MONTANA STATE DEPARTMENT OF HEALTH
AND
ENVIRONMENTAL SCIENCES

September 3, 1976

Comments Concerning

Draft Environmental Impact Statement
for Sun Prairie Village - a proposed
subdivision in Cascade County

A draft environmental impact statement (EIS) was proposed and circulated by the State Department of Health and Environmental Sciences. A copy of the comments and department response is enclosed.

Based on the substance of the comments, the department waives the requirement for a first EIS pursuant to The Uniform Rules implementing the Montana Environmental Policy Act, 16-2.2(2)-P2040 (Rule V), section (2)(a) and (b).

The department anticipates approval of the proposed subdivision when the approval conditions listed on page 30 and 31 are fulfilled.

Sincerely,

Edward W. Casne, Chief
Subdivision Bureau
Environmental Sciences Division
Department of Health and
Environmental Sciences

DCA MONTANA DEPARTMENT OF COMMUNITY AFFAIRS
Capitol Station, Helena, Montana 59601
Thomas L. Judge
Governor

August 20, 1976

Edward W. Casne, Chief
Subdivision Bureau
Environmental Sciences Division
Board of Health
Helena, Montana 59601

We have reviewed the draft environmental statement for the proposed Sun Prairie Village mobile home subdivision in Cascade County. The statement appears to thoroughly discuss the potential impact of this major development, and in particular those aspects of the development which will have an impact upon local government and the community, such as tax revenue, costs of public services, transportation needs and land use.

However, the statement is not clear in regard to an important question relating to both the water and sewer systems. According to the statement, the wells are located three-fourths of a mile southeast of the subdivision near the Sun River. Is the well site located on land owned by the developer and will the home owners' association receive title to this property? If it is not owned by the developer, will a permanent easement be provided by the property owner to permit maintenance of the wells and associated water lines?

The spray irrigation system to be installed initially will require forty acres of land. Will this forty acres be included within the subdivision itself and if not, will the homeowners' association be provided with title to the separate property to be used for irrigation? The same questions also apply to the additional forty acres which may be needed in the event that maximum sewage flow occurs. The statement says that the department must be assured that sufficient land is available should this happen.

How does the department propose to "assure that sufficient land is available?" Any arrangement to provide this eighty acre area must, of course, be permanent. Permanent access could only be effectively assured by conveying title to the area to the home owners' association, or by providing a perpetual easement for the disposal of treated waste water.

We believe that the final impact should address these questions in detail.

Thank you for the opportunity to comment.

Sincerely,

David C. Cole

David C. Cole
Planner
DCA/Division of Planning

DCC/nh

Department of Health and Environmental Sciences
STATE OF MONTANA HELENA, MONTANA 59601

A. C. Knight, M.D.
~~John S. Anderson M.D.~~
~~XXXXXXXXXXXX~~XXX
Acting Director

September 3, 1976

Mr. David C. Cole, Planner
DCA/Division of Planning
Department of Community
Affairs
Capitol Station
Helena, Montana 59601

Dear Mr. Cole:

Thank you for your response to the draft EIS concerning the proposed Sun Prairie Village Subdivision.

A copy of the easements for the water supply and sewage disposal systems are on file with the Subdivision Bureau. We have received verification from our Legal Division that these easements will provide the necessary safeguards to assure adequate land availability and access.

I trust that this letter answers your questions, if not feel free to contact this office.

Sincerely,

Edward W. Casne, Chief
Subdivision Bureau
Environmental Sciences
Division

EWC/js

July 27, 1976

Edward W. Casne, Chief
Subdivision Bureau

Sun Prairie Village
Cascade County, Mont.

Dear Sir:

After reading the E.I.S. on the above proposed developement, I find many of the statements vague, inconclusive, & contradictory.

Page 1- Para. 2 " 29 multi family residential lots". To determine the requirements for water, sewer, & traffic, one must know how many people are going to live in the devlopement. Just how ' multi' are these lots?? Two trailers, or a 100 unit high-rise??

Para.3 " 26 acres for parks (more then one).
On page 12 it implys one 26 acre park. It does state as fact the park will be established and maintained by the homeowners. On page 14 it further states the park will be near the sewer lagoon, in the black alkaline area.

Lets face a few more facts that aren't mentioned. Transient (Boeing) trailer dwellers are not about to spend their money on a park they might use for a year or two. In that length of time the grass will hardly have time to get well established. The permanent dwellers are not to likly to foot the bill alone, for all the things needed to establish and maintain a park. Number one for a big expense, is who would put in the irrigation?? Then we have the fact that it is in a black alkaline area, where nothing will grow, and next to the sewer lagoon, where the smell is anything but pleasent. In short, no park.

