



JUL 10 1978

# Department of Health and Environmental Sciences

STATE OF MONTANA HELENA, MONTANA 59601  
ENVIRONMENTAL SCIENCES DIVISION - Phone: 449-3946

June 27, 1978

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Director

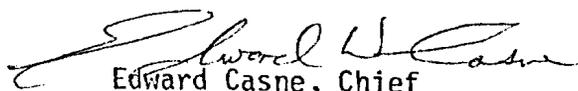
- Honorable Thomas Judge, Governor, State of Montana, Helena, MT, 59601
- Honorable Ted Schwinden, Lieutenant Governor, State of Montana, Helena, MT, 59601
- Dr. Ray Gold, Institute of Social Research, U of M, Missoula, MT 59801
- Department of Sociology, U of M, Missoula, Missoula, MT 59801
- Ravalli County Planning Board, Courthouse, Hamilton, MT 59840
- State Department of Revenue, Property Assessment Div., Real Property Bureau, Helena, MT 59601
- Ravalli County Extension Service, 205 Bedford, Hamilton, MT 59840
- Soil Conservation Service, 111 Old Corvallis Road, Hamilton, MT 59840
- Bitterroot Chamber of Commerce, 105 E. Main, Hamilton, MT 59840
- Department of Community Affairs, Planning Division, Helena, MT 59601
- Department of Community Affairs, Human Resources Division, Helena, MT 59601
- Ravalli County Sanitarian, Courthouse, Box 5019, Hamilton, MT 59840
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- Department of Labor & Industry, Employment Security Division, Helena, MT 59601
- Florence - Carlton School Board, Florence, MT 59833
- Montana Power Company, 104 Main, Hamilton, MT 59840
- Mountain Bell, 201 North 3rd, Hamilton, MT 59840
- Ravalli County Sheriff, 205 Bedford, Hamilton, MT 59840
- Florence Volunteer Fire Department, Florence, MT 59833
- Department of Highways, Engineering Division, Helena, MT 59601
- Department of Natural Resources, Water Resources Division, Helena, MT 59601
- Department of Natural Resources, Floodway Management Section, Helena, MT 59601
- Montana Bureau of Mines & Geology, c/o Montana Tech, W. Park, St., Butte, MT 59701
- Department of Community Affairs, Research and Information Systems Division, Helena, MT 59601
- Department of Geology, U of M, Missoula, MT 59801
- Department of Health & Environmental Sciences, Air Quality Bureau, Helena, MT 59601
- Department of State Lands, Helena, MT 59601
- Department of Anthropology, U of M, Missoula, MT 59801
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- Doris Milner, Montana Wilderness Association, Route 1, Box 1410, Hamilton, MT 59840
- North Rockies Action Group, 9 Placer Street, Helena, MT 59601
- Concerned Citizens for a Quality Environment, c/o Ron Erickson, U of M, Missoula, MT 59801
- Montana Wildlife Federation, Box 4373, Missoula, MT 59801
- Montana Power Company, Attn: Carl Anderson, 40 E. Broadway, Butte, MT 59701
- Resource Education Foundation, Inc. Box 1148, Helena, MT 59601
- Defenders of Wildlife, Attn: Hank Fischer, 947 Rimini Court, Missoula, MT 59801
- Montana Wilderness Association, 4000 - 4th Avenue North, Great Falls, MT 59401
- Sierra Club, 509 Hill, Missoula, MT 59801
- Trout Unlimited, Attn: Jim Handley, Box 140, Manhattan, MT 59741
- Rick Applegate, 427 N. Tracy, Bozeman, MT 59715
- Bitterroot Sanitation, c/o Charles Mann, P.O. Box 247, Victor, MT 59875
- Stevensville Public Schools, School District #2, S. Park, Stevensville, MT 59870
- Stevensville Public Schools, School District #13, Lone Rock NE of Stevensville, Stevensville, MT 59870
- Stevensville City Fire Department, Stevensville, MT 59870
- Stevensville Rural Three Mile Fire Department, Stevensville, MT 59870
- Stevensville Volunteer Ambulance Service, Stevensville, MT 59870
- Ravalli County Ambulance Service, Hamilton, MT 59840
- Ravalli County Commissioners Office, 205 Bedford, Hamilton, MT 59840
- Wes Woodgerd, Route 1, Box 143F, Stevensville, MT 59870
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Mr. Dean Turner, c/o Professional Consultants, Inc., Box 3416, Missoula, MT 59806  
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Bill Thomas, Department of Fish and Game, 3309 Brooks Street, Missoula, MT 59801  
Dr. Bill Willavize, Florence-Carlton School, Florence, MT 59833

The enclosed environmental impact statement has been prepared for the proposed Hensler Ranch Subdivisions in Ravalli County. This impact statement is submitted for your consideration. Comments and questions will be accepted for 30 days after the date of this publication. The DHES will forward the comments to the developers. All comments should be sent to the Subdivision Bureau, Environmental Sciences Division, Montana Department of Health and Environmental Sciences, Helena, MT, 59601.

Sincerely,

  
Edward Casne, Chief  
Subdivision Bureau

MONTANA DEPARTMENT OF HEALTH  
AND  
ENVIRONMENTAL SCIENCES  
ENVIRONMENTAL IMPACT STATEMENT

THE HENSLER SUBDIVISIONS  
PROPOSED SUBDIVISIONS

RAVALLI COUNTY

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; and the act to control water pollution, Section 69-4801, the following environmental impact statement (EIS) was prepared by the Montana Department of Health and Environmental Sciences (DHES), Environmental Sciences Division, concerning the request for administrative approval of the HENSLER SUBDIVISIONS, proposed subdivisions near Florence, Montana.

INTRODUCTION

This EIS is prepared pursuant to the only opinion of the Montana Supreme Court which addresses the responsibilities of the DHES to review subdivisions under the Sanitation in Subdivisions Act, Title 69, Chapter 50, R.C.M., 1947, and the Montana Environmental Policy Act (MEPA), Title 69, Chapter 65, R.C.M. 1947. That case, The Montana Wilderness Association et al. vs. The Board of Health and Environmental Sciences of the State of Montana et al., 33 St. Rep. 1320, (hereinafter referred to as the "Beaver Creek South" case) indicates that the department's substantive decision-making authority to approve or deny subdivisions is limited to a consideration of whether proposed water supply, sewage disposal and solid waste disposal systems are adequate to protect public health and prevent water pollution.

The Beaver Creek South opinion does not indicate that the department is relieved of its responsibilities to prepare an EIS which, "to the fullest extent possible," satisfies the requirements of MEPA and the rules adopted by the DHES and the Board of Health and Environmental Sciences implementing MEPA (rules MAC 16-2.2(2)-P2000 through P2080). Therefore, although the Beaver Creek South opinion indicates that the department may only base final approval or disapproval of a subdivision on the criteria and statutory authority contained in the Sanitation in Subdivisions Act, the DHES does believe that it still has MEPA responsibilities. The MEPA analysis contained in this EIS attempts to analyze in detail the three statutory criteria upon which the department may make a substantive decision--water supply, sewage and solid waste disposal--while still addressing the basic land use and environmental impacts that the Montana Supreme Court has indicated are a part of a local government's substantive decision-making authority under the Subdivision and Platting Act, Title 11, Chapter 38, R.C.M. 1947.

It must be emphasized that the DHES fully appreciates the fact that the Beaver Creek South opinion does not address the substantive questions concerning the scope of review required under MEPA when specific legislative limitations and directives have been imposed pursuant to other statutes. Therefore, to the extent that the DHES must interpret what MEPA responsibilities must be performed in light of the specific limitations on the department's final decision-making authority under the Sanitation in Subdivisions Act, this EIS has been prepared in conformity with the requirement of Section 69-6504, R.C.M. 1947, that the analysis comply with MEPA.

Because of the time limitations imposed on the DHES by the Sanitation in Subdivisions Act, the department is unable to circulate the draft EIS for the full 30-45 days anticipated by MEPA. Despite this limitation, the DHES made every effort to comply with MEPA to the fullest extent possible.

#### DESCRIPTION

The former 6,000-acre Hensler Ranch consists of three large tracts of land. Two are about two miles east of Florence (Reference map # 1), and the other is further east in Sapphire Mountains. The property in the mountains has been sold to Burlington Northern, Inc.

One of the tracts near Florence is 2,500 acres and the other is 1,950 acres. Included in the larger parcel is a proposed major subdivision, three occasional sales and 18 minor subdivisions. The proposed developments total 1,292 acres, with the remaining 1,208 acres divided into 20-acre plots (Reference map # 2). The 2,500 acres combine parts of 11 sections (Sections 4, 5, 6, 7, 8, 9, 16, 17, 18, 20 and 21).

The adjacent land is southeast of the 2,500-acre tract, and encompasses about 1,950 acres. The land has not been developed, but could be in the future.

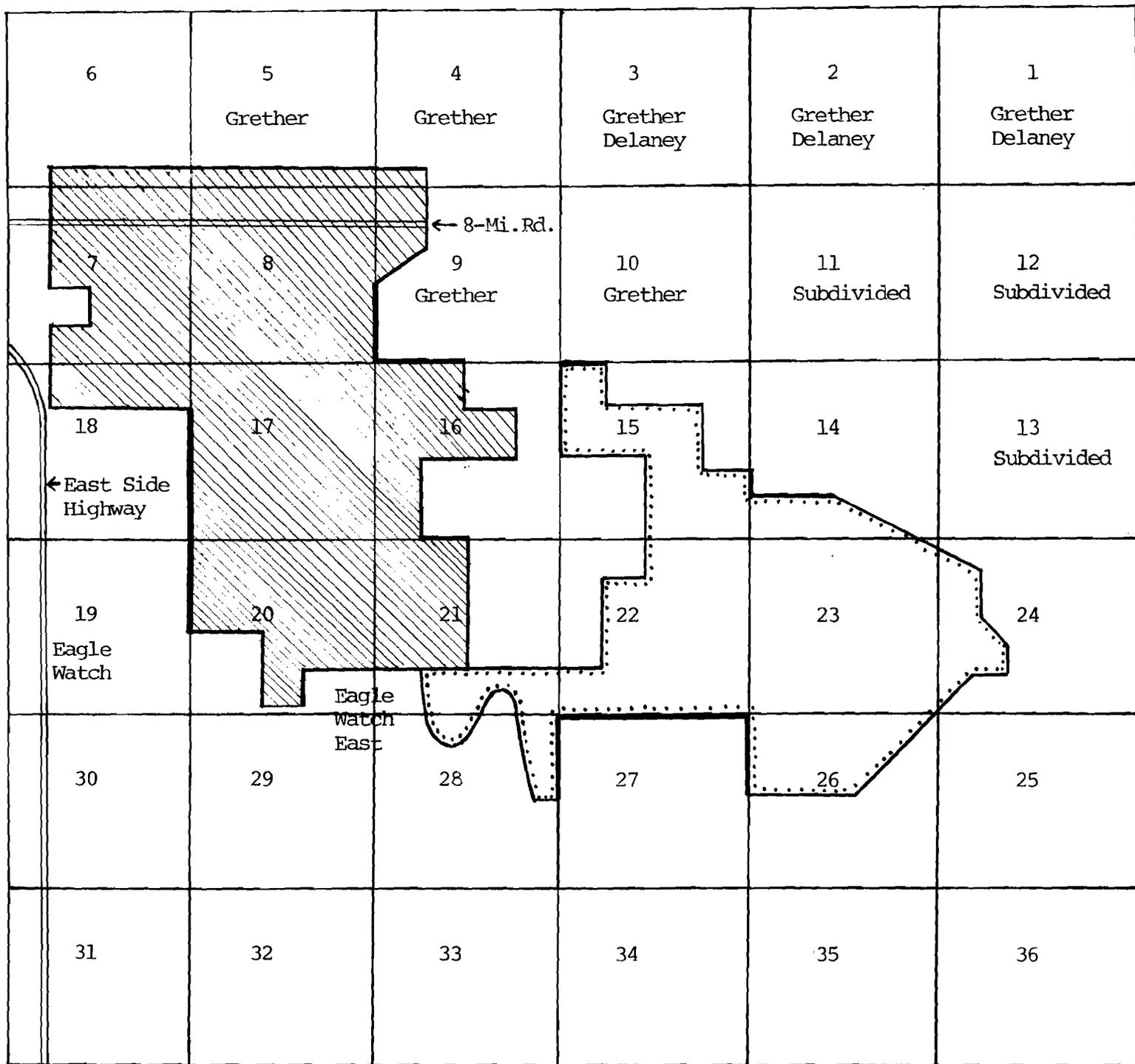
The major subdivision is Riverview Orchards. The developers, Val Holmes, Robert Greene and Marion Sterns, Missoula, Montana, propose to subdivide the 802 acres into 154 lots, ranging from 4.26 to 11.55 acres. It is in portions of Sections 5, 6, 7 and 8, T10N, R19W.

