

MINUTES

MONTANA HOUSE OF REPRESENTATIVES 52nd LEGISLATURE - REGULAR SESSION

SUBCOMMITTEE ON LONG-RANGE PLANNING

Call to Order: By CHAIR MARY ELLEN CONNELLY, on February 8, 1991, at 8:00 a.m.

ROLL CALL

Members Present:

Rep. Mary Ellen Connelly, Chair (D)
Sen. Bob Hockett, Vice Chairman (D)
Rep. Francis Bardanouve (D)
Sen. Ethel Harding (R)
Sen. J.D. Lynch (D)
Rep. Bob Thoft (D)

Staff Present: Jim Haubein, Principal Fiscal Analyst (LFA)
Jane Hamman, Senior Budget Analyst (OBPP)
Claudia Montagne, Secretary

Please Note: These are summary minutes. Testimony and discussion are paraphrased and condensed.

Announcements/Discussion: Jim Haubein reported that there were several issues pending before the committee: University Bonding proposals, Prison Bonding, and the Women's Correctional Facility. He described the agenda for upcoming meetings covering these issues. In addition, there are pending actions on the Dept. of Highways, DFWP, and the use of inmate labor. Amendments per the committee's request are pending on combining the WD/RRD Programs. **REP. BARDANOUE** also brought up the need for a detailed report on the downsizing of Boulder and alternative methods of financing it, possibly through the Health Facilities Law or through the Bonding Program.

SEN. LYNCH asked that A&E be contacted regarding needed roof repair at Galen. The Executive assumed Galen would be closed, and did not include it in the priority listing. However, it was possible it would remain open.

SEN. HOCKETT asked about the funding for the Women's Correctional Facility. **Mr. Haubein** said HB 528 has it funded through GO Bonds, and the Department proposes a lease/purchase agreement with the community building the facility. Either way, it would take a 2/3 vote of the Legislature since both commit the State to long term debt. **REP. BARDANOUE** said the State would pay for the facility in the end no matter which way was chosen. He asked for a long

term calculation of the cost of the two methods of financing. He was concerned about the liability of long term costs and the increased size.

Mr. Haubein said the bill, HB 648 sponsored by REP. WANZENRIED, to reauthorize the Evergreen project had been introduced and was scheduled for hearing in Appropriations.

HEARING ON WATER DEVELOPMENT AND
RENEWABLE RESOURCE DEVELOPMENT GRANT PROGRAM

Tape 1:A:275

DNRC/Water Management/Hydrosciences: Beaverhead County
Groundwater Study

Bill Uthman, Groundwater Hydrologist, DNRC, introduced other proponents of the proposal RRD 15: Holly Franz, Montana Power Company, Jim Wedeward, Bureau of Reclamation, Don Chance, Beaverhead County Planner and Rep. Chuck Swysgood, Beaverhead County. This study was proposed in response to chronic water shortages in the basin, and will encompass approximately 100 square miles. The drainages to be studied provide major sources of water for agricultural users and downstream hydropower operations. Over the past decades, there has been major groundwater development for irrigation, resulting in disputes among local water users over the sustainability of high capacity groundwater development, and the possibility that the streamflow in the Beaverhead River is being diminished by groundwater development. In addition, there has been a deficit precipitation in the region.

Information gathered from this detailed hydrological study will enable DNRC and other agencies to credibly address the problem. Co-applicants on this grant request include Bureau of Reclamation, Montana Power Company and East Bench Irrigation District, all of whom are contributing to the cost of the project.

Holly Franz, private Helena attorney representing MPC in water rights disputes, has been involved in a number of disputes in Beaverhead County in which they tried to explore the effect of further groundwater well development on surface water flows. The information is not available. MPC is willing to contribute \$50,000 towards this study, contingent upon full funding of the study and this grant.

Jim Wedeward, Bureau of Reclamation, Billings, spoke in favor of the project. It is a high priority since it will answer questions about their responses to future development in the area. In addition, the drought has impacted storage, with Clark Canyon Reservoir running at 50% of the long term average. Inflow this year into the reservoir is expected to be 45% of average. They have programmed \$220,000 for this study, but it requires a 50/50 cost share.