Page 2-Para.5 " storm water drainage- will percolate most of the time" Under the present conditions, I might agree, BUT, there is going to be 50 acres of asphalt surfaced roads, which will have 100% run-off. 505 trailers, depending on size, will cover another 8 to 10 acres, with 100% run-off. 40 and possibly 80 acres will be irrigated to the maximum from the sewer lagoon. How much run-off will that have? One thing we know- none of that run-off is there now.

Page 3 - Para. 2 Armstong's pump test data; 364,000 Gals. in 23.33 hrs. The 5 wells are capable of putting out over one million Gals. in 24 hours. With 500 or more lawns, and a 26 acre park, should it ever be established, you can bet they will need that much. Lets be realistic. Pumping one third of capacity for 24 hours, couldn't possibly have any effect on outlying wells.
-Para.3 " Steve White's conclusion", " The draw-down effect to surrounding wells is minimal, due to the proximity of the Sun River." That statement is only taking up space in the report- it means nothing. An above ground river has nothing to do with an underground well. He then recommends that notice procedures be waived on this application. I DO NOT. I recommend the notices not be waived, untill such time as the maximum output of the wells in question, has been maintained, for a sufficient length of time (a year) to show it will not effect outlying wells, giving the outlying wells priority, should the water table draw down.

Page 3- & 4 Last & 1st Para. ' Giving elevations of the top of the dike above mean sea level, and stateing; " This means the dikes are well above the 100 year flood." That certainly is mishandling the truth. The dikes are not above the flood plain, and an addition on page 31, letter D, it should be stated how the dikes are to be protected, with concrete, large rocks, or whatever is adequate.

While we are on the subject of sewer lagoon dikes, I have another question. What happens to the flood water being dispalced by almost 7 acres of lagoon dikes?? Where will that water go during the next flood?? North of the dikes, into the trailer park? South of them, into Sun Prairie Estates? Will it back up some of it?? In 1975 the county road was under water about 10 inches deep for a couple hundred yards. That lagoon is right in the path of the flowing flood water, and it's going to have an effect on it.

Page 4- Sewage flow and disposal;
& 5 To obtain the figures given for sewage flow, some number of persons, times 100 gals. per day per capita, had to be used. My calculator shows this number to be 1787 persons. On page 11, paragraph 2, it states what type people are anticipated in the trailer park. Elsewhere it states 505 single family lots, and the 29 multi family lots. Using the figures given on page 11 of the E.I.S. for the family size, we get 1767 persons on the 505 single family lots. You mean only 20 persons live on the 29 multi family lots??

I know that untill the the number of persons anticipated for the multi-family lots is an established fact, all we can do is guess at that number, but why guess so low??

DISPOSAL: I'll concur, the soil can handle 5 additional inches of moisture, bringing the maximum to 27 inches. In that case, you will also have to concur that some years it rains more than other years. During those years, it will not take the 5 additional inches, and may not even take the standard 22 inches. What then?? 100% runoff into the Sun River?? On that short notice, more land and a larger irrigation system cannot be put into use.

As for the Berkley B-3 pump, with the 6 inch suction and discharge, it sounds very impressive, but; a B-3 pump has a 4 inch intake, and 3 inch discharge, and you can put 10 inch connections on each end, and still have only a 3 inch pump.

Page 10- Para 8 & 9 " type of persons living in Sun Prairie Estates"
~~& 11~~ I guess you could call me a " professional'. Truck driving is classed as a profession, but I sure as hell am not classed with 'professinal and white collar managerial' as stated in the E.I.S. and don't know of anyone out here who is.

I drive for Garrett, and two others drive for the B.N. Three carpenters, a 1-man construction(gravel and grade), Wards employee, retired osteopath, couple of insurance salesman, a full-time Guardsman, a smelterman, and a teacher, make up about half the number of persons living here. The other half fall in similar groups.Does that sound like a group of rich people?? Weare for the most part, a group of working stiffs, fed up with city living, struggling like hell to keep what we have, and who-ever wrote that statement about us, can take his presumptions and stick them in his ear.

Page 11- Para. 8. Sun Prairie Estates didn't try and block the developement. The petition our three spokesman presented at the public meeting, held for just that reason, had 100% of the residents signatures on it, along with a few facts like people living over a high pressure gas line, and under high voltage wires, the sewer lagoon in the 10 year flood plain, and the smell created by it, the traffic congestion, the crouded conditions of a trailer park, which would spill the kids and dogs over into Sun Prairie Estates, just to mention a few of the things. I guess that explains why we thought we had been ' steamrollered'. Nobody even knew we were there.