The occasional sales include:

1. Short Grass Gulch Addition - The occasional sale divides a 21.50-acre parcel into two equal lots, in Certificate of Survey (COS) 1503. The addition is in Section 17, T10N, R19W, and is owned by John Reely, Missoula, Montana.

2. Pine Meadows Addition - The occasional sale splits a 21.50-acre parcel into two equal lots, in COS 1503. The addition is in Section 17, T10N, R19W, and is owned by Linda Reely and Barbara Koessler, Missoula, Montana.

3. William McNulty Parcels - The occasional sale, remainder and six releases to immediate family members divides 40.04 acres into eight lots ranging from 5 to 5.01 acres. The parcels are in Section 20, T10N, R19W, and are owned by William McNulty, Missoula, Montana. The McNulty occasional sale and most of the minor subdivisions are all part of COS 1316 or Hidden Valley Ranches, unless otherwise indicated. Hidden Valley Ranches is composed of 71 lots, 20 acres or larger in size.



Portion of the ████████-Hensler Ranch presently surveyed into 10 and 20 acre parcels. This is the portion from which submittals have been received.

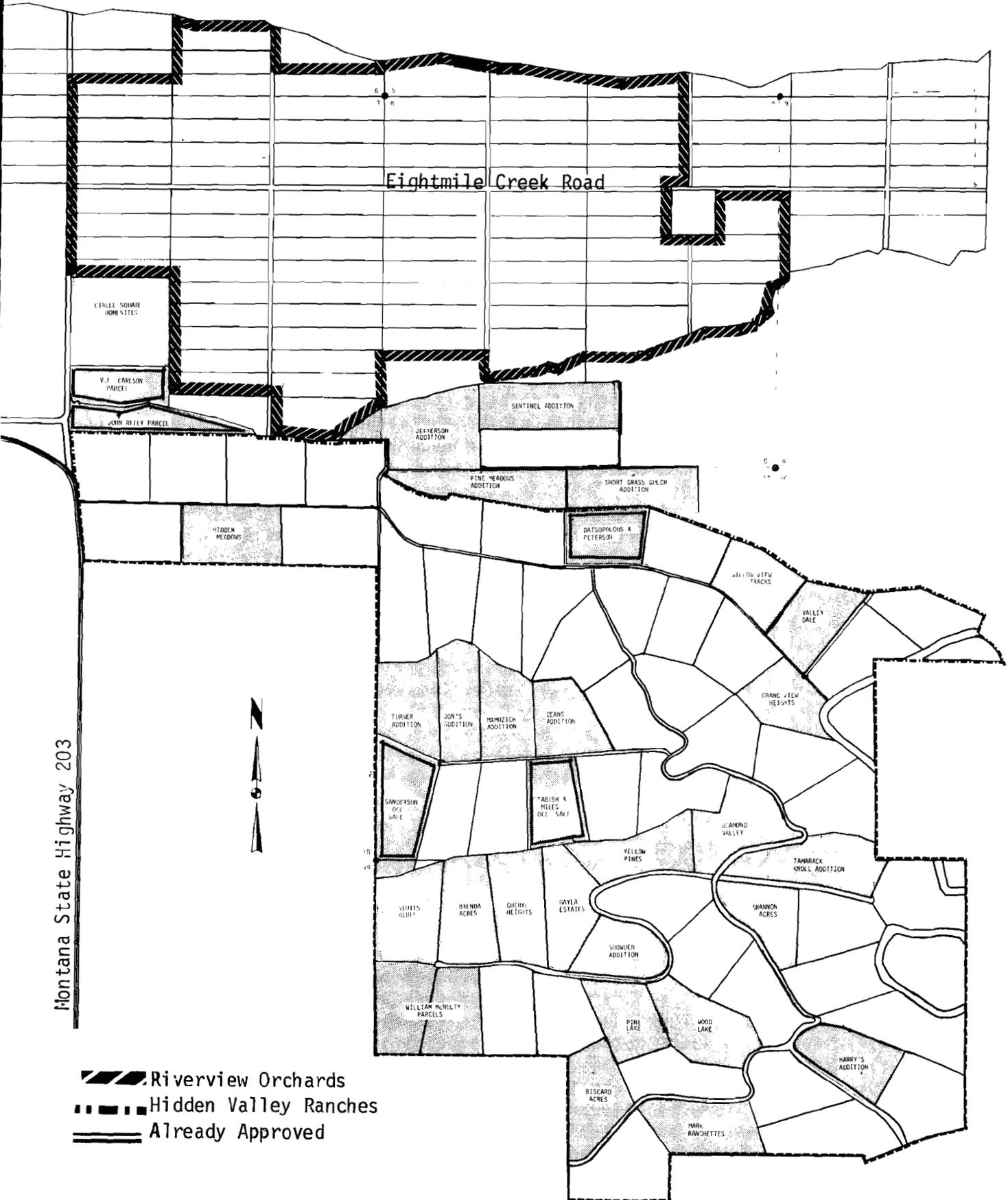


Remaining portion of the ranch.

Montana State Highway 203

Eightmile Creek Road

-  Riverview Orchards
-  Hidden Valley Ranches
-  Already Approved



The minor subdivisions, unless indicated otherwise, are in Hidden Valley Ranches:

1. Scotts Bluff - The proposed subdivision will divide 24.43 acres into four lots. It is in Section 20, T10N, R19W, and is owned by E.J. Nicholson, Missoula, Montana.

2. Brenda Acres - This development will split 24.02 acres into four lots. It is in Section 20, T10N, R19W, and is owned by Nicholson.

3. Cheryl Heights - The proposed subdivision will divide 23.96 acres into four lots. It is in Section 20, T10N, R19W, and is owned by Nicholson.

4. Gayla Estates - This development will create four lots from a 23.76-acre parcel. It is in Section 20, T10N, R19W, and is owned by Nicholson.

5. Mark Ranchettes - The proposed subdivision will split 23.80 acres into four lots. It is in Section 20, T10N, R19W, and is owned by Nicholson.

6. Showen Addition - The development will subdivide 20.01 acres into four lots. It is in Section 20, T10N, R19W, and is owned by Bruce Showen, Helena, Montana, and Clyde Showen.

7. Harry's Addition - This subdivision will create four lots from 22 acres. It is in Section 21, T10N, R19W, and is owned by Harry Johnson, Missoula, Montana.

8. Tamarack Knoll Addition - This 21.67-acre tract will be split into four lots. It is in Sections 16, 17, 20 and 21, T10N, R19W, and is owned by Barbara Koessler and Mathewson Green, Missoula, Montana.

9. Hidden Meadow - The proposed development will subdivide 24.46 acres into five lots. It is in Section 18, T10N, R19W, and is owned by Green.

10. Dean's Addition - The subdivision proposes to split 20 acres into four lots. It is in Section 17, T10N, R19W, and is owned by Charles Martin, Missoula, Montana.

11. Kenneth Mamuzich Parcel - This 20.58-acre tract will be subdivided into four lots. It is in Section 17, T10N, R19W, and is owned by Kenneth Mamuzich, Conrad, Montana.

12. Jon's Addition - Thomas Walker, Missoula, Montana, proposes to divide 20.20 acres into four lots. The subdivision is in Section 17, T10N, R19W.

13. Turner Addition - The development will split 20.09 acres into four lots. It is in Section 17, T10N, R19W, and is owned by Dean Turner, Missoula, Montana.

14. Jefferson Addition - This subdivision will divide 39.03 acres into five lots. It is in Section 8, T10N, R19W, and is owned by James Stover, Missoula, Montana (located north of Hidden Valley Ranches).

15. Sentinel Addition - The proposed development will subdivide 20.64 acres into four lots. It is in Section 8, T10N, R19W, and is owned by Beryl Stover, Missoula, Montana (located north of Hidden Valley Ranches).

16. Willow View Tracts - The subdivision will split 20.03 acres into four lots. It is in Section 17, T10N, R19W, and is owned by Linda Hilbert, Missoula, Montana.

17. Grandview Heights - Billie Lou Eitel, Missoula, Montana, proposes to subdivide 18.37 acres into three lots. It is in Section 16, T10N, R19W.

18. Valley Dale - This proposed development will split 20.03 acres into four lots. It is in Section 16, T10N, R19W, and is owned by Martin Eitel, Missoula, Montana.

#### BACKGROUND

The DHES began a preliminary review of proposed subdivision activity on portions of the Hensler Ranch in February of 1978. The department had received an amended plat for a major subdivision, plus submittals for 18 minor subdivisions and three occasional sales, all totaling 1,292 acres. Prior to these submittals, the DHES had approved three occasional sales, a gift to a family member and an amended plat in the same area. Considering the past and proposed development activity, it was apparent that approximately 2,500 acres of the ranch were available for development. Only one major subdivision (Riverview Orchards) has been submitted for review in this draft EIS. Since this review began, however, another major subdivision in the immediate vicinity, but outside the 2,500-acre tract (Circle Square Homesites) has been submitted for preliminary comment. This subdivision, which divides 40 acres into 31 one-acre lots, borders Riverview Orchards on its north and east property lines. Circle Square has been approved by the Ravalli County Planning Board and is now pending before the county commissioners. Outside the Riverview Orchards subdivision, the remainder of the 2,500 tract has been divided into 20-plus acre parcels.