Don Chance, Planning Director, Beaverhead County, said they did not have the information at hand to deal with the serious difficulties associated with these water issues. Agriculture is the economic mainstay of the area, and this study would enable them to make better judgements in the future about development in the county and protection of the agricultural resource.

Pete Rebish, farmer and rancher, President, Board of Directors, East Bench Irrigation District, said the Board supports funding for the study of the groundwater in the Beaverhead Valley. Irrigators have been irrigating with 65% of their water allotment since the drought began. Low precipitation has exacerbated the problem, causing hardship. DNRC has issued permits for groundwater wells now pumping approximately 16,000 acre feet of water, thus depleting return flows to the Beaverhead River. Clark Canyon Reservoir has been used to replace this water, and it too is running below normal. The irrigation district is willing to put up \$25,000 in in-kind money for this study.

REP. CHUCK SWYSGOOD, HD 73, Beaverhead County, testified in support of the project. This same situation exists elsewhere in the state, and hopefully some of the information, especially the methodology, would have applications statewide. The Water Users in the area have asked him to introduce a bill requesting the temporary closure of the basin to groundwater development. If this grant is approved, there would be time to study without the adverse effect of wells being drilled for a truer picture.

Jo Brunner, Montana Water Resources Association, spoke in support of the project.

Questions from Subcommittee Members:

SEN. HOCKETT asked about the computer modelling. Mr. Uthman said they wanted to do streamflow monitoring, install monitoring wells to measure groundwater levels over a 24 month period, etc. After data collection, all relevant information is put into a computer model, which simulates groundwater and surface water flow through the area. This tool will enable them to project groundwater development into the future and better quantify streamflow and groundwater interactions for predictive purposes.

REP. BARDANOUVE asked about the issuance of permits for groundwater development when there is such a question about the water resource. He expressed concern about the basin, and asked if there could be a moratorium on this without legislative action, such as mentioned by Rep. Swysgood.

Gary Fritz, DNRC, said they did not issue surface water permits in that basin because of a prior court case. Groundwater permits are still permissible. The Department feels it cannot deny groundwater permits at this time because there is not enough information. That is the basis of this grant request. The

process for closure can be done in two ways: (1) the water users must petition the Department; or (2) the water users can go straight to the Legislature. The Department would be supporting the bill to close the basin. **REP. SWYSGOOD** said the bill would set a five year temporary closure.

SEN. HARDING asked about the litigation mentioned by Ms. Franz. **Ms. Franz** said the question is whether or not it is the drought or the groundwater development that is causing the decrease in the surface flow. The concern is that senior water rights in the surface water are being adversely impacted by the new groundwater rights. The groundwater is not in the same priority system as the surface water, and water from a new groundwater well can be withdrawn during the entire irrigation season, while the 1800 surface water right is only getting 50% of its water.

REP. BARDANOUE asked where Montana Power came in the equation. **Ms. Franz** said they came in downstream at the Missouri River power plants, with their interest in keeping the mainstem of the Missouri River full of water.

SEN. HOCKETT asked about the water table and its impact on the existing groundwater wells. Is there any monitoring? **Mr. Uthman** said there is monitoring on the Blacktail drainage for the past nine years. They do see an overall, progressive decline in the static groundwater levels on the order of 10 to 20 feet since 1981.

REP. BARDANOUE asked if there was a pool underlying the valley, or an actual flowing of water. **Mr. Uthman** said there were no pools, lakes or streams. The groundwater is provided within the aquifer, composed of gravels, sands and clays saturated with water which discharges into the Beaverhead River.

Ray Beck, DNRC, said there had been some criticism about DNRC applying for funds under its own grant program. For the benefit of the new members of the committee, he felt it important to clarify that **Ms. Barclay, Director, DNRC**, was had closely reviewed this project and supported it strongly. It is not solely in the Department's self interest, but would benefit the people in that area.

MSU/Montana Water Course: Montana Water Course, Public Education and Water Management

Susan Higgins, Coordinator, Montana Water Course, testified on behalf of RRD5. She clarified the goals of the Montana Water Course, and why the project is so important for Montana citizens.