Page 12-Para 3-Kids playing in the narrow streets- just what we really need. There is no mention of small motorcycles, or dogs, an you can bet there will be planty of both, with little control over the former, and noneover the latter. What happens when the dogs pack up and harass the livestock?? With around 30 families, at the time, we have had two such incidents out here, about a year ago. After a dog or two ' disappeared' and some nasty words flew back and forth, things calmed down and there has been no trouble since, but that was with 30 families, and now we are talking 500/

Page 13- From this page, I gather my taxes are going to go up because of the developement, and the rest of the county gets to spend a half million more for education alone, plus all the fire an police protection. Then, if the trailers are set up right, the owners pay much less in taxes, and the county gets to pick up what the trailer owners save. The whole project costs the County money which in turn costs us, so a developer can make some money. somehow that doesn't grab me as quite fair.

Page 14- para 4 for a contradiction, where the developer claims the land is marginal farmland, and the A.S.C.S. office rates it average.

Para. 7- This I mentioned earlier, about the sewer lagoon an the park, being located in the high alkaline area.

Page 17- Traffic conditions.
& 18 With the A.D.T. on the Frontage road at 650 now, and the anticipated A.D.T. from the Devlopement between 3700 an 5300, you better believe we will need left turn lanes at both entrances on the frontage road, and they should be at least a half mile long, and they should be funded 100% by the developer, since it's his money making project that is causing the need for them.

It's also suggested the existing county road be built perpendicular to the frontage road, and I would have to agree with that, whether or not the trailer park is built.

Page 19- Para 8. Here we have another ' contradiction'. Elsewhere it is mentioned there will be from 1 to 2 children per dwelling, on the single family lots. Now in Paragraph 8 it says a high ratio of children per occupancy is expected.

Page 20- The need for a trailer park- People shifting around.
& 21 The Contryside Village trailer court on the north edge of Great Falls has now been approved, and should take care of anyone on a waiting list, and any influx of Boeing personell, so we really don't need another one.

As for the people in trailer courts in Great Falls moving out to this one, I'd like to know why?? With the price of gasoline going higher all the time, they can't afford to drive into town to go to work. I'm keeping in mind that these people won't be as financially well-to-do as we here in S.P.Estates. That trailer park will be just as crouded as any in town, so they will not have the things we moved out here for, namely room. With 4 lots on an acre, compared to one on 10 acres, there just is no comparison.

Page 23- Energy demands.

Montana Power just had a big rate increase, in part, to encourage conservation, because they are in short supply. Now they have all the energy needed to supply the developement, and everyone knows trailers aren't noted for their quality insulation and economy of heating and cooling.

Pages 24 thru 28 Zoning;

Just exactly what is going on here, is difficult to say. One says they can, one says they can't- but we do know they did waive the zoning recommendation. On March 12, 1976, the developer was informed, that according to law he form a zoning district before any lots are sold, and as we know, he did not form this district, but he ran an ad in the Great Falls Tribune from March 19, 1976 to March 26th, 1976, offering lots for sale in the proposed developement, and ran a similar ad again in April of 1976. The sewer lagoon is well along it's way to completion, an there is a group of materials of some kind over there, and has been for some time, and yet nothing has been appoved. Actions of this type seem quite presumptuous and high handed to me.

Page 31 'Condition (B)' Delete the ' homeowners Ass'n." and put it up to the developer to maintain and operate the spray irrigation system. What if the homeowners do not form an Ass'n.?

" condition (D) '

Should specify how the dikes are to be protected from flowing flood water- Concrete, large rocks, whatever is adequate to keep the dikes from washing away.

Gentleman, you asked for comments, and there you have them. I tried to keep it short, but believe me, I wanted to say ten times as much as I did. True, my views are biased. I like things as they are now, with the nearest neighbor two tenths of a mile away. I know that can't last, but it's nice as long as it does. When all the lots are filled, it won't be as nice as it is now, but it's still roomier than in town, something the trailer park dwellers won't have, but will take away from us.

With 2000 people in the area, there will be no more, not locking things up tight, at night, or by day, for that matter. Everything is going to change, and none of the changes will be for the better, except for the developer, he stands to make a million.

Thank you.

Yours truly,

Duane Schwecke
Rt. 1 West- Box 195
Great Falls, Mont. 59401

Department of Health and Environmental Sciences
STATE OF MONTANA HELENA, MONTANA 59601

A. C. Knight, M.D.
~~John S. Anderson M.D.~~
~~XXXXXXXXXXXX~~
Acting Director

September 3, 1976

Mr. Duane Schwecke
Route 1 West, Box 195
Great Falls, Montana 59401

Dear Mr. Schwecke:

We appreciate your meticulous review of the Sun Prairie Village environmental impact statement (EIS). Such a review gives us a better insight concerning portions of the EIS which might be in error or unclear.