The Sanitation in Subdivisions Act defines a subdivision as a parcel containing less than 20 acres. Each of the 20-plus acre tracts submitted to the state has been divided into five-acre lots, thus constituting several minor subdivisions of five lots or less. Unlike major subdivisions, minor subdivisions are not subject to full-scale local review according to the Subdivision and Platting Act, which involves a public hearing, environmental assessment and public interest determination.

Riverview Orchards was also exempted from extensive local review. The 802-acre subdivision was submitted as an amended plat (dividing 10-acre parcels into five-acre lots) and, under rules adopted by the Ravalli County commissioners, amended plats are not subject to the full local review process in that county (Appendix A, Jan. 11, 1978, letter to DHES from Ravalli County commissioners). The land is now being advertised as 10-acre lots, as laid out in the original plat. However, the developers have not withdrawn the amended plat from review by the DHES.

Thus, none of the subdivisions in the 2,500-acre tract will be subject to full review at the local level.

The DHES received an unusually large number of letters from Florence area residents in response to the preliminary environmental review (PER), which was circulated in March. Based on intense citizen interest in the development, plus the potential impact of numerous subdivisions on a rural area, the DHES decided an EIS was in order.

About the time the DHES began work on a preliminary review of the Hensler Ranch subdivisions, the Florence-Carlton School District went to court in an effort to require the Ravalli County commissioners to make a public interest determination on the proposed minor subdivisions. The school district lost its case in state district court June 5, when Judge Jack Green ruled the proposed subdivisions are to be reviewed as minor subdivisions. Judge Green's decision has been appealed to the Montana Supreme Court by the school district.

In a related matter, Montana Attorney General Mike Greely has denied a request by the Ravalli County attorney for a decision on whether several minor subdivisions constitute a major impact. The attorney general denied the request on the grounds that litigation is pending in at least two cases where similar issues are involved. Attorney General Greely said when these two cases are resolved, he will issue an opinion on the Ravalli County request if it has not been answered satisfactorily in the pending litigation.

The DHES recognizes these subdivisions as minor subdivisions under state law. However, it is the position of the DHES that while the impacts of each of these subdivisions may be small, the combined impacts of the minor subdivisions will be great.

#### CURRENT ENVIRONMENTAL CONDITIONS

The 2,500-acre tract is in the foothill country between the Sapphire Mountains and the Bitterroot River bottomland.

The northern part of the property is open pasture and hay land. The southern border of this tilled area slopes down to Eightmile Creek and a smaller creek, which both flow west toward the river. The creek bottoms support a variety of trees, shrubs and grasses. Proceeding south, the land is higher, more rolling and supports scattered stands of pine and dryland grasses.

Most of the 2,500 acres has been grazed by livestock, with the more fertile portions used for growing alfalfa and other annual agricultural crops.

#### PHYSICAL ENVIRONMENT

##### Terrestrial and Aquatic Life and Habitats

A variety of wildlife inhabits the land planned for development. The types of wildlife include big game animals, non-game, and game and non-game birds.

According to a letter from Bill Thomas, Information Officer for the Department of Fish and Game in Missoula:

This proposed subdivision lies to the west of the main deer and elk winter range in the foothills of the Sapphire Mountains, and there does not appear to be a big impact on wildlife habitat from the subdivision. Some whitetail deer habitat in the Bitterroot River and Eight Mile Creek bottoms could be affected depending on the location of the development. There appears to be little cover for game bird habitat in the

vicinity of the proposed subdivision. Although direct impacts to wildlife and habitat may be small, the potential for indirect impacts does exist. Even though the main winter range lies to the east, there is a potential impact of dogs associated with the subdivision running or harassing game animals.

Wes Woodgerd, a resident of Stevensville/Florence area and former director of the Department of Fish and Game, made the following comments in a letter to the DHES:

The proposal would have a major impact on the local whitetail deer population. The area proposed for subdivision (Hidden Valley) now serves as a refuge for the local whitetail that are displaced from the river bottom during the duck hunting season. It also serves as a corridor to the public land in the foothills of the Sapphire Mountains. The deer would be denied this place of refuge and passage under a subdivision situation.

Unless the area were covenanted to prevent dogs from running loose the surrounding areas and both terrestrial and aquatic wildlife would be impacted by dogs from this subdivision. Dogs molesting wildlife is a serious problem now and would be intensified by further subdivision without dog control.

Both Woodgerd and Thomas expressed concern about domestic animals harassing wildlife. The protective covenants for Hidden Valley Ranches state:

Only normal family pets, and cattle, sheep and horses may be kept on the premises. Such animals shall be confined within the property of their owners and shall not be permitted to become a nuisance or annoyance to neighbors. The number of animals shall be limited to preclude overgrazing of the land.

The DHES did not receive any protective covenants from Riverview Orchards or the occasional sales not in Hidden Valley Ranches, thus there is no information concerning the disposition of domestic animals in those developments.

In addition to deer, some elk have been seen along the eastern border of the property, and during the summer of 1974 a cow moose and her calf were reported to have roamed the river bottomland and ranch property until fall.

Other mammals observed on or near the property were black bear, coyote, longtail weasel, striped skunk, badger, yellow bellied marmot, ground squirrel, pocket gopher, porcupine, wood rat, deer, mouse and meadow voles.<sup>1</sup>

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<sup>1</sup> Hensler Subdivision Vegetation and Wildlife, Gordon Scaggs, University of Montana, May 29, 1978.

During the spring and summer of 1975 a bird species list was compiled along with nesting sites.<sup>2</sup> The ranch supports a wide variety of bird families and species because of the diverse habitat components with which they are associated. Habitat includes the grassland areas favored by the horned lark, vesper sparrows, long billed curlew, and Western Meadowlark for nesting and feeding. The draws, with pine and cottonwood, attract the warblers, woodpeckers, bluebirds, nut-hatches and birds of prey for nesting and many for feeding. Game birds such as Hungarian partridge, pheasant, various species of ducks and geese (Canada and Snow) also inhabit the area.

The ducks are fairly restricted to the Bitterroot irrigation canal and ponds where they may share areas with the red-wing and yellow headed blackbirds. The geese use the pastures during the fall and spring.

Eightmile Creek is about 12 miles long with its headwaters in the Sapphire Mountains. The upper-reaches of the stream flow through timber and brush and are impounded by numerous beaver dams. The lower reaches usually dry up due to irrigation. The beaver ponds reportedly are good early-season fishing for small cutthroat trout.

#### Water Quality, Quantity and Distribution

The proposed subdivisions all would have individual wells. The DHES had Maxwell K. Botz, P.E., hydrogeologist-engineer of Western Technology and Engineering, Inc. (WESTECH), Helena, Montana, evaluate the existing hydrological information to determine if available water resources would meet the requirements of the Sanitation in Subdivisions Act.

WESTECH's report included the following information:

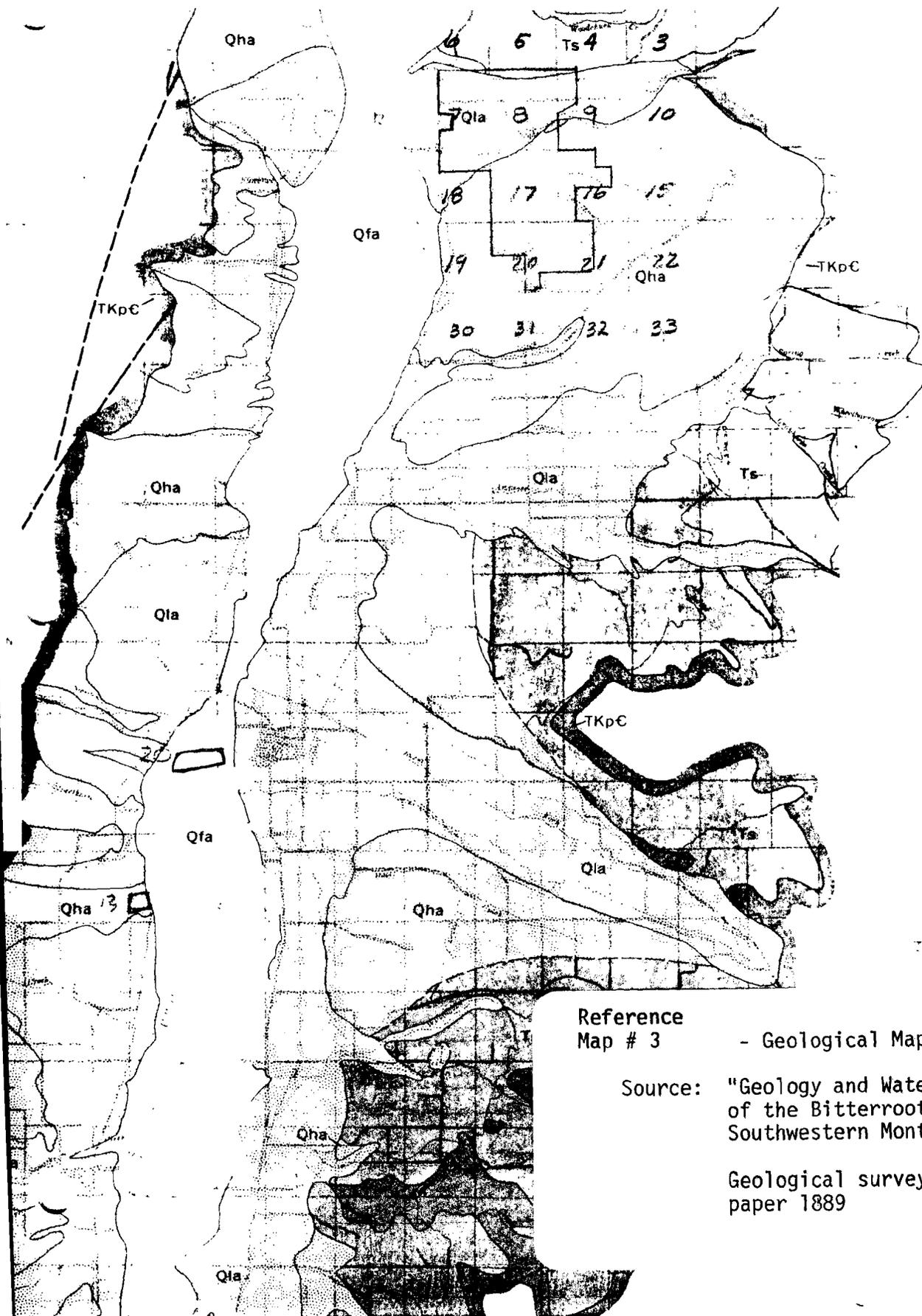
Throughout the proposed subdivisions, Quaternary deposits of both high and low level terraces cover the underlying Tertiary sedimentary rocks (Reference map #3), and are a significant factor in the hydrogeology of the area. These terrace deposits consist of stream-transported detritus from the Sapphire Mountains and reworked Tertiary sedimentary strata..

Available geological information on this area is not detailed and the nature and thickness of Quaternary and Tertiary strata are poorly known. To provide further information on subsurface conditions, all available water well data for the area were obtained.