The Western Water Course is a water education program located at MSU, a private non-profit organization which has received seed monies from the Bureau of Reclamation to develop a regional multi-state youth and adult education program covering water

management, conservation and development. The first pilot program is the Montana Water Course, which has two components, a youth/teacher education program, Project Wet Montana, and an adult component. This grant is for the adult education program, which would target groups who represent a cross section of water users. To date, they have focused on Water Rights Workshops. This grant proposal would expand these workshops and learning materials, and also proposes workshops and guidebooks in four other categories. These would be water conservation, water quality management, basic hydrology and water management principles, and multi-use storage project development. Progressive changes, or even a fresh examination of the status quo cannot occur without new information for, or involvement by the people who depend upon the resource.

REP. TOM LEE, HD 49, Bigfork, spoke of the benefit to him of the workshops and the need for an intermediate program.

Questions from Subcommittee Members:

1:B:000

SEN. LYNCH asked why MSU needed this money. Ms. Higgins said they are not part of MSU. The Montana Water Course is located on the campus, but are not part of the budget. It was put together through the cooperative efforts of DNRC, the Bureau of Reclamation, and some private interest groups. This is a distinct program developed to meet the questions that come up during the State Water Planning Process and any other water rights hearing. SEN. LYNCH asked who the instructors were. Ms. Higgins said it varies from course to course, and at present there were four: herself, Judge Loble, a DNRC attorney and water rights professionals in the field offices. SEN. LYNCH asked if there was any possibility of credit for the course. Ms. Higgins said they were working on it, but it is designed for quick facts for the public. If a course is available for credit, such as the Water Education for Teachers, there will be a charge, \$40 in this case. Credits would awarded from the institution in that section of the state.

Gary Fritz, DNRC, said this program is the product of conversations with many people in the State Water Planning Process over the past two years.

1:B:205

Flathead Joint Board of Control: Flathead Irrigation Information System

Barry Dutton, Land and Water Consulting, Missoula testified on behalf of the Water Development grant ranked 15. For the past three years, he had been involved in an integrated crop and pest management programs and irrigation information programs in the Flathead area. This grant would expand the program from serving a few individual farmers to serving all irrigators within a three Irrigation District area. Several components of the program could eventually go to water conservation and irrigation

efficiency improvements for the entire state. They were looking at better use of the water supply, increased water quality, reduced energy consumption, and better profitability for the grower.

Mr. Dutton said components of the program include testing 100-200 irrigation systems for efficiency, an irrigation scheduling program, refining a computer system for local growers to utilize in irrigation scheduling, a detailed local irrigation guide and a final report which could serve as a blue print for others.

SEN. HARDING asked how this information would be disseminated. Mr. Dutton said they would publish in the weekly paper the crop consumptive use for the past week and the predicted crop consumptive use in the following week. In addition, they were considering providing information on TV and radio stations and a call-in phone systems for more precise information.

SEN. HARDING asked about the funding sources, and wondered about tribal participation. Mr. Dutton said one funding source, Mission Valley Power, is owned by the tribes, and has been administering this program for the past two years. Bonneville Power Company has been giving money to local electric coops for irrigation system testing and scheduling. They will continue their funding for irrigation pump testing, and Mission Valley will continue to run that program in the coming years. The BPA has stopped their funding for irrigation scheduling. These funds will be used primarily for that component of the program; Mission Valley will continue to support the pump test program.

Lynn Engles, Superintendent, Flathead Agency, Bureau of Indian Affairs, Pablo, expressed concern that no input from the BIA and the Confederated Salish and Kootenai Tribes had been sought in the development and submission of this application. He agreed that the goals are laudable and should be done. However, he was concerned about the lack of tribal input, and the fact that BPA and the Bureau of Reclamation have not deemed this project worthy of funding. Mission Valley Power, the old power division of the Flathead Indian Irrigation Project now operated by the tribes, is no longer involved in this. Any water scheduling done on the irrigation system is the responsibility of the officer in charge, who is the Superintendent of that project. He commented on the ongoing water rights negotiations between Indian tribes in Montana and the State, which were not completed on the Flathead Reservation at this time.