In response to your comments, we thought it would be best to discuss our analysis of the EIS in the same chronological sequence you used. Thus, we'll begin with:

Page 1 - Paragraph 2: Multi-family residential lots are restricted to two-family dwellings according to the restrictive covenants. The covenants mention "duplex dwellings containing only one story," with the word building used throughout the section. In another part of the covenants it says, "In no event shall more than one mobile home be permitted to be used on any lot, even where two-family or duplex dwellings or greater density of population may be permitted."

Paragraph 3: The covenants give the homeowners association the authority to levy fees to be used ". . . exclusively to promote the recreation, health, safety and welfare of the residents. . ." Thus there will be money available to build and maintain parks.

In terms of number of parks, there are three, and yes, you read correctly, one is next to the sewage lagoon in the black alkaline area. From what I remember of the area, there is a grass cover, but the alkaline apparently prevents the growing of cash grain crops. Possibly the location isn't ideal--next to the lagoon--but we can't control questions of design. The county planning board normally discusses such questions, and I don't know if it considered the matter.

Page 2 - Paragraph 5: You have a good point, and that's why we attached item 3(a), page 30, to the list of conditions for approving the development.

Page 3 - Paragraphs 2 and 3: (Refer to Appendix A and B)

Page 3 - Last Paragraph, Page 4 - First Paragraph: (Refer to Appendix B, C and D)

Pages 4 & 5: (Refer to Appendix B and C)

Page 10 - Paragraphs 8 and 9: We're sure you can appreciate the fact that we, like people in most jobs, have certain time and money constraints.

We would have liked to have been able to talk with each property owner in the area, but couldn't. It is difficult to describe the social/cultural make-up of any community, but we think we did a pretty good job considering our resources. Concerning the identification of the three groups, we feel it is pretty close, and the fact that persons might not be "white collar managerial and professional . . ." types doesn't eliminate the fact that people living in Sun Prairie Estates are enjoying the best of two worlds--working in the city, living in the country. Plus I don't think living in the development necessarily implies great wealth, but it does imply that families have enough money to buy tracts of land, build homes and commute back and forth to Great Falls.

Page 11 - Paragraph 8: We appreciate the situation. Sometimes making one's position known is difficult.

Page 12 - Paragraph 3: The covenants say no pets shall be allowed to run at large, but the covenants are only as good as the people who control them. If there are problems, you do have two recourses, the sheriff's office and the county commissioners.

Page 13: This is something your county commissioners were aware of when they approved the preliminary plat. It is their responsibility to consider such situations and if the development doesn't increase taxes, they can take credit for the success, but if it increases taxes they must take their chances at the polls.

Page 14: One reason we check all information is to see if there are contradictions. If there are, we include both contentions and let the reader judge who he feels is most credible.

Page 17 and 18: Driving for Garrett I'm sure you can appreciate the section devoted to transporation safety. There are some problems the county, the State Department of Highways and the developer should try to iron out before an accident occurs.

Page 19 - Paragraph 8: The figures of 1-2 children per dwelling would be a high ratio of children if each family living in Sun Prairie Village had children. However, undoubtedly families will range from retired couples to persons with children to young couples without children. The question of children is an educated guess at best.

Page 23: Again, the reason energy was discussed was that it could be a problem.

Pages 24-28: If the actions ". . . seem quite presumptuous and high handed . . ." to you, you should go to the source of the controversy, your county commissioners. They are the ones who control such matters, and as you have read, are the ones who made the decisions.

Page 31: (Refer to Appendix D)

Again, thank you for your comments. We have tried to answer your questions in a straight, forward manner and hope we have clarified rather than muddled parts of the EIS. If you have more questions call or write.

Sincerely,

Edward W. Casne, Chief
Subdivision Bureau
Environmental Sciences
Division

EWC/js

cc: Tom Ellerhoff
Al Keppner

MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

THOMAS L. JUDGE, GOVERNOR
GARY WICKS, DIRECTOR

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NATURAL RESOURCES BUILDING
HELENA, MONTANA 59601

August 20, 1976

Mr. Edward Casne, Chief
Subdivision Bureau
Environmental Planning Division
Department of Health and Environmental Sciences
Helena, MT 59601

Dear Mr. Casne:

Enclosed is a response written by Tom Patton, Water Rights Bureau Geologist familiar with this appropriation, to comments directed to your Draft Environmental Impact Statement by Mr. Duane Schweke. We are specifically addressing the comments on page 2 of Mr. Schweke's letter concerning the hydrologic operation of the Sun Prairie Village wells.