Appropriation forms for a total of 24 wells and 1 spring on or near the property were available from the Department of Natural Resources and Conservation. Wells ranged in depth from 39 to 390 feet and yields varied from 8 to 400 gallons per minute (gpm) (with the exception of one well yielding  $\frac{1}{2}$  gpm). Two wells are developed for irrigation purposes with yields of 240 and 400 gpm. These logs show that groundwater along the western edge of the property and at scattered localities in the subdivisions can be obtained in quantities sufficient for domestic

<sup>2</sup> Bird Species Observation and Nesting Location on the Eightmile Ranch (March-May), Gordon Scaggs, University of Montana, 1975.

# GEOLOGY



Reference  
Map # 3 - Geological Map

Source: "Geology and Water Resources  
of the Bitterroot Valley,  
Southwestern Montana"

Geological survey water supply  
paper 1889

purposes (8 gpm for 2 hours) and, in some areas, for limited irrigation. There are, however, only a few wells located within the subdivisions, particularly the entire eastern and southern portions of the subdivisions in Sections 8, 9, 16, 17, 20 and 21. There are no reports of dry holes or holes with insufficient yields in the area, and there are no requirements to report such holes.

It should be noted that some wells were drilled relatively deep to obtain adequate water. For example,...(one well)...was drilled to a depth of 230 feet to yield 12 gpm after 1 hour of pumping and had a pumping water level 220 feet below the ground surface. Similarly...(another well)...was drilled to a depth of 255 feet to obtain 15 gpm with a pumping water level at 240 feet.

It is difficult to distinguish Quaternary and Tertiary strata based on the well logs; however, many of the deeper wells have encountered alternating fine and coarse-grained layers that are typical of Tertiary sediment in western Montana. Such Tertiary deposits typically have wide variations in lithology over short distances; thus, aquifers may be encountered at various depths and wells may have a wide range of yields.

Based on water table contour data furnished in USGS Water Supply Paper 1889, the direction of groundwater movement is from the mountains and terraces toward the river with a relatively steep hydraulic gradient in the vicinity of the proposed subdivisions. Data, however, for water table contours does not extend into the eastern portion of the subdivisions. The overall configuration of the groundwater table beneath the subdivisions is not well known and available evidence suggests that in order to reach the water table, deep holes into the underlying Tertiary sedimentary rocks will be necessary in portions of the subdivisions.

The major question to be answered is the adequacy of water for the proposed 415 parcels of land. The total groundwater demand of these parcels, if they were all developed into single family dwellings, would be about 40 gpm, or 0.3 cubic feet per second (cfs). Based on available hydrogeological data and well logs, along with my general knowledge of Quaternary and Tertiary sedimentary deposits in western Montana, it is my opinion that there would be adequate groundwater in underlying aquifers to furnish the proposed number of parcels in this subdivision. This is a large development, however, and there are very few wells drilled on the property, thus, hydrogeological conditions are poorly known and there is no positive assurance that adequate groundwater is available on all parts of the subdivision.

Near the western edge of the property at lower elevations, there appears to be little problem in obtaining sufficient groundwater at reasonable drilling depths. Deeper wells into Tertiary sediments probably will be required in the higher parts of the subdivision and water yields are less certain. Generally, however, if wells are drilled deep enough (with commensurate high cost), an aquifer with adequate water will be encountered in Tertiary sediments.

Your staff also requested an assessment of the availability of groundwater if this property were further subdivided into one-acre parcels. The impact of 2300 (figure readjusted to 2,500) one-acre parcels on this hillside property, each with individual wells and septic tanks, is somewhat overwhelming and difficult to assess. The groundwater resources are too poorly understood to make any realistic appraisal of the effects of a large development on the groundwater system. Similarly, percolation of effluent in the ground from 2300 (2,500) septic tank drainfields creates a large addition of water to the shallow groundwater system. Based on standard residential water use, a water supply of 1022 gpm (2.3 cfs) is needed and there would be a sewage effluent flow of about 511 gpm (1.1 cfs). The existing groundwater system possibly could accommodate such activity, however, severe problems in groundwater depletion, well pollution, and hill-slope stability due to increased moisture in fine-grained sediments could occur. A meaningful appraisal of this development can be made only after substantial further investigation of the areas water resources, including test drilling of wells. I do not feel I can properly assess such a development based on existing data.

Three wells in or near the subdivision have been sampled for water quality. The three wells range in depth from 43.8 feet to 60 feet and yield waters of excellent quality. One well exceeds the Public Health Service recommended standard for iron (2.1 mg/l versus the recommended standard of 0.3 mg/l), but waters high in iron are not harmful to human health as far as is known.

#### Water Impoundments

South of Antrim's Point two drainages converge and run south under the East-side Highway, through the bottomland, into the Bitterroot River. The creeks are in Sections 17, 19 and 20, and drain an area of about 1900 acres east of Antrim's Point.

A total of eight dams, four up each drainage, have been constructed. Some of the small lakes are next to the road running east and west past the point. Local residents have questioned the safety of the dams. Concerns included the adequacy of construction, the placement of the "draw-down tubes" (which enables water to flow safely out before going over the top of the dam) in relation to the top of the dams, the apparent absence of spillways and the possibility of a mass failure of the dams due to faulty construction.

The Bitterroot Irrigation District Canal flows through Sections 16 and 21 and crosses these two drainages at the upper reaches. The canal has an initial carrying capacity of 400 cfs and would tax the ability of the dams to hold water should the canal ever break.

The State Department of Natural Resources and Conservation (DNR) inspected the dams and is preparing a report on its findings.

#### Storm Drainage

At the proposed lot densities, roughly one percent of lot areas will be occupied by houses, driveways and other impermeable surfaces. This should not cause a significant increase in the total amount of runoff from the proposed development area. Some re-routing of storm flows will occur along roadways, but the major drainage patterns will be utilized.

Portions of the proposed development area will drain into the two tributaries discussed in the water impoundments section. When the DNR report on the dam inspections is complete, the ability of the impoundments to accommodate storm flows can be better addressed. However, assuming the dams will accommodate normal storm flows, less storm water may leave the proposed development area than before the dams were constructed.

Average rainfall at the Stevensville reporting station is 13.33 inches. From U.S. Geological Survey (USGS) topography maps, the drainages within the subdivisions drain roughly 30.5 square miles. The 25 year, 24 hour duration rainfall is 3.0 inches in the Sapphire Mountains above the development area and is 2.2 inches in the area of the development. The ratio of water that runs off the watershed to the total amount precipitated on it was assumed to be 0.20 and 0.75 for the wooded areas and non-wooded areas, respectively. The USGS topography maps indicate that approximately 85-90 percent of storm flows from the 30.5 square miles drain into Eight Mile Creek. This would be approximately 415 cfs. Because no proposal has been made to alter Eight Mile Creek and because of the proposed housing density, this storm flow should pose no runoff problems which do not presently exist.

The runoff from a 25 year storm into the tributaries where dams have been constructed would be approximately 60 cfs. Again, concern has been expressed by local residents over the construction of these dams and the ability of the dams to handle storm flows is unknown at this time.

According to the Water Quality Inventory and Management Plan published by the DHES in 1976, the water quality data collected from the mouth of the Bitterroot River did not indicate any violations of water quality standards. Some degradation was indicated by coliform and nitrate counts, however. The only obvious sources of degradation from the development area would be temporary problems resulting from road construction and slug flows should one of the dams fail.

### Geology and Soil Quality Stability and Moisture

#### Geology

A thick blanket of Tertiary and Quaternary sediments cover the underlying bedrock that is either Cretaceous-Tertiary igneous rocks or Precambrian Belt sediments. The unconsolidated to semiconsolidated Tertiary sediments are gravels, sands and muds that were derived from peripheral bedrock by weathering and erosive processes. Within the Tertiary deposits, materials of different texture interfinger and intergrade both laterally and vertically, often over short distances, due to changes in either the type of geometry of the depositional media. These Tertiary strata are probably several hundred feet to possibly greater than 1,000 feet thick.

Interbedded volcanic ash lens may extend into the area, possibly buried under colluvial and other sediments. These volcanic ash units sporadically outcrop at elevations between 3,500 and 4,100 feet. The closest outcrop lies 4 miles south of the proposed subdivisions.

Quaternary deposits mantle the Tertiary sediments along the Eight Mile Creek floodplain which passes through this subdivision. These deposits are moderately well-to well-sorted stream sediments derived from the Sapphire Range; predominantly silts, sands and gravels.

## Soils

Soils that have developed on the Riverview Orchards subdivision have been classed as Lolo cobbly loam and Lolo gravelly loam by the Soil Conservation Service (SCS). These soils have developed in Quaternary alluvium. The upper 18 inches consists of a gravelly loam. Sand, gravel and cobbles are generally found below this depth. One hundred fifty-four ten-foot test holes were dug on the subdivision and verify this description. One percolation test was run on each lot.

All but two of the percolation rates varied between 2 and 41 minutes per inch. The lots with percolation rates near 2 minutes per inch did not show any signs of groundwater in the ten feet deep test holes. Two of the percolation rates were in excess of what is acceptable for the installation of a conventional septic tank and drainfield. These two lots must be retested and will be rejected if they are found not to be acceptable.

Soils that have developed on the Hidden Valley Ranches property developed in Tertiary sediments. The major soils found on this property have been classed by the SCS as Riverside gravelly and cobbly loams, Burntfork loam, Wemple loam-Ravalli loam complex, Riverside fine sandy loam and Lolo gravelly loam. Minor areas of other soils also have developed on the property.

Riverside gravelly and cobbly have a gravelly sandy loam topsoil with sand and cobbles generally found below 18 inches. Burntfork loam has a loamy topsoil with cobblestone increasing with depth. Wemple fine sandy loam has some volcanic ash content at greater depths. These soils would not be used for drainfield sites due to slope. Riverside cobbly sand loam has cobbly sandy loam topsoil grading to loose sand and gravel. The upper 18 inches of Lolo gravelly loam consists of a gravelly loam grading to sand, gravel and cobbles below.

Seventy-one soil profile holes have so far been dug on the property and generally verify the general soil descriptions. Plastic clay lenses were found in several of the profiles. Seventy-one percolation tests were made all within the acceptable range.

Every lot in Hidden Valley Ranches has a suitable drainfield site and replacement area that does not have slopes that exceed 15 percent.

Proper placement of the drainfields can be assured since Ravalli County has a septic tank permit program. The sewage disposal systems would be inspected before they were covered and the permit approved by the Ravalli County sanitarian.

## Vegetation

The 2,500-acre tract of land being reviewed supports a variety of vegetation.

The northwestern part of the property is mostly irrigated farmland, with the predominant crop being alfalfa. Some of the areas bordering the fields have been taken over by spotted knapweed.

The tillable land in the northeastern part of the tract is also primarily in alfalfa. The Eight Mile Creek drainage and another unnamed creek are also in this area and the predominant species in these bottomlands is black cottonwood.

Proceeding south out of the creek bottoms to higher ground, the most dominant species changes to spotted knapweed, bluebunch wheatgrass and open stands of ponderosa pine.

Along the southern boundary of the property the predominant species include sagebrush, bluebunch wheatgrass, ponderosa pine and in two streambeds, black cottonwood.