Mr. Engles said he was not asking the committee to deny the grant, but to delay action until the grant can be studied and commented upon by the tribes since it affects Indian Trust Land, Indian Allotted Land and Fee Land on their reservation.

Mr. Dutton said he had heard no comment from the Mission Valley Power that they were withdrawing funding. The grant and the figures had been reviewed by them, and the BPA and the Bureau of

Reclamation are putting money in this year, which will go to Mission Valley Power.

Jo Brunner, Executive Secretary, Montana Water Resources Association, entered their support of this and other projects in general.

MSU/Local Government Center: Solid Waste Information and Assistance Center

James Goehrung, Local Government Center, Bozeman, testified in support of RRD 14. EXHIBIT 1 They are associated with the Cooperative Extension Service, and would work with them in the distribution of educational materials. They have already received inquiries from communities about receiving assistance. Technical assistance is badly needed by these communities. The Center will provide matching funds in the amount of \$32,000.

SEN. HOCKETT asked if this was a new program. Mr. Goehrung said it was a new program developed in response to a need expressed by local governments, but the Local Government Center had been providing assistance for local governments in the form of training programs.

SEN. HARDING asked how the program would interface with private industry. Mr. Goehrung said they would coordinate with private interests, especially in making sure that there would be markets for the recyclable goods.

SEN. HOCKETT asked if there had been any attempt to deal with hazardous wastes. Mr. Goehrung said they would work with the Cooperative Extension Service, which had identified hazardous waste as an emerging issue. They would utilize their programming and would publicize information on alternatives to hazardous substances and problems of collection and disposal.

Mr. Goehrung distributed the Montana Solid Waste Handbook, produced by the Center, and their Annual Report. EXHIBITS 2 & 3

Town of Polson: Wellhead Protection Project

Pat Trusler, Administrator for Lake County Land Services, testified in support of RRD 8. He introduced John Campbell, Superintendent, Water and Sewer Dept. for the City of Polson, and John Shannon, consultant, SRH, Montana. EXHIBIT 4 He distributed an overview of the Wellhead Protection Project. EXHIBIT 5

Questions from Subcommittee Members:

2:A:000

SEN. HOCKETT asked DNRC about the match and suggested it sounded like they were asking for help for something the city should be doing anyway. **Jeanne Doney** said she had made an error by stating that this would be funded at 25%, which is the allowable level for projects. This is in face a study, which can be funded at 100%. The PSC does not allow them to rate base these kinds of services and charge them back to their people.

SEN. HOCKETT said any municipality should be determining the quality of the water automatically. **Mr. Tubbs** said that was a reason this project ranked high, especially because they could not rate base and get monies to cover the costs. In addition, this would serve as a demonstration project for what is necessary to be studied in order to protect the groundwater sources of water. **SEN. HOCKETT** asked why then the East Butte Groundwater Study, the same type of project, was out of the funding. This is inconsistent. **Jeanne Doney** said the projects are ranked point by point, and there are many competitive grants. One project is actually going to develop a plan for figuring out what they will do to protect a particular wellhead. The other is a wide range study which will later form the basis for a plan.

Jon Shannon, Missoula, Consultant, said the grant is important. The Safe Drinking Water Act amendments was passed in 1986, which mandated that the State create a program to have every community in the state do exactly this. The reality is this type of study is not being done because there is no system to fund it, either through EPA or the rate payers due to PSC sanctions against it. He encouraged anything this committee can do to put some preventative action into place.

Darby School District No. 9: School Park

Dale Huhtanen, Superintendent of Schools, and Al Mello, Maintenance Supervisor, Darby, testified in support of RRD 17.
EXHIBIT 6 & 7

SEN. HARDING questioned the fact that this was a school park and classroom space, and that the district was contributing \$9,000 in kind. **Mr. Huhtanen** clarified that this project was for the development of the water at the site. The community could use the park as well. There would be picnic stations and pathways.

Mr. Tubbs said they have already raised the up front dollars prior to the approval of the grant. They qualify for the program on two points: water development and recreational opportunity. **Mr. Huhtanen** said the development of outdoor classroom space was appealing to them and their science instructors, especially in light of transportation limitations and their handicapped population. They have 575 students, 10% of which are handicapped. They had gone from a \$28,000 Special Education

budget to over \$200,000 when a family with 16 severely handicapped children moved from Ohio into the community.

