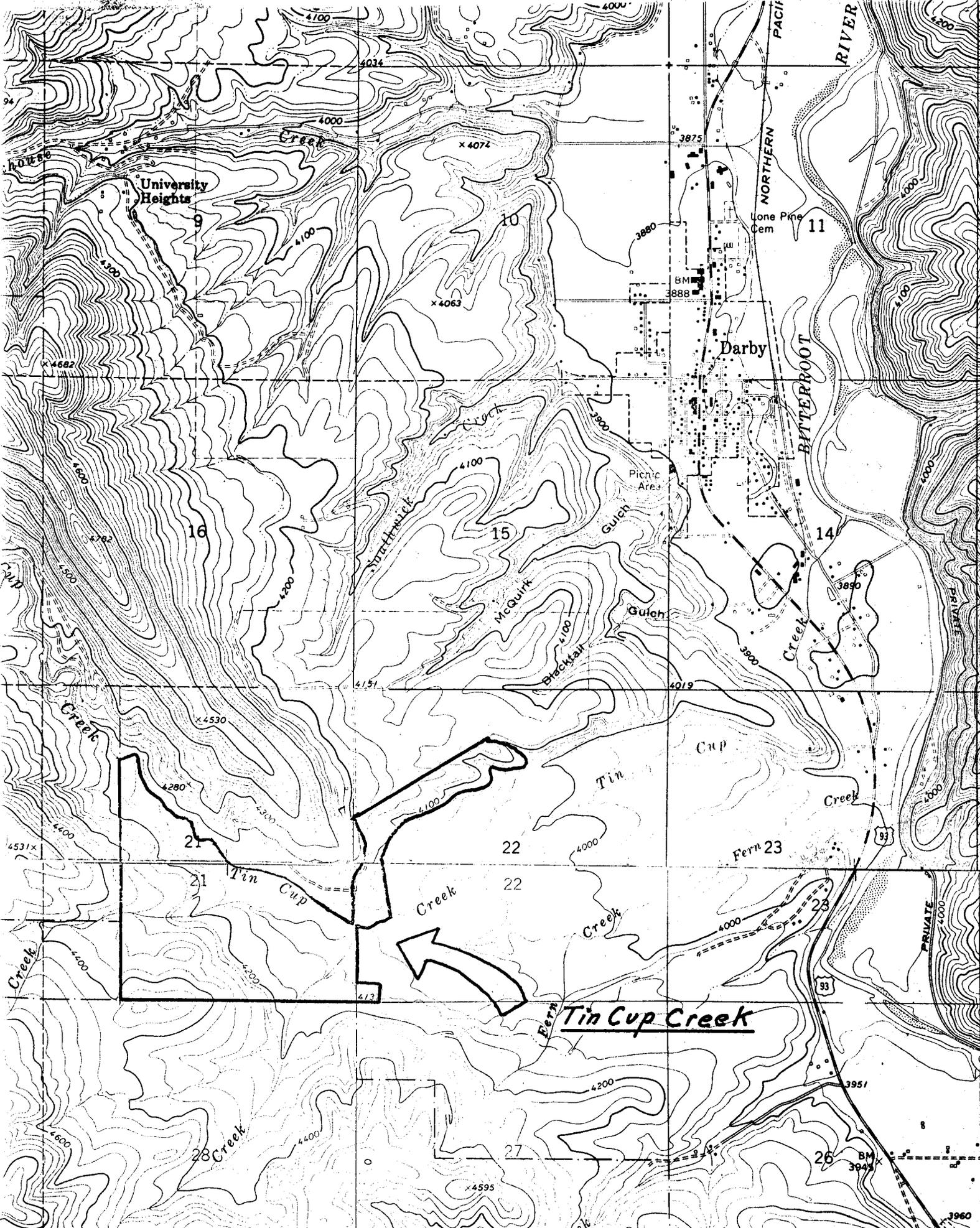
There are two basic alternatives available to this department:

- a. Not approve the subdivision plat.
- b. Approve the plat as submitted provided the developer files with the Ravalli county clerk and recorder a plat that delineates the high groundwater area.

Conclusion

It does not appear there would be any significant pollution of ground or surface water from properly installed and located subsurface drainfields. If the plat is approved, it would be under the condition that all plans, specifications, and location of all individual sewage disposal systems will be reviewed and approved by the Ravalli County Health Department.

This draft environmental impact statement has been prepared by Daniel Vichorek, Technical Writer, Environmental Sciences Division, Montana Department of Health and Environmental Sciences, from information supplied by the developer and others as designated therein.



John W. Reuss
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Thomas J. Lynaugh

February 28, 1975

Mr. Daniel Vichorek, Technical Writer
Department of Health and Environmental Sciences
Capitol Station
Helena, Montana 59601

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Sincerely,

Ronald J. Schleyer
EIS Coordinator

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