If you have any questions concerning the response, please contact us.

Sincerely,

Laurence Siroky

Laurence Siroky, Chief
Water Rights Bureau

TP/cf
Enclosure

Menco, Inc.
1300 Marshall Lane
Helena, Mt. 59601

August 13, 1976

Mr. Edward W. Casne
Subdivision Bureau
Environmental Sciences Division
Helena, Mt. 59601

Dear Ed:

I will reply to the letter of Mr. Duane Schweke dated July 27, 1976

Page 3 Par(a) 2 Armstrong's Pump Test Data

The water system of Sun Prairie Village was designed for 200 gallons of water per day per person. It has been found that this amount of water provides ample water for a community of this size. This amount of water per person amounts to 336,000 gallons per day not the 1 million gallons referred to by Mr. Schweke.

Pages 3 & 4 last & first Par(a)

The entire sewage lagoon is out of the 100 year flood area. This has shown by the drawing furnished by the Board of Natural Resoures. The elevations directly South of the sewage lagoon are some 4' lower than the base of the dikes. Therefore any flooding to occur would be the the South of the lagoon. There will be no flood water displaced by the lagoon because the lagoon is not in the flood plain. That lagoon is not right in the path of of the flowing flood water and it is not going to have an effect on it.

As for the Berkeley B-3 Pump

It is quite commonplace for designers to use a pump with a 4" suction and a 3" discharge and to provide for a 6" suction line and 6" discharge line. By increasing the size of these two lines the cross sections area is increased, the velocity is reduced, the friction loss is reduced, therefore the system is more efficient. That is why we use a 6" suction line and a 6" discharge line. If we used 10" connections on each end of the pump, as mentioned by Mr. Schweke, it would again add efficiency to the system. However we did not believe that that added efficiency was warranted because of the cost benefit ratio.

Ed, I have tried to be objective in this reply. If you have any other questions about Mr. Schweke's letter please call on me.

Yours truly,

Ralph L. Menasco
Vice-President

Response to Duane Schweke's comments concerning the hydrologic operation of wells owned by Sun Prairie Village.

The quotes on Page 3 of the Montana Department of Health and Environmental Sciences Draft Environmental Impact Statement attributed to Steve White were taken from the summary of his report, Hydrologic Report and Summary of Application 6853-g41K. The backup data on which this summary was based was not included, which may have confused the issue somewhat. Mr. Schweke's comments can be broken down into three areas; surface water and ground water connections; the predicted adverse effect caused by the wells; and the recommendation for waiver of notice procedures.

Connection between "above ground river" and "underground well"

Such connections do exist and are very common. Riverbed aquifer systems are almost always in close connection with flowing streams. In the Sun River valley, sand and gravels are found below 180± feet of silt and clay deposited by Glacial Lake Great Falls and above the bedrock. The bedrock which underlies the alluvium according to the Geologic Map of Montana of 1955 is the Colorado Shale, and is not normally considered to be an aquifer. This formation would not supply any large amounts of water to the gravel. The overlying silts and clays, while they are probably water saturated, are too impermeable to transmit large amounts of water. The most logical explanation then, is that the gravels are connected in some manner to the river. Further documentation that such conditions can and do exist is found in the following textbooks and reports.

Johnson Well Manual: Johnson Division, Universal Oil Products Company, 1972.

Ground Water Resource Evaluation: by William C. Walton, McGraw-Hill Book Company, 1970.

Hydrogeology: by Stanley N. Davis, John Wiley & Sons, Inc. 1966.

Computation of Rate and Volume of Stream Depletion by Wells: C.T. Jenkins, Chapter D-1, Book 4, Hydrologic Analyses and Interpretation, U.S. Geological Survey, 1970.

Further supporting this relationship is the time versus drawdown data developed by the pump test. This data indicates that drawdown is being lessened to some extent by vertical leakage, and to a large extent by recharge induced from the river. In the pumping test, water levels stabilized at approximately 700 minutes, and held constant for the duration of the test to approximately 1400 minutes. It seems most reasonable that the river is in fact providing the recharge to compensate for the pumping.