Little Beaver Creek Ranch: Fishery Improvement Project and Sediment Reduction

Gerhard Von Der Ruhr testified in support of WD 12. His family owns the ranch, which is located in the Nine Mile Valley west of Missoula. One of the oldest homesteads in the Nine Mile Valley, settled in the 1880's by the Longpre family. For the past five years, they have brought the ranch back into production after a period of abandonment. He presented a slide show on the project to rehabilitate an existing dam, rated high hazard, and to install a gravity sprinkler system for irrigation. The project would reduce the sedimentation in Isaac Creek and Nine Mile Creek, a major factor limiting trout spawning in the lower Nine Mile Creek. It would also reduce the amount of water pumped out of the creek, leaving more for instream flows.

Questions from the Subcommittee Members:

REP. BARDANOUE said this was a fine project with environmental benefits. He pointed out that there were many high hazard dams in the state, with enormous costs of compliance with the Dam Safety Act. The first request was received yesterday for \$3,000,000, and this one comes today. There is the possibility that granting money for such a project is unconstitutional. His main concern is that if this process to underwrite the costs of repairing all high hazard dams begins, hundreds of millions would be needed. A policy decision needs to be made before this is begun since it is far beyond the financial means of the State. He hesitated to set a precedent by approving a project such as this.

2:B:000

Mr. Von Der Ruhr said he appreciated the dilemma facing the State. However, his concern is that ranchers faced with meeting regulations must be helped or they will go bankrupt. As members of private enterprise, he asked help either with regulations or funding to meet the regulations. REP. BARDANOUE said he well understood the situation of a ranch operator, but there are fiscal constraints.

SEN. HARDING asked if the increased storage and benefit to wildlife would qualify this project for DFWP support. REP. BARDANOUE said this project would be ideal for DFWP, but they are stretched.

Mr. Von Der Ruhr commented that a ranch must be profitable. The days of the gentleman rancher are over and are not in the best interest of the state.

Missoula County Conservation District: Irrigation Diversion Alternatives

Sarah McDonald, Missoula County Conservation District, testified in support of their project, RRD 19, requesting \$85,250 to work on a statewide problem with the diversion of irrigation water from the larger rivers around Montana. There are problems with the regulatory agencies and the administration of the Natural Streambed and Land Preservation Act, flood plain laws, Corps of Engineers laws, all of which the irrigation companies have to comply with. With gravel diversions, one agency might give approval, while another might not. With this project, help is being sought for these Irrigation Districts. In Missoula, three of these larger Irrigation Districts are within the city limits, and problems arise with their activities on the river, such as the installation of gravel dikes.

Geoff Badenoch, Missoula Redevelopment Agency, spoke of coming head to head with the ditch companies. Missoula has been involved for the past 30 years in the reclamation of the river front from a legacy of abuse and misuse by industry and the community. They have been successful in this effort, especially in the development of a river front park system. The cooperative effort represented by this project would allow the ditch company to divert the water in a way that would allow the city to enjoy its natural beauty.

Dan Kemmis, Mayor, Missoula, spoke in support of the project. He described the conflict between agricultural and urban interests. The Conservation District has come up with a good idea for a cooperative solution, but they need some help. He asked for help in meeting everybody's needs either through new methods of diversion or through switching to groundwater as a source of irrigation water. In the process, the urban environment would be substantially improved. Other cities in Montana would learn from Missoula's experience.

Jo Brunner, Montana Water Resources Association, spoke in support of the project. The irrigators have a strong desire to solve this problem.

Ms. McDonald said if this group can come up with a feasible alternative, they would share it statewide.