Development of this land will affect the vegetation. Home and road building often lead to soil compaction, erosion and the depositing of infertile subsurface soils on vegetation. Construction in forested areas normally necessitates the felling of trees. The protective covenants for the Hidden Valley Ranches land addresses the matter of tree cutting by saying:

Section 7. Timber: No timber cutting shall be permitted that materially reduces the aesthetic or scenic value for adjacent tracts. This provision is not intended to preclude clearing of a residential site or providing access thereto.

The loss of natural habitat will reduce cover and forage for wildlife and in the case of domestic livestock, it's possible for over-grazing to occur.

It is likely that many people will want to have lawns and landscape with domestic vegetation. The result will be a change in vegetation, but the change in some cases may benefit some types of wildlife, such as the planting of trees and shrubs that will provide food and cover.

### Aesthetics

A major reason for recent, unprecedented growth in the Bitterroot Valley undoubtedly lies in the area's scenic attractions. Located between two majestic mountain ranges, the valley stretches out along the Bitterroot River--the lifeline for the valley's agricultural land base.

To the west, the peaks of the Bitterroot Range provide a jagged wall that runs the length of the valley. At the north end of the valley, near Florence, Lolo Peak stands at 9,075 feet. Trapper Peak, at the south end, stands at 10,157 feet. To the east lie the Sapphire Mountains, with peaks in the 7,000 to 8,000-foot range.

Several years ago, the Bitterroot Valley was regarded primarily as an agricultural belt. The land raised cattle and sheep, hay and grain crops and some fruit crops. Over the past few years, however, residential development and subdivision activity have been closing in on the agricultural land base.

In a letter to the DHES, the attorney for the owners of the minor subdivisions said a homeowners' association has been created and protective covenants attached to the property "to insure a desirable rural development." The covenants, whose initial term expires in five years, restricts lot sizes to five acres. They

further prohibit placement of trailers or mobile homes on the property. While power lines in Hidden Valley would be underground, according to the electric cooperative that services the area, the main power line for Riverview Orchards would be above ground, with underground service connections.

There can be no doubt that development of the Hensler Ranch subdivisions would significantly alter the landscape. If the properties are fully developed, there will be hundreds of homes built in an area where one ranch has stood for years.

### Air Quality

Based on the subdivisions being reviewed by the Department and the possible subdivision of the remainder of the 20-acre lots in Hidden Valley Ranches into five-acre parcels, the Air Quality Bureau (AQB), DHES, has projected that dust from unsurfaced dirt roads will violate federal primary and secondary standards for total suspended particulate (TSP).

The federal primary standard is 75 micrograms/cubic meter ( $\mu\text{m}^3$ ) annual geometric mean and the secondary standard is 60  $\mu\text{m}^3$ .

According to conservative figures used by the AQB, if the roads remain unsurfaced and dust is not suppressed, at full development the average emission density will be, at a minimum, 281 tons/square mile/year (T/sq. mi./Y), and the maximum will be 484 T/sq. mi./Y. The federal primary standard of 75  $\mu\text{m}^3$  equates to about 200 T/sq. mi./Y. Thus, there will be violations.

The AQB suggests the following ways to mitigate anticipated violations of TSP:

1. Pave the roads with asphalt or concrete.
2. Water the roads.
3. Oil the roads.
4. Use chemical dust suppressants on the roads.
5. Reduce the speed of vehicles on the roads.
6. Reduce the number of vehicles traveling on the roads.
7. Locate unpaved roads as near as possible to paved roads.

The DHES will require that dust suppression measures be used to control road dust by administrative order pursuant to ARM 16-2.14 (1)-S1440.

Since the DHES did not receive protective covenants for Riverview Orchards or the tracts outside of Hidden Valley Ranches, it is not known if there are any plans or requirements for road maintenance or surfacing. The covenants for the

subdivisions in Hidden Valley Ranches say this about road maintenance:

Section 5. Road Maintenance Charges- In addition to other assessments provided for herein, the Association shall levy a special assessment each year for the purpose of paying for road maintenance charges at their actual costs. This assessment shall be levied at a uniform rate for all tracts adjoining the non-dedicated road easements.

In a March 18, 1978, letter to the DHES, Dennis Lind, attorney for Hidden Valley Ranches said:

The homeowner's association is responsible for road maintenance, which may include dust oiling to insure air quality, and has authority to impose assessments for the purpose of providing adequate services to insure the health, safety and welfare of the residents...

#### Unique, Endangered, Fragile or Limited Environmental Resources

The development of the former ranch will change the aesthetics of the area and to a great degree the native vegetation. The rural setting will become more suburban in appearance and much of the native vegetation will be either eliminated or replaced by domestic plant varieties.

The elimination of large areas of native vegetation will probably affect the ranging patterns of whitetail deer and many of the smaller game and non-game animals and birds.

There are no known endangered species in the area.

#### Demands on Environmental Resources of Land, Water, Air and Energy

The proposed developments would create demands on land, and possibly on air and water resources. Subdivision of the land would permanently alter the landscape. If roads are not properly maintained and land is further subdivided into one-acre lots, both air and water resources would be seriously affected. However, since potential problems with air and water have been identified, it is possible to avoid such problems.

The amount of energy used by homeowners in the subdivisions will not, by itself, affect the total amount of energy available to the region or state. However, energy may, in the near future, become appreciably more expensive. This is particularly true for petroleum-based fuels, such as gasoline, heating oil and propane.

#### Historical and Archaeological Sites

Three state historic sites are situated near the proposed subdivisions; none lies on the property.

An old mining district -- the Eight Mile District -- lies east of Florence in the Lolo National Forest. The district marks the site of several rich placer mines, including the White Cloud and the Cleveland, which were in production from 1866 to 1910.

Two early homesteads are also located in the Florence area. A house, barn and two sheds of hand-hewn logs are all that remain of the Mayhew Homestead, an early dry-land wheat farm homesteaded around the turn of the century. It's unique, two-story "saltbox" style is said to have been the finest house in the area. The homestead is five miles northeast of Florence on Woodchuck Creek.

The Wagner Homestead, just a mile north of Florence, consists of six log structures built by three brothers who emigrated from Germany between 1867 and 1875. These buildings are distinguished by their German craftsmanship. One of the structures has been given to the Stevensville Historical Society and moved to the Fort Owen State Monument.

Dee Taylor, anthropology professor at the University of Montana, reports there is one archaeological site in the area; however, it does not lie on the property proposed for development. Taylor said a general lack of other data for this area "probably reflects the fact that a cultural resources inventory has never been done there."

"Certainly the potential impact on historical and archaeological sites is not minor," he added, "rather it is unknown at present."

Taylor recommended a cultural resources inventory of the proposed development be conducted "prior to modification of land surfaces." Such an inventory would be left to the discretion of the developers.

## HUMAN ENVIRONMENT

### Social and Cultural Characteristics

Florence is a youthful and rural community. According to a survey<sup>1</sup> conducted for the DHES by Raymond L. Gold, director of the University of Montana Institute for Social Research, the average age of the area's residents is 26. The population is also young in terms of length of residence: More than half the residents have lived in the area for five years or less.

Survey results indicate that young families have chosen to settle in Florence for a reason, and the reason is the area's rural character. A clear majority (76 percent) of those surveyed said they moved to the area primarily because of its rural character. Furthermore, 71 percent of the respondents said their continued residence in the Florence area hinges on the maintenance of that rural character. (Forty percent said they would consider moving from the area if an anticipated 200 to 300 families were to move in as part of the proposed Hensler Ranch development within the next five years.)

Because of their preference for a rural environment, Florence area residents are highly sensitive to growth patterns in their community. Though residents do not advocate a "no growth" policy, they are deeply concerned about the kind and the rate of growth in their community. According to the survey, the residents are nearly unanimous (91 percent) in their opinion that rapid growth is not good and should not be encouraged. On the other hand, 88 percent believe some growth is acceptable as long as it proceeds slowly and orderly.

The same general opinions are reflected in the residents' specific attitudes toward the proposed Hensler Ranch subdivision. Only 10 percent are unconditionally opposed to the subdivision. However, a majority (59 percent) say the development is unacceptable as proposed. Most agree that various modifications would make the project acceptable. Among the modifications they favor, in varying degrees, are: a smaller development; a slower rate of development; relief from anticipated increases in the costs of social services; assurance of the quality of housing and overall development; enforcement of a 10-acre minimum on lot size, and some kind of assurance that the subdivision would not have a negative impact on their quality of life.

To summarize the overall reaction of the residents to the proposed subdivision, a small minority welcome it, compared with the majority of respondents, who view it as a threat to their way of life. It should be noted that residents do not view the subdivision as an isolated development that will single-handedly change their way of life. Rather, they view it as part of a trend toward rapid and unplanned growth in their area and an erosion of the rural character of their community. In his survey summary, Gold states the irony of this trend: "If existing patterns of development continue unabated, the principal attraction of the Florence area will be displaced by a different, more urbanized way of life."

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<sup>1</sup>The "Survey of Anticipated Social Impacts of the Development of the Hensler and Associated Properties" was conducted in late April and May of 1978. Results and a summary of the survey were submitted to the DHES June 2, 1978. The Institute for Social Research, University of Montana, utilized a probability (or random) sampling method in conducting the survey, which represents about 10 percent of the households in the study area.

Another community characteristic that is changing, according to at least one native of the Bitterroot Valley, is a sense of civic or community involvement. Bob Krout, who serves as a volunteer on both the Florence "quick response (medical) unit" and the Florence fire department, says one characteristic is common among new residents, and that is an unwillingness to become involved in community activities. "Most new residents work in Missoula and live here to get away from the hassle," he said recently in a phone conversation. "They don't want to become involved in the community. They just want to be left alone."

### Distribution and Density of Population and Housing

Florence is a rural community with an estimated population of 2,300. According to the Gold survey, its residents are young and they're there by choice. As mentioned earlier, the majority of residents are employed outside the community.

About 28 percent of the population are children between the ages of 1 and 5; 10 percent fall between the ages of 6 and 18; 54 percent are between 19 and 49 years old, and 8 percent are 50 years or older. Although Florence consists largely of younger families, it has some attraction as a retirement community also. More than half of the people in the older age category have lived in the area less than five years.

The people of Florence describe their community as rural. Outlying ranches and small farms dot the area surrounding Florence, along with clusters of single-family residences and lots. The population of Florence itself is concentrated just west of the post office on Highway 93 and adjacent to the Florence-Carlton School. Recent development has produced scattered lots and subdivisions of various sizes, which are becoming more and more evident throughout this portion of the Bitterroot Valley.

Potential impacts of the Hensler Ranch development are based on an estimate of between 200 and 300 families moving into the area over the next five years. (This is the estimate used in the Gold survey.) As of 1975, the mean size of a Montana household was 2.93.<sup>2</sup> Using this statistic, the proposed subdivisions would raise the population of Florence by anywhere from 25 to 40 percent within five years. (The statistic could be conservative for this community since Florence is inhabited largely by younger people of a child-bearing age.) If the proposed subdivisions should become fully developed, there would be hundreds of families living in an area that was once one ranch. A population increase of this magnitude is bound to alter the way of life in a community that, up until recently, has functioned on a first-name basis.

### Quantity and Distribution of Employment and Income

Farming, ranching, small business and the forest products industry account for most of the employment in the Florence area, according to the Gold survey.