Steve White's Predicted Adverse Effect Caused by the Sun Prairie Village Wells

The pump test described above serves not only to determine actual drawdowns caused by a certain rate of pumping, but can be used to predict

drawdowns caused by different pumping rates. One method used of analyzing time-drawdown data is by using the Theis equations as modified by Jacob. These equations develop coefficients which describe the water-yielding characteristics of the aquifer. Using the coefficients, Steve White estimated the adverse effect of pumping 750 gallons per minute (1,080,000 gallons per day) for 168 days continuously, appropriating 550 acre-feet. This volume is the total annual appropriation allowed by the water right. While this may not be the actual pumping pattern used, it places a much stronger stress on the aquifer than allowing the same amount of water to be pumped in 365 days. Taking this extreme case, Steve White calculated that drawdown in adjacent areas after pumping 750 gallons per minute (1,080,000 gallons per day) for 168 days continuously would approximate:

Distance in feet from The Sun Prairie Village Wells	Drawdown in Feet
1550	0.2
1100	1.0
600	2.0
350	3.0

Waiver of Notice Procedures Recommendation

Based on his findings, Water Rights Bureau records of neighboring wells, and verbal notification (verified in writing April 15, 1976) that the Sun Prairie County Water District felt that their water supply would not be affected, Steve White recommended that notice procedures pursuant to Section 89-881, R.C.M. 1947, with respect to water rights be waived. The Permit to Appropriate Water was then issued under the following conditions:

1. Subject to all existing water rights in the source of supply.

2. Subject to any final determination of existing water rights, as provided by Montana law.

Mr. Schweke's concern that outlying wells may be harmed by the well field should be alleviated by the knowledge that the full amount of water to be appropriated by the subdivision was used in analyzing any adverse effect, and that the Permit was issued subject to all existing water rights.

cf

Office Memorandum •

STATE DEPARTMENT OF HEALTH
AND ENVIRONMENTAL SCIENCES

TO : Ed Casne, Subdivision Bureau **DATE**: August 24, 1976

FROM : Bob Braico, Water Quality Bureau RDB

SUBJECT: Reply to E. Casne Memo of 8/10/76

Questions contained in paragraphs 2 and 3, page 2 and paragraph 2, page 6, are adequately answered by Charles Parrett's letter of January 27, 1976 in which he stated:

> " . . . only the extreme southwest corner of the proposed subdivision is subject to flooding from the 100-year frequency flood event. Since this portion of the subdivision is planned only for open-space park use, flooding should not adversely affect the proposed subdivision."
>
> "Although all other portions of the subdivision are beyond the expected 100-year flood limits, we would recommend that the developer locate the proposed sewage lagoon on natural ground that is one foot or more above 3,340 feet (MSL datum) in elevation. This would help insure that the proposed sewage facilities would be reasonably safe from floods larger than the 100-year frequency event (e.g. the 1964 flood event) and would also provide some safety factor against possible error in the calculated 100-year flood limits. We would further recommend that the developer provide a vegetative cover on all sides of the proposed lagoon to minimize potential erosion."

Plans submitted by the developer's engineer indicate the lagoon facility will be located as recommended above. Maintenance of a good vegetative cover will be no problem.

Mr. Schwecke is correct in raising the question described in paragraph 1, page 3, when basing projected sewage flows on an average contribution of 100 gpcd. However, 100 gpcd (a national average) is high for a strictly residential area with no possibility of infiltration from a high groundwater table. Unfortunately, that figure was used in the EIS. If we use 75 gpcd (USPHS Manual of Septic Tank Practice), the consultant's projected flows are reasonable as computed below.

505 single family lots x 3.5 persons/family = 1,767 persons
29 duplex* lots x 3.5 persons x 2 families = 203 persons
1,970 persons

25 commercial lots x ? = ?
1970 persons x 75 gpcd = 147,750 gpd

Menco, Inc. (Basis of Design) used 560 lots x 3 persons/lot x 100 gpcd
= 168,000 gpd

168,000
-147,750
20,250 left for commercial

20,250 gpd ÷ 25 lots = 810 gpd/lot

810/75 gpcd = 10.8 persons (residential equivalent for commercial lots)

*Our phone conversation of 8/23/76

MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

THOMAS L. JUDGE, GOVERNOR
GARY WICKS, DIRECTOR

WATER RESOURCES DIVISION
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DAVID G. DRUM

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32 SOUTH EWING
NATURAL RESOURCES BUILDING
HELENA, MONTANA 59601

August 20, 1976

Mr. Edward W. Casne, Chief
Subdivision Bureau
Department of Health and Environmental Sciences
Cogswell Building
Helena, MT 59601

Dear Mr. Casne:

This letter is in response to comments on the proposed Sun Prairie Village which you received from Mr. Duane Schwecke.

Concerning Mr. Schwecke's comment about the dike, I agree that the dikes must be protected from erosion with rock rip-rap or some other suitable material. The top of the dike is well above the 100-year flood elevation. A well protected dike with an impervious core built to the proposed "top of dike" elevation will fully satisfy the State requirements from a Floodway Management standpoint. The impervious core will also help protect the functional operation of the lagoon and help prevent contamination of the immediate area in case of extremely heavy precipitation or other failure occurring within the dike.