Questions from the Subcommittee:

REP. BARDANOUVE said DNRC administers the Stream Preservation Act, and asked if cats and dozers were allowed in the river. **Mr. Tubbs** said 310 permits are administered by the Conservation Districts themselves. The problem is that in addition to the standard issues of moving gravels in a river and the resulting sedimentation, the diversions occur in a highly visible area, downtown Missoula. **REP. BARDANOUVE** asked if they were performing their duties. **Mr. Tubbs** said to date they had not been sued for

any activities. Ms. McDonald predicted that day would be coming. They are confined by the law, and yet the irrigators must be able to get their water. REP. BARDANOUE said the law was being ignored to accommodate both sides. Ms. McDonald disagreed. REP. BARDANOUE suggested building weirs. Ms. McDonald said that had been attempted, but ice takes them out.

SEN. HARDING asked where the funding comes for the Conservation Districts. Ms. McDonald said county tax dollars provide \$1,450,000; in addition, there is some grant income. On Nine Mile, there is EPA money which comes through the Water Quality Bureau. REP. BARDANOUE expressed concern that a solution, even through this process, would be a long time coming, and that in the meantime, the Stream Preservation Act is being ignored.

Missoula City/County Health Department: Aquifer Monitoring and Remediation

Jim Carlson, Director, Environmental Health Division, Missoula City-County Health Department, introduced Alan English, Staff Hydrologist, Missoula City-County Health Department, who testified in support of project RRD 22. EXHIBIT 8 He asked for a minimum of \$25,000 to construct monitoring wells and to purchase equipment.

Questions from Subcommittee Members:

SEN. HARDING asked about the involvement of the University. Mr. English said they had given them full access to their wells and some equipment which would need repair. Most of the grant covers salaries for staff to do the work. Once in place, it would be a permanent groundwater network, a key component in managing an aquifer system.

3:A:000

SEN. HARDING asked the source of the funding to maintain the monitoring system once in place, and the commitment by the City and County to continue the program. Mr. Carlson said a variety of funding sources are being considered, with grants from Mountain Water Company and money from Champion International for public education already received. The community thinks this is a vital issue, a staff hydrologist has already been hired despite financial constraints within the county and the Chamber of Commerce has recently established an environmental committee. In addition, with the passage of SB136, local water districts could be formed, allowing communities to collect money from users and dischargers of water for funding. The City and the County have passed a joint resolution establishing groundwater as one of their major concerns, with top priority status for the next two years. Mr. English said the monitoring wells would be used to supply information to re-calibrate the model used to predict the outcome of events.

REP. BARDANOUE said they had identified the problem, and asked what they were going to do. Mr. Carlson said they needed better information to pinpoint exactly where the sources of pollution are. Also, local health departments do not have the authority to enforce the Clean Water Act in the state. SB 136 provides authority to create local water quality districts to allow a tax for the withdrawal and discharge of water into the aquifer and limited authority to deal with the problems. Moreover, EPA has stepped into Helena and Missoula to say that the State, through the Water Quality Bureau, is not taking adequate care of these sole source aquifers. It has banned the 5X38 sumps associated with the automotive industry. Missoula has received a grant to inspect and close these down. Projects are being done to stop adding to the problem.

REP. BARDANOUE asked why responsible parties were not being shut down, or asked to clean up their contaminants. Mr. English said the State Water Quality Bureau is responsible for enforcing those regulations, and are working on it. It is also very difficult to recover contaminants from an aquifer with 30 to 40% recovery considered good.

SEN. HOCKETT asked if they were collecting any contaminants. Mr. Carlson said they have several projects going on, but none has been developed for the collection of household and small commercial hazardous wastes. They are in the process. With regards to waste oil, the garbage collection company is adding a drum to their trucks for the collection of waste oil. It will be used after testing for heating oil.

Missoula City/County Health Department: Linda Vista Sewer Interceptor

Jim Carlson, Director, Environmental Health Division, Missoula City-County Health Department, testified in support of the project RRD 32, which would address the problem within the Linda Vista Subdivision where the septic systems have contaminated the groundwater wells with nitrate levels elevated 2,000 times the normal background level. Both State Groundwater Standards and the Federal Drinking Water Standards are being violated. There is also fecal coliform in some of the samples. They would build a pressurized sewer main from the city of Missoula to the subdivision, two miles southwest of the city and eventually sewer that area, with a total cost of over \$400,000. Local funds would provide up to \$337,000 from county SIDs and contributions from the city and the residents.