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<sup>2</sup>U.S. Bureau of the Census, Current Population Reports, Series P-60, No. 108, "Household Money Income in 1975, by Housing, Tenure and Residence, for the United States, Regions, Divisions, and States (Spring 1976 Survey of Income and Education)," U.S. Government Printing Office, Washington, D.C., 1977.

The majority of residents, however, are employed outside the area. Many Florence residents work 20 miles up the road in Missoula, and most of the people surveyed said their continued residence in Florence is not dependent on rural employment opportunities. In short, employment is not among the attractions that draw people to the Florence area. However, the ability of Florence residents to combine a rural lifestyle with a steady job outside the community does appear to be a drawing card for the area.

Nearly all (86 percent) of the households covered by the survey have at least one person salaried or self-employed. Forty percent have two persons salaried or self-employed.

Average annual family income in the Florence area is \$17,516, according to the survey. Twenty percent of those surveyed have annual family income of less than \$10,000. The annual family incomes of 36 percent fall between \$10,000 and \$17,000; 37 percent fall between \$17,000 and \$35,000, and 7 percent exceed \$35,000.

The largest job category among those surveyed is the clerical/technical field. The second largest category is skilled manual. Other categories, in descending order, are: administrators, small business owners and semi-professionals; semi-skilled; medium-sized business owners and unskilled workers.

The survey concludes that income levels and diversity of employment are greater in the Florence area than they are in comparable, rural Montana communities. Gold attributes this disparity to the area's proximity to Missoula and to the number of residents working outside the area in which they live.

Because jobs are scarce in Florence, it is anticipated that new residents would be forced to seek employment outside the area. For that reason, it is likely the proposed development would at least initially be a bedroom community for Missoula. Demands for more convenient local services would probably create more employment opportunities in the Florence area. Even though there is a general apprehension among area residents that the job situation would become a problem if there were a sudden and substantial influx of people into the area, the Gold survey shows that 60 percent of the respondents feel the proposed development would have little or no impact on their income and/or employment.

### Taxes

It is not possible to accurately predict tax revenues with any degree of certainty since no one knows what the market value of the lots will be until they are sold; nor is it possible to predict what future mill levies will be. Yet it is possible to make some assumptions and discuss possible situations that might occur regarding local tax revenues.

According to the Ravalli County Appraisal Office, agricultural land is taxed much less than suburban tracts. This is true throughout the state. Consequently, when a parcel of agricultural land is subdivided and sold, the tax income increases appreciably. Most subdivided properties eventually have homes and associated buildings built, thus not only is local government able to tax the land but it also taxes the buildings.

The taxes on homes are in proportion to the value of each home. Thus, the taxes on a \$20,000 home will be less than the taxes on an \$80,000 home.

The lots and eventual homes in the Hensler subdivisions will generate appreciably more taxes than those derived from the agricultural land. However, the subdivisions will generate certain costs--such as more pupils for local schools, expanded fire protection, possibly an increase in law enforcement, road improvements, etc.--which were not associated with the agricultural land and will have to be paid through taxes.

The problem of new tax revenues vs. increased local services, then, reduces to the question of whether the increase in revenues will cover the costs of the increased services.

Taxes on subdivided land vary according to the dwellings on the property. The 20-acre tracts in Hidden Valley Ranches have restrictive covenants that prohibit mobile homes and trailers and specify that homes must either be no smaller than 900 square feet for a one-story home or no smaller than 700 square feet for the ground floor of a two-story home. Considering current construction costs, homes built according to minimum specifications should cost from about \$35,000 to \$40,000.

Since the DHES did not receive protective covenants for the occasional sales outside of Hidden Valley Ranches or Riverview Orchards, it appears there are few if any restrictions on the type of dwellings or associated buildings.

If mobile homes are placed on lots the amount of tax income is normally less than permanently constructed homes, due to the value of the mobile homes. An average sized mobile home (14' x 66') sells for between \$12,000 and \$20,000. Additionally, if the mobile home is not on a permanent foundation it is taxed as personal property and depreciates each year, thus gradually lowering the taxes the owner pays on the trailer home.

Hypothetically, if each of the 154 lots in Riverview Orchards had a mobile home on it, and none of them were on permanent foundations, the total tax revenues would decrease yearly. Conversely, if each lot has a permanently constructed home on it, the tax income, over a period of time, would likely increase.

Thus, the types of developments which occur on the former Hensler Ranch property and in the area adjacent to the property will be determining factors in the amount of tax income available to pay for local taxes.

If growth is well planned and spread over a long period of time, tax income (depending on the type of development) should be able to keep pace with the increased need for local services. However, if a community experiences high density, rapid development, and it's the type that generates the least amount of tax revenues, then community services such as schools, law enforcement, fire protection and so on, suffer the consequences of being unable to financially meet the bludgeoning demand.

In terms of the Hensler Subdivisions, both extreme possibilities exist. It's possible to have rapid, dense development with an extremely low tax base or gradually planned development with the highest possible amount of tax income. The third possibility would be a middle ground somewhere in between. The controlling factor in all three possibilities rests with local citizens and officials and how they plan the development of the area.

### Demands on Government Services

The Department has received numerous letters from Florence area residents who are concerned about the potential impacts of the proposed subdivisions on their community. Most of the letters address the impacts of the development on various social and government services and the anticipated rise in taxes to cover these impacts. Schools emerge as the single-most important area of concern.

Many residents have expressed concern, either in their letters or through their responses to the Gold survey, that school facilities are already overcrowded and underfunded. Many also fear an increase in school taxes will inevitably follow an increase in student enrollment.

One of the earliest critics of the development was Dr. William Willavize, superintendent of the Florence-Carlton (elementary and secondary) Schools.

In a report to the Department, Dr. Willavize said development of the Hensler Ranch subdivisions has the potential of doubling the Florence-Carlton School population within a "relatively short time." (Dr. Willavize based his report on a projected figure of 1.7 students per household--a figure he obtained from the Ravalli County Planning office. In a letter to the Department, Planning Board Chairman Earle Wright challenged this figure. According to his own calculations, based on tax-paying homesites, Wright came up with a figure of .5 children per home. Dr. Willavize came in later with yet another figure of 1.6 school-age children per household based on statistics he obtained from an existing subdivision about two miles north of Florence.)

In September of 1977, the voters of the school district passed a high school and elementary bond issue for construction of additional space to provide classrooms for the next five to eight years. In his report, Dr. Willavize stated: "With the knowledge we now have of major and minor subdivisions planned in the District, we feel that the additional space may be near capacity when opened."

Dr. Willavize added that the school presently has an inadequate bonding capacity for the anticipated influx of students. "While it is true that additional homes will bring in additional bonding capacity and taxable valuation, it is also true that this increase will not cover the cost of school facilities for the students the houses will bring," he said.

"Without adequate financial resources," he added, "it is apparent that double-shifting will occur and that all students will have a reduced quality of education."

Dr. Willavize recommended that no more than 20 homes be constructed each

year on the ranch, and that if the number exceeds 20, "the developers shall provide financial assistance to the District in the form of cash payment or land for school construction."

Like the other residents of the area, Dr. Willavize said he is not opposed to growth, but he is opposed to unplanned, haphazard growth. His major concern is that the school is not adequately funded to provide classroom space and operational monies for the children it is serving. "We are not anti-development," he said. "We are pro-children."

Another school that stands to be impacted by the development is the Lone Rock School in Stevensville. The school currently serves 170 students in grades kindergarten through eight, and according to school board chairman Jim Kaiser, has a capacity of 200. "The school faces the reality of normal growth and with this, the need to build," Kaiser said in a letter to the Department. "We do not expect the (Hensler Ranch) development will be stopped, but we feel there is a need for a slowdown, careful planning and some form of impact aid."

The Department also received a letter from Carl Martin, chief of the all-volunteer Florence Fire Department. Martin believes the fire department will be able to serve the proposed major subdivision--Riverview Orchards--because it lies near a good road. However, he said his crew would not be able to get their trucks into the minor subdivisions during the winter months because the roads would not be maintained by the county. He also pointed out that no water supply would be available to the trucks within the subdivisions. He said that approval of all the subdivisions would have a major impact on the fire department's budget and that the department would need another building unit to serve the area.

Minor subdivisions also lie in the Three Mile Fire Company district near Stevensville, according to Dave Brandon, secretary-treasurer of the company. In a letter to the DHES, Brandon said there is not a suitable water supply near the subdivisions for use by his crew. He suggested a well or other suitable supply of water be made available by the developers. He also said purchasers of property in this area should be informed about which fire district they reside in, how and where to report fires and what kind of response time to expect. (Brandon said response time of the Three Mile Company exceeds 30 minutes.)

In response to the department's PER, Dennis Lind, attorney for several of the developers and current property owners said "a buyers information statement" is required on all parcels indicating fire response time. He added that individual owners have indicated a willingness to allow fire truck hookups to private wells.

Brandon closed his letter by stating the impact of the development would be "devastating" to his budget. He added: "Furthermore, if this development, and the many others proposed in our district, realizes its full potential for growth, it will necessitate additional fire trucks, companies and expansion of the all-volunteer fire fighter force in this district."

According to Ravalli County Sheriff Dale Dye, there are currently two officers assigned to handle law enforcement problems in the Florence area. A third officer roves throughout the county and works occasionally in Florence.

Sheriff Dye said that population growth generally tends to increase pressure on the public services system and that he wouldn't have trouble finding work for any additional officers. He added, however, that "the present staff is adequate for handling the major problems that are brought to the attention of my department." He said any additional manpower would be used for patrol and investigative work.

It is the sheriff's opinion that subdivisions create law enforcement problems when buyers over-extend themselves financially. Certain terms attract people who can't really afford the price of buying and maintaining a residence, according to Dye. He describes the resulting problems as "inadequate fences, lack of proper control of livestock, dogs and kids, marital problems, theft problems, etc."

For a discussion of impacts on area roads and traffic, see section on Transportation Networks and Traffic Flows.

#### Human Health

Like most rural communities, Florence depends, to a large extent, on local volunteers to provide needed human services, such as fire protection and emergency medical aid.

A 12-member team makes up Florence's "quick response (medical) unit." The team, the only one of its kind in Ravalli County, serves the northern end of the county, covering roughly the same jurisdiction as the fire department (about 107 square miles).

Members of the team have been trained as emergency medical technicians. Their job is to lend first aid and stabilize the victim until an ambulance or other professional help arrives. According to one member of the team, Bob Krout, who also serves the volunteer fire department, the quick response unit has responded to 32 calls since December 1977, when team members completed their training.

Krout reports that outside of one physician in Stevensville, area residents rely on Missoula and Hamilton for medical services, personnel and facilities. Residents of the northern end of the county generally travel to Missoula for these services, and residents living in the southern portion of the county travel to Hamilton, which has a hospital.

Krout said there is one ambulance in Stevensville, which is operated through the sheriff's office in Hamilton. The ambulance is operated by volunteers on an on-call basis. He added, however, that the Missoula ambulance service is used more often in Ravalli County than the Stevensville ambulance.