The dikes surrounding the lagoon will displace a very small volume of water and will cause no measurable increase in flood elevations.

I hope this letter fully addresses Mr. Schwecke's comments. Please contact me if you have further questions.

Sincerely,

Charles Parrett, Chief
Floodway Management Bureau

STATE OF MONTANA
DEPARTMENT OF FISH AND GAME
HELENA, MONTANA

Office Memorandum

TO : Wes Woodgerd Attn: Jim Posewitz **DATE:** September 3, 1976

FROM : Jim Ford By: Robert Rothweiler

SUBJECT: Comments on Draft Environmental Impact Statement on...Anaconda-Hamilton 161 KV Transmission Line.

The Montana Department of Fish and Game opposes the construction of a proposed transmission line from Anaconda to Hamilton across the upper Rock Creek drainage and through the roadless area of the Sapphire Mountains. The Department questions this development because of probable effects of power line construction on wildlife populations located in and utilizing the area within the requested routes. The Department is particularly concerned about the effects on game animals and fish and ultimately, the opportunities for hunting and fishing by outdoor recreation enthusiasts.

For many years the Department of Fish and Game has based its wildlife management programs on the maintenance of wildlife habitat:

For game fish — maintenance of water quality and quantity of lakes and streams, and in the case of streams, preservation of natural stream characteristics.

For game animals — maintenance of range conditions that support maximum game populations on their various seasonal ranges with special emphasis on winter range.

Department investigations and inventories reveal changes in wildlife populations resulting from changes in habitat. In some circumstances, changes

in habitat conditions have enhanced wildlife numbers, however, in many more instances, wildlife populations have deteriorated.

The environmental impact statement adequately presents the potential impacts and the mitigating measures to reduce these impacts. Assuming the proposed power transmission line from Anaconda to Hamilton is approved, the major impact on aquatic and terrestrial wildlife will result during construction. Following completion of the transmission line, animal use will change in relation to the change in habitat.

The impact statement indicates "edge" and possibly small forage areas may be increased as a result of right-of-way clearing. Timber removal along the selected corridor would result in a long, narrow clearcut. However, the removal of forest canopy does not necessarily result in additional game range.

Until recent years, game managers and land managers have assumed that such changes were generally beneficial. Closed canopy timber stands produced less wildlife than seral stages of forest growth resulting from disturbances such as fire or logging. Timber harvest was accepted as a method to create forage areas for big game and the associated roads were utilized as a means of increasing hunter access. Forest managers have commonly justified timber removal by clearcutting as beneficial to big game animals. The change from closed-canopy forests to "open parks" and brush areas create edge and winter range. The attendent roads create access for hunters. Following timber harvest, the roads became recreational roads. Dispersed recreation including driving-for-pleasure, sightseeing, etc. became a major use of National Forest. The forest manager then cites the various recreational benefits of roads as further justification for timber removal.

Recent information indicates timber removal may or may not benefit game species and additional access does not improve hunting. The value of right-of-way clearing as game range depends on elevation, slope, exposure, soils, its

proximity to existing and proposed roads not associated with the transmission line, its proximity to timber harvest areas, its proximity to domestic livestock grazing allotments, and various other factors.

The transmission line corridor will reduce the roadless characteristics of the Sapphire Mountain divide. This roadless area provides a retreat for elk populations moving from the pressures of developmental activities at lower elevations. Many proponents of forest development declare that maintaining roadless environments waste natural resources. However, these roadless areas are an integral part of the elk range in the Rock Creek drainage and on the east side of the Bitterroot Valley. These forested areas provide only marginal commercial timber resources while they provide habitat for prime elk populations.

Forest planning for the west side of the Sapphire Mountains divide in the Bitterroot National Forest has reserved a transmission line corridor in the Railroad Creek drainage, a tributary to Skalkaho Creek. Will this decision by the Bitterroot National Forest influence eventual construction of the transmission line? If a decision to build the line is forthcoming, how does it influence the transmission line corridor?

I will comment specifically on two paragraphs in the Environmental Impact Statement"

Page 72, 6.2.2.

"The salmonid populations of the study area are in no danger of disappearing as a result of transmission line-related impacts. The threat lies in the potential for reduction of an already declining amount of productive habitat. For example, poor land management techniques, heavy dewatering for irrigation, and man-made alterations are reducing the amount of productive fisheries habitat available now. Construction of a transmission line through productive sport fish areas can contribute further to the deterioration of important habitat."