Mr. Carlson described the causes of the problem: large portions of the city not sewered, a slow moving aquifer with little recharge, septic tank and seepage pit systems, permitted by the state and county pursuant to current regulations in the mid-60's. The project would proceed in two phases, the first being the construction of the interceptor, and the second, the

installation of collectors and on site hookups, tanks and pumps at a cost of \$1,200,000. This project is number one on the DHES list of priorities for sewer improvement projects because of impacts on public health, impacts on groundwater contamination, impacts on the generalized aquifer and the impact of the discharge on the Bitterroot River. In addition, the contamination has produced a severe economic impact on the homeowners in the area. There is no more direct federal aid to construction; therefore, the county is appearing before this committee. He asked for positive consideration for this grant request.

Questions from Subcommittee Members:

SEN. HOCKETT said he had spoken to the County Commissioners regarding the annexation issue. Mr. Carlson said the city does ordinarily require annexation in order to sewer a subdivision; however, in this case, they would delay annexation for ten years to help the residents to amortize the cost. There is not support for the annexation and the project among the property owners, and the County Commission may institute their authority to create the SID over 100% protest, an indication of the level of their concern for the situation.

Big Sky Sewer District: County Water and Sewer District for Big Sky

Rick Kerin, Consulting Engineer, Kerin & Associates, Bozeman, represented Gallatin County Rural Improvement District No. 305 and testified in support of project RRD 31. EXHIBIT 9

3:B:010

Questions from Subcommittee Members:

SEN. HOCKETT asked how many home sites were served. Mr. Kerin said there were approximately 1500.

SEN. HARDING asked why the financial difficulties had not been documented and supported by current water and sewer rates. Mr. Kerin said the records are nonexistent; this system would be improved as part of the project. SEN. HOCKETT asked about the rates. Mr. Kerin said the sewer rate is \$15 per single family equivalent, with the average rate a little more than \$20. He did not know the water rate.

MSU/Extension Service: Natural Resource Management Education

John Lacey, Montana State University, Extension Range Management Specialist, testified in support of the project, RRD 35. There is much public misconception about range lands in Montana. More education has to be done by the Extension Service and private industry to create more awareness and understanding about grazing management. This project proposes MSU as the lead agency,

working together with the Montana Public Lands Council, private industry, Forest Service, and the Bureau of Land Management, in the determination of areas to be looked at and the development and dissemination of information to the targeted area. 78% of the County Agents feel there needs to be additional education on public land issues. The economic importance of livestock grazing on public lands is also important, as evidenced in articles included in the exhibit.

Lakeside County Sewer District: Lakeside Wastewater Collection and Treatment Facility

Butch Forsyth, General Manager, Lakeside County Sewer District, testified in support of the project, RRD 36. Despite the recommendation for no funding, he gave a history of the project and the facts. The district was started in 1983, constructed in 1987 and completed in 1988. The cost was initially projected at \$3,400,000 in 1985, and with the site change, the cost was projected at \$4,800,000, the figure upon which funding from DNRC was determined. When the bids came in, the final cost came in at \$5,800,000. The monthly sewer charge is \$45 per month per user. In addition, 554 mills have been placed on the tax rolls this year to raise \$350,000 from 375 homes. The actual monthly user charge in the Lakeside Sewer District ranges from \$80 to \$265 per month. The assessment is based upon taxable value of the land, which accounts for the variation in the charges.

Mr. Forsyth said 65% of the people in the district are retired. He asked the committee to reconsider the grant application for funding, not to pay back the two previously funded DNRC loans, but for the loan taken out locally for the cost overruns. He agreed that everyone involved with the project had made mistakes, but asked if the people had to suffer.

CHAIR CONNELLY asked if Somers was included in this proposal. **Mr. Forsyth** said they were mentioned, and that he had been working on an interlocal agreement with Somers to provide them treatment for sewage. The average cost for Somers would be \$50 per month. Between Lakeside and Somers is an area known as West Shore Sewer District which has 186 homes and is not part of the proposal. They do not want to incur Lakeside's debt.

SEN. HOCKETT asked how many homes there were in Lakeside. **Mr. Forsyth** said there were 375, but the engineers had incorrectly based their plans on 600. **SEN. HOCKETT** asked how many years they had at the reduced interest rate on the loan. **Mr. Forsyth** said two more years, when the interest would increase to over 8%.