It is Krout's opinion that development of the Hensler Ranch subdivisions would impose a significant hardship on the quick response unit, as well as on other social and human services. He believes the development could triple the size of the Florence community if the property is fully developed. Although it is anticipated that most of the new residents would use Missoula medical services, there would still be an increased need for the kind of emergency aid provided by the quick response unit.

Another human health consideration is proper solid waste disposal. Currently, there are two approved solid waste disposal sites in Ravalli County. The disposal site at Darby is operated by the Darby Refuse Disposal District and is for use almost exclusively by Darby area residents. The other site, at Victor, is privately owned and operated by Charles Mann. During the comment period on the PER, Mann said the landfill ... "can easily take care of this subdivision and a hundred more like it with no adverse effect."

Depending on how fast the subdivisions would be developed, the DHES' Solid Waste Bureau believes the development would have a definite impact on the solid waste system in the area. Unless a new landfill site is developed, it is estimated that solid waste generated by the development would significantly shorten the life of the Victor landfill.

Landfill location is a difficult problem in the Bitterroot Valley, according to the Solid Waste Bureau. Valley land consists generally of sandy, gravelly soils, underlain by high groundwater, and the bench areas pose bedrock problems. Agricultural land in the Valley is generally regarded as too valuable to be used for landfill purposes. Finally, few people want a landfill located next to their home and, as population and homes increase, there will be fewer sites to choose from for landfill needs.

#### Agricultural or Industrial Production

Most of the 802 acres of the Riverview Orchards Subdivision have been under cultivation in the past. Soils are classed by the Soil Conservation Service (SCS), United States Department of Agriculture (USDA), as Lolo gravelly loam. SCS estimated yield on this soil for spring wheat is 20 bushels per acre and 25 bushels per acre for barley. Therefore, it can be expected that under ordinary management, up to 16,000 bushels of wheat or 20,000 bushels of barley could be produced on this land. The Chicago Board of Trade closing price for September wheat was \$3.24 $\frac{1}{4}$  on June 19. The grain that could be grown on this land would command a gross value of \$51,880 on that day. Net value would be gross value less cost of production.

An estimated 200 acres of the land in the northwest part of Hidden Valley Ranches is in irrigated alfalfa. The soils are classed Lolo gravelly loam and Hamilton-Corvallis silt loam. SCS estimated yields for alfalfa on these soils range from 2.6 to 4 tons per acre. Using an average of 3 tons per acre, an estimated 600 tons of hay could be produced. Since hay prices vary from year to year, depending on availability, revenue estimates would not be meaningful.

Approximately 100 acres in the eastern portion of Hidden Valley Ranches have been cultivated in the past, but now support sparse cover of knapweed, Sandberg bluegrass, cheatgrass and forbs. Surface soils tend to be dry, hard, puddled or in hard clods, gravelly or cobbly and rough. Discing has produced these soil conditions. Yield estimates for spring wheat on these soils is low due to low moisture-holding capacity.

The subdivision of Riverview Orchards will end the growing of wheat or barley. In terms of the alfalfa, some property owners may keep portions of their land in alfalfa, but the large fields will be broken down into smaller parcels.

### Industrial and Commercial Activity

Although there are no known plans for commercial developments on any of the subdivisions, the amount of anticipated growth will probably lead to more local commercial activity. This growth could occur in Florence, at the development site or in both areas. It is difficult to predict what types of commercial developments might occur, but certainly some will be aimed at providing goods and services for new and existing residents.

Commercial and industrial development have been approved as permitted uses on about 2,900 acres of the Hensler properties by means of the zoning process. Ravalli County commissioners have approved three zoning petitions, covering portions of Hidden Valley and Riverview Orchards, that provide for one-acre minimum lot sizes, with the following permitted uses: residential, agricultural, industrial and commercial.

It should also be noted that four acres of the adjacent, 40-acre proposed major subdivision--Circle Square Homesites--have been designated as light commercial. This subdivision is at the preliminary review state. Although it is not a part of the development under review in this EIS, it lies in the immediate vicinity.

### Access to and Quality of Recreation and Wilderness Activities

Because of its agricultural land base, plus its location along a major water system and between two majestic mountain ranges, the Bitterroot Valley has long been admired as one of the most scenic areas of Montana. The valley's scenic attractions, plus its reputation for good hunting and fishing, have drawn visitors from all over the state and out-of-state tourists as well.

Florence itself provides easy access to a wide variety of year-round, outdoor recreational activities. Located just a few miles from Florence, the Bitterroot National Forest offers a number of recreational opportunities, including hunting (big game and birds), fishing, hiking, camping, horseback riding, cross-country skiing, snow-shoeing and snowmobiling.

Though most recreational activity occurs in the Bitterroot Mountains and along the west side of the valley, the Sapphire Mountains to the east are also used for recreational activity. Some of the major activities in the Sapphires are hunting, hiking, cross-country skiing, horseback riding, snowmobiling and off-road vehicle use. Major access roads into the Sapphires are the Eightmile Creek Road, the Threemile Creek Road and the Ambrose Creek Road. Although these roads are now used moderately, it is anticipated their use will increase substantially with development of the proposed subdivisions. All three roads are near the Hensler Ranch property, and Eightmile Creek Road is the main road that would serve Riverview Orchards, the major subdivision.

Other attractions near Florence are the Selway Bitterroot Wilderness Area, the Bitterroot River and the Ravalli Wildlife Refuge, just south of Florence. The refuge serves as a sanctuary for many species of migratory birds.

The Montana Department of Fish and Game has developed three public fishing access sites along the Bitterroot River. All three sites are only a few miles from Florence and all three currently receive heavy use.

Most of the land in the Bitterroot Valley is privately owned, and permission is often required before entering onto it. A sudden influx of new residents into the area can be expected to put a strain on landowner-sportsmen relations as more and more people seek to hunt and fish on private property.

With increased development and subdivision activity comes increased pressure on all recreational resources in the valley. The quality of the recreational experience can be expected to decline proportionately with increased use of the recreational resource. According to the Gold survey, 61 percent of the respondents expect to see a decline in the quality and availability of recreational opportunities if the Hensler properties are developed.

### Locally Adopted Environmental Plans and Goals

In 1976, the citizens of Ravalli County adopted a comprehensive plan for their county. The plan opens with the following goals statement: "The following ideas, expressed as goals, are centered on the proposition that the county citizens cherish the rural life style and value open space, and that direction toward a higher standard of living includes an awareness of the environmental qualities to be maintained for the present and future county residents."

After 31 pages of discussion, the comprehensive plan closes with this statement:

"One basic characteristic of the people of the Bitterroot is their pride in being who they are and where they are. This plan is an attempt to help all of us keep that pride, to assist in maintaining those qualities of life that make the Bitterroot unique. The plan will have succeeded in its purpose if, years from now, we can still all be proud to say that we live in the Bitterroot Valley of Montana."

In other words, the residents of this area take a fierce pride in their environment. Most of the residents live here by choice, and most moved to the area recently for a single reason: they like the rural environment of the Bitterroot Valley. According to the Gold survey, 76 percent of the respondents said they moved to the area primarily for its rural character. The same survey reveals that 73 percent believe there has been an erosion of this aspect of the community over the past three years.

Land-use planning is a controversial issue in Ravalli County. The DHES received 31 letters from Florence area residents and citizen groups during the comment period on the PER. The letters generally expressed concern about the proposed subdivisions and requested further review by the state. Of the 31 letters, 12 were critical of the planning process in Ravalli County. Comments from the letters and from the Gold survey indicate that county residents do not arbitrarily oppose growth, but they do feel threatened by rapid and disorderly growth in their county.

Florence-area residents do not feel they have enough control over what happens in their community, according to the results of the Gold survey. The survey also shows that residents believe "the county boards and commissioners do not entirely share local residents' feelings about growth." In his narrative describing the survey results, Gold states: "While respondents feel that local residents are equally divided between a no-growth policy and the promotion of planned growth, only 27 percent see the county boards and commissioners as promoting planned growth, and 40 percent see them as promoting spontaneous growth."

Twenty-five percent say they could not characterize the county boards' and commissioners' policies on growth." Although half the local residents believe they should have the most control over growth in their area, according to the survey, "the majority of respondents see those presently in control of growth decisions (real estate developers, large landholders and the county commissioners) as leading them away from a controlled or planned growth policy."

According to local newspaper accounts, planning board meetings dealing with development of the Hensler properties have been heated and well attended. In their letters to the DHES and in published news accounts, area residents have criticized the process by which several minor subdivisions, with a potential major impact, can avoid extensive review at the local level (Refer to section on Background, page 6 ). To date, 27 of the potential 76 minor subdivisions in COS 1316 and COS 1503 have been approved by the local planning board. They are still pending before the county commissioners.

The commissioners have approved three zoning petitions covering portions of the Hensler property, including portions of Hidden Valley and Riverview Orchards. All three petitions, which cover about 2,900 acres, provide for one-acre minimum lot sizes, with the following permitted uses: residential, agricultural, industrial and commercial. Although current protective covenants restrict lot sizes in the minor subdivisions to five acres, the zoning resolutions clearly indicate the potential for one-acre lots upon expiration of the initial term of the covenants on January 1, 1983.

Here is what the Ravalli County Comprehensive Plan says about zoning: "Some sort of order is needed if the growth of Ravalli County's population--evident in the past few years and projected to continue--is not to produce a rural slum and a blighted landscape. Everything that is being built and will be built in the future cannot be beautiful, and a sprawl of eyesores the length of the Bitterroot Valley will please no one. Moreover, unplanned neighborhoods tend not to be neighborhoods at all, but merely clusters of isolated people. Without some prior planning, there can be no sense of community among groups of people in the valley, no conveniently organized areas for industry, no healthy clusters of commercial enterprise."

#### Transportation Networks and Traffic Flows

The Montana Department of Highways was asked to comment on impacts of the Hensler Ranch subdivisions on roads and traffic in the Florence area. In a memo dated March 2, 1978, the department defined the impact as major. The Department was asked to elaborate on this statement after it was decided that an EIS would be written for the development in compliance with the Montana Environmental Policy Act (MEPA). The department declined to elaborate, stating the roads in the area are maintained and controlled by the county.

Jay Unrue, head of the Ravalli County Road Department was also asked to comment on the situation. Unrue said the East Side Highway (Montana Highway 203) is a good road that can handle the anticipated traffic increase.

The East Side Highway makes a 90-degree curve at the Hensler Ranch subdivisions. The county road that would serve Riverview Orchards intersects the highway near this curve. A private access road that would serve the minor subdivisions enters the highway just south of the curve. Mr. Unrue said he does not believe the location of these intersections would create problems.

The DHES requested written comments from the Ravalli County Road Department concerning impacts of the Hensler Ranch subdivisions. No reply has been received.

It should be noted that since Florence is generally regarded as a bedroom community for Missoula, a development of the magnitude proposed would significantly raise the amount of commuter traffic on Highway 93 between Florence and Missoula. The traffic issue was raised by several of the area residents who submitted letters to the DHES during the comment period.

#### Demands for Energy

Representatives of both the Ravalli County Electric Cooperative and Mountain Bell said they would be able to service the proposed Hensler Ranch subdivisions.