Page 114, I

"The immediate impact of small-scale timber clearing on affected species is not expected to be great, and may not result in immediate and obvious reductions in animal numbers, but should not be disregarded. Piece-meal erosion of habitat is too often ignored, although it places irreversible constraints on the future abundance and distribution of animals, and may become significant as further habitat alteration due to other causes (such as clearcut logging, urban and industrial expansion) continues."

The proposed transmission line may not have a considerable effect on wildlife populations in the Upper Rock Creek drainage. Yet, it has "the potential for reduction of an already declining amount of productive habitat," and it is part of the "piece-meal erosion" of wildlife habitat. At present, the Deer Lodge National Forest is involved in the planning process for this area. Forest planners have not made public the plans for the area, but they do indicate forest development activities will increase. The total developments proposed for the Upper Rock Creek area will have extreme impact on wildlife populations.

STATE OF MONTANA

DEPARTMENT OF

FISH AND GAME

Box 7, Ravalli
Hamilton, Montana 59840
August 20, 1976

Mr. Albert C. Teeo, Administrator
Energy Planning Division
Montana Department of Natural Resources and Conservation
32 South Ewing Street
Helena, Montana 59601

Dear Mr. Teeo:

I appreciate the opportunity to review and comment on the Draft Environmental Impact Statement for the proposed Montana Power Company (MPC) 161 KV transmission line extending from Anaconda to Hamilton.

A transmission line which requires road access for installation and service through portions of roadless areas will have an impact on wildlife populations, particularly big game. In addition to creating disturbances and harassment to wildlife, increased road access (mainly logging roads) in the Bitterroot during the past 10 years has allowed easy hunter access into what were remote sanctuaries for big game. This has resulted in an accelerated harvest rate, particularly during those hunting seasons with heavy snows, and has necessitated shorter hunting seasons to prevent overharvesting local herds. Primarily due to increased road access, the either-sex elk season in the Bitterroot during the last 10 years has been reduced by over 50 percent to maintain a stable harvest. We can and have adjusted (shortened) hunting season lengths but it is at the expense of hunter recreation days. Few roadless drainages remain outside of wilderness areas and road construction in these remote locations such as that planned for the proposed MPC transmission line can only be detrimental to big game and will be one more step toward even shorter hunting seasons and less recreational hunting opportunity.

The MPC states that the primary purpose of the Anaconda-Hamilton transmission line is reliability. I question the logic of choosing a route over the Bitterroot-Rock Creek divide for reliability when heavy snowfalls are frequent, snow depths render the area inaccessable except for snowmachine travel for seven-eight months out of the year, and the chance of other severe weather (high winds, lightning, ice storms, etc.) is much greater than a lower elevation valley route. Lightning, high winds, and ice storms accounted for most of the line outage causes listed in Table 3-16 of the Draft EIS.

The need for additional power at this time is questionable, particularly when the recently completed Missoula-Hamilton Heights 161 KV line has only been energized at 69 KV. On page 28 of the Draft EIS it states "...the applicant projects an increase in electrical load of 8% per year through 1985. This increase is based in part on a history an average 8% annual growth from 1948 to 1973, and in part upon an average 11% annual growth from 1963 to 1973." (emphasis added) However, census figures indicate that total growth between 1960 and 1970 in Ravalli County

was 11%, not 11% annually. And figures listed in Table 3-8 for population growth in Ravalli County from 1971-1975 show from 2-6% annual growth. There is no doubt that the population of Ravalli County is increasing, but not at the rate of 8-11% annually stated by MPC.

On page 47 MPC states "...the present transmission system, in the absence of line outages, should be adequate to accomodate anticipated load growth without excessive voltage drops at Bitterroot Valley substations through 1975." Why the sudden concern over outages when we have done so well in the past with increasing population and electrical demand? If increased reliability due to other possible line outages is the primary function of this proposed transmission line, then the preferred route over the Bitterroot-Rock Creek divide seems like a very poor choice. However, it would probably be a more direct route for sending power to the coast from the coal generating plants in eastern Montana, particularly if the Magruder Corridor is utilized as a transmission line route.

Again, I question the need for this proposed transmission line and I am not convinced that it is necessary. However, if the decision is made to build the line, I would recommend replacing either of the existing 69 KV "A" or "B" lines which generally parallel U.S. Highway 93 with a new 161 KV line, or utilizing the existing utility corridor along the Missoula-Hamilton Heights line. No additional road access would be required, year-round access would be much easier, and the chances of outages from lightning, ice, wind, heavy snow, etc. would certainly be lessened.

Sincerely,

John E. Firebaugh
Area Game Biologist

JEF/pm
cc: Jim Ford