SEN. HOCKETT asked if Somers and West Shore were going to be added into the system. **Mr. Forsyth** said the system was designed to handle them. Regarding consolidation, they want the service, but do not want to incur the debt. The buy in amount for Somers is \$123,000, and it cost Lakeside \$1,414,000.

Mr. Tubbs said there was legislation passed last session which would enable Lakeside to extend that 20 year bond to a 30 year bond. Mr. Forsyth said they decided not to do that because it would have decreased the monthly user charge by only \$4 per month, but it would have incurred an additional \$1,602,000 in debt. Mr. Tubbs added that for the first two years, they were unable to make any payments. However, last March, they began making interest payments, and now they have made back payments, on which the Department forgave the interest. Mr. Forsyth said they recognized their obligation and placed it on their tax roles. The assessments range from \$267 to \$4,216, based on the location and value of the lot.


SEN. HOCKETT asked what the water rates were. Mr. Forsyth said they were \$100 per year.

SEN. HARDING asked about the discrepancies in the number of households and the amounts of the bids. Ms. Doney said one factor was the building of homes on the system before the system was completed, homes for which they could not charge. Mr. Forsyth said he had two recommendations for DNRC: Do not give money until the communities have their bids, and make sure those are competitive bids. He asked for any help the Legislature could give. Mr. Tubbs clarified that there is a gap in the loan process which is not being addressed. Some of the loan proceeds were used to pay for engineering costs. If loans are only given out after contract bids are received, there is the problem of the communities coming up with the money for the engineers to get to the bidding stage.

Mr. Tubbs asked how much Somers would help out if they came on line. The committee would be considering reauthorizing that loan. Mr. Forsyth said the buy in amount from Somers would be applied to the unfunded local share to get the 11.5% promissory note paid off. The rates would be approximately \$1600 to \$1700 per month.

ADJOURNMENT

Adjournment: 12 noon



MARY ELLEN CONNELLY, Chair



CLAUDIA MONTAGNE, Secretary

HOUSE OF REPRESENTATIVES
LONG-RANGE PLANNING SUBCOMMITTEE

ROLL CALL

DATE 2-8-91

NAME	PRESENT	ABSENT	EXCUSED
REP. FRANCIS BARDANOUE	✓		
SEN. ETHEL HARDING	✓		
SEN. BOB HOCKETT, VICE-CHAIRMAN	✓		
SEN. J.D. LYNCH	✓		
REP. BOB THOFT			
REP. MARY ELLEN CONNELLY, CHAIR	✓		

HR:1991
CS10DLRLCALONGRP.MAN

EXHIBIT 1

DATE 2.8.91

HB Long Range Planning

PROPOSAL SUMMARY

Montana Solid Waste Information and Assistance Center

HB 6 Long Range Building Committee Renewable Resources and Water Development Program

The Local Government Center at Montana State University has submitted a proposal to the Department of Natural Resources and Conservation to establish a statewide Solid Waste Information and Assistance Center. The purpose of the solid waste center is to help Montana communities develop programs of waste reduction, reuse, recycling and composting.

The goals of the project are to:

- 1) Increase citizen knowledge of integrated solid waste management
- 2) Decrease the amount of waste that communities send to local landfills
- 3) Improve the effectiveness of communities in selecting private contractors
- 4) Improve overall efficiency in the operation of local solid waste management programs.

Local governments across the state will soon be facing major changes in their current solid waste practices. These changes will come about because of new federal regulations under Subtitle D of the Resource Recovery and Conservation Act (RCRA); State efforts to establish a long range Solid Waste Plan; and from citizens interested in influencing local government decision making. Funding for this proposal would provide technical assistance and support for communities attempting to meet these new regulations and expectations.

The Solid Waste Information and Assistance Center has received a recommendation for funding from the evaluations conducted by the Department of Natural Resources and Conservation. Attached is a copy of the proposal summary prepared by DNRC. Hearings on this proposal will begin the first week in February. Support for this proposal will help Montana communities establish effective solid waste management plans.