Full development of the properties would necessitate a new substation, according to Gary Mason, a representative of the electric cooperative. Cost of a new substation would be shared by the Ravalli County Electric Cooperative and the Missoula County Electric Cooperative since the substation would service customers of both cooperatives. According to Mason, the main power line to the Hidden Valley subdivisions would be paid for by the developers. All power lines in Hidden Valley would be underground. Mason said he did not know who would pay for the main line to Riverview Orchards. The main line would be above ground with underground service connections.

Since the Ravalli County cooperative supplies electricity only, any auxiliary power or heating sources would probably have to be supplied by the individual property owners.

Telephone service will be provided by Mountain Bell from its Missoula station. According to Jack Pippy of the Missoula station, the quality of service will depend largely on the rate of development. If growth is moderate and can be forecast, Pippy anticipates no problems. However, if growth is erratic or slow or if it mushrooms, he said it would be difficult to supply adequate service.

Another major energy consideration is the commuter traffic that would be generated by the proposed subdivisions. It is anticipated that most of the new residents would work outside of Florence and many would work in Missoula, which would mean a 40-mile round trip each workday.

In a time of high fuel prices and growing awareness about finite fossil fuel supplies, the necessity to commute is probably becoming a major consideration in home-buying decisions.

#### PRIMARY, SECONDARY AND CUMULATIVE IMPACTS

Primary impacts include the change in land use and the apparent lack of local support for high density, rapid development.

The proposed subdivisions will change the area from a rural, agricultural area to a more suburban community. According to the Gold survey, people in the Florence area are not anti-development, but they do not want rapid, high density growth and the problems associated with such development.

Secondary impacts include such things as loss of wildlife habitat, increase in the demand for local government services and the possible alteration of air quality.

Development of the 2,500-acre tract will eliminate a great deal of natural habitat, thus resulting in game and non-game wildlife moving out of the area and into quieter, more protected areas. There is a possibility the migration from one area to another will cause crowding in adjacent areas.

If rapid development occurs, local government services -- such as schools, law enforcement, fire protection, roads, etc. -- will be impacted. The subdivisions will generate more tax income, but whether the increases will cover the services is a point of conjecture.

If local residents and homeowner associations do not take steps to surface roads or suppress road dust, it is possible federal air quality standards will be exceeded.

The cumulative impact of the proposed subdivisions will be a change from a rural to a more urban community and the permanent loss of agricultural land. By itself the loss of crop land should not affect agricultural production in Ravalli County; however, it adds to the cumulative loss of agricultural land to residential development in the county.

#### POTENTIAL GROWTH INDUCING OR INHIBITING IMPACTS

If the developments on the 2,500-acre tract prove to be successful, they could prompt the development of the 1,950 acres, southeast of the property now being reviewed. The growth could encourage the creation of additional developments, such as the proposed Circle Square Homesites, in the immediate vicinity of the land now under review. Thus, there is a good chance the proposed developments will be growth inducing.

#### IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF ENVIRONMENTAL RESOURCES

As previously discussed, land use and aesthetics will be forever changed, along with possible negative impacts to air quality and water availability.

#### ECONOMIC AND ENVIRONMENTAL COSTS AND BENEFITS

##### Economic

###### Benefits:

1. Tax revenues for Ravalli County will increase.
2. There will be greater demands for local goods and services.
3. Development and construction will create short-term jobs.

###### Costs:

1. There will be a need for more local government and human services, such as schools, law enforcement, fire protection, roads, etc.
2. The cost of building and living will probably be higher than if the development were situated near a major urban center, such as Missoula or Hamilton.
3. There will be a loss of agricultural production.

##### Environmental

###### Benefits:

1. The chance of over-grazing on dry benchland areas will be reduced.

2. People moving into the developments will enjoy some of the benefits of rural living; however, if rapid, high density development occurs, the character of country living will change.

Costs:

1. The development will cause a permanent change in aesthetics and land use.
2. More stress on recreational opportunities in the area and possibly more strain on landowner-sportsmen relations.
3. The development will possibly degrade air quality and water availability.
4. Household pets may cause harrassment of wildlife and domestic livestock.
5. The rural character of the Florence area is likely to be changed.
6. Wildlife habitat will be lost to residential development.

Short-term vs. Long-term Costs and Benefits

Short-term

Costs:

There will be some degradation and disruption of the land during the construction of roads and houses.

Benefits:

Jobs will be created by the construction associated with the subdivisions.

Long-term

Costs:

There will be a loss of wildlife habitat and the area will change in terms of character and aesthetics.

Benefits:

The reduction of grazing will benefit some of the dryland bench areas which have been over grazed in the past.

## ALTERNATIVES

### 1. Disapprove the subdivisions:

The Hidden Valley Ranches, COS 1316, and COS 1503, would remain as twenty-acre parcels and perhaps exemptions would be used to create a similar number of parcels on a piecemeal approach. Riverview Orchards subdivision would remain with its present configuration of approximately 72 lots.

### 2. Unconditional approval:

The subdivision would be approved without any additional requirements.

### 3. Conditional approval:

A. Riverview Orchards Subdivision cannot be approved until the items requested in the February 24, 1978, letter from DHES to Professional Consultants, Inc., have been received. Those items are:

- 1) Percolation tests on lots 6A and 6B exceeded 60 minutes per inch, which is an unacceptably slow rate. An acceptable sewage treatment site must be found before approval of lots 6A and 6B can be granted.
- 2) An additional \$50. review fee must be submitted (154 lots x \$25. per lot = \$3,850. The Department received a check for \$3,800.).
- 3) A letter of approval from the Ravalli County Health officer or his agent.

B. The Air Quality Bureau, DHES, has determined that road dust from the Hensler Ranch Subdivisions (which include: Riverview Orchards and Certificates of Survey 1316 and 1503) will create violations of federal ambient air quality standards unless appropriate preventive action is taken.

The DHES will issue an administrative order to parties responsible for maintenance of the roads under the provisions of ARM 16-2.14 (1)-S1440 Particulate Matter Airborne that will require the initiation of appropriate road dust control measures.

## RECOMMENDATION

Based on the information in this EIS, the DHES recommends alternative three, conditional approval of Riverview Orchards and the parcels being reviewed in Certificates of Survey 1316 and 1503.



**Hamilton, Montana**

January 11, 1978

State Dept. of Health & Environmental Sciences  
Subdivision Division  
State of Montana  
Helena, Montana 59601

**RECEIVED**

FEB 17 1978

MONTANA DEPT. OF HEALTH  
HEALTH SERVICES DIVISION  
HELENA, MONTANA 59601

Gentlemen:

Under the present rules observed in Ravalli County at this time, Ammended Subdivision Plats are not reviewed by the Planning Board.

After consulting with those in charge of surveying the several lots in RIVERVIEW ORCHARDS, shown on the enclosed plat, we feel it is in the best interest of the County and particularly the office of Clerk and Recorder that these several potential Ammended Subdivision Plats be filed on one sheet.

Thank you for reviewing this and all platted lands to help assure the health and safety of the people of Ravalli County.

Sincerely,

*Jim McFady*  
\_\_\_\_\_  
*D. W. Galbraith*  
\_\_\_\_\_  
*Hugh H. Cumming*  
\_\_\_\_\_

RAVALLI COUNTY COMMISSIONERS

## REFERENCES

- Booth, W.E., Grasses of Montana, Department of Botany and Microbiology, Montana State University, Bozeman, MT, 1972.
- Botz, Maxwell K., P.E., hydrologist-engineer, Western Technology and Engineering, Inc., June 1, 1978.
- Brandon, Dave, officer, Three Mile Fire Company, March 3, 1978.
- Comprehensive Plan of Ravalli County, Ravalli County Planning Board, Hamilton, MT, July 1976.
- Declaration of Restrictions, Covenants, and Conditions, Hidden Valley Ranches, Oct. 18, 1977.
- Donovan, Joseph J., hydrogeologist, Montana Bureau of Mines and Geology, May 17, 1978.
- Dye, Dale E., sheriff, Ravalli County, May 31, 1978.
- Forest Service, U.S. Department of Agriculture, Draft Environmental Statement: Multiple Use Plan -- Bitterroot North Planning Unit, Jan. 14, 1974.
- Gold, Raymond L., Survey of Anticipated Social Impacts of the Development of the Hensler and Associated Properties, Institute for Social Research, University of Montana, Missoula, MT, June 2, 1978.
- Herrin, John, Hensler Subdivision Geology, University of Montana, May 29, 1978.
- Kaiser, Jim, chairman, Lone Rock School District 13, March 20, 1978.
- Kimmell, Paul, Recreation in the Vicinity of the Hensler Subdivision & Associated Properties, University of Montana, May 29, 1978.
- Krout, Bob, volunteer, Florence Quick Response Unit and Florence Fire Department, June 20 and 21, 1978.
- Lind, Dennis, attorney, Missoula, MT, March 28, 1978.
- Mann, Charles, owner-operator, Bitterroot Valley Sanitary Landfill.
- Martin, Carl, chief, Florence Fire Department.
- Mason, Gary, Ravalli County Electric Cooperative, Inc., June 16 and 23, 1978.
- McCarter, Steve, resident, Victor, MT, June 12, 1978.
- Montana Historic Preservation Plan, Montana Department of Fish & Game, July 1975.
- Pippy, Frank, Mountain Bell Telephone Company, Missoula, MT, June 23, 1978
- Ravalli Republic, Jan. 16, Feb. 22, March 3, March 13, March 17, April 3, May 17, May 19 and June 15, 1978.
- Salvato, Joseph A., Environmental Engineering and Sanitation, Wiley-Interscience, second edition, 1972.

Scaggs, Gordon, Bird Species Observation and Nest Location on the Eightmile Ranch, University of Montana, 1975.

Scaggs, Gordon, Hensler Subdivision Vegetation & Wildlife, University of Montana, May 29, 1978.

Schmidt, Tom, Air Quality Bureau, DHES, June 22, 1978.

Simpson, Jim, Preconstruction Bureau, Montana Department of Highways, March 2, 1978.

Sledd, John, Hensler Subdivision Vegetation, Topography & Wildlife, University of Montana, May 29, 1978.

Soil Survey: Bitterroot Valley Area, Montana, U.S. Department of Agriculture, Soil Conservation Service and Montana State Agricultural Experiment Station, May 1959.

Taylor, Dee, professor, anthropology, University of Montana, Missoula, MT, Feb. 28 and March 17, 1978.

The Missoulian, Feb. 24, Feb. 28, March 2, March 5, March 11, March 15, March 25, April 5 and May 5, 1978.

Thomas, Bill, information officer, Montana Department of Fish & Game, Missoula, MT, March 16 and March 21, 1978.

Trusler, Pat, Solid Waste Management Bureau, DHES, June 20, 1978.

Unrue, Jay, Ravalli County Road Department.

Willavize, William, superintendent, Florence-Carlton Schools, March 1 and June 12, 1978.

Woodgerd, Wes, former director, Montana Department of Fish & Game, resident, Stevensville, March 20, 1978.

Wright, Earle c., chairman, Ravalli County Planning Board, May 27, 1978.

Zeiler, Pat, reporter, Ravalli Republic, June 12, 13, 14 and 16, 1978.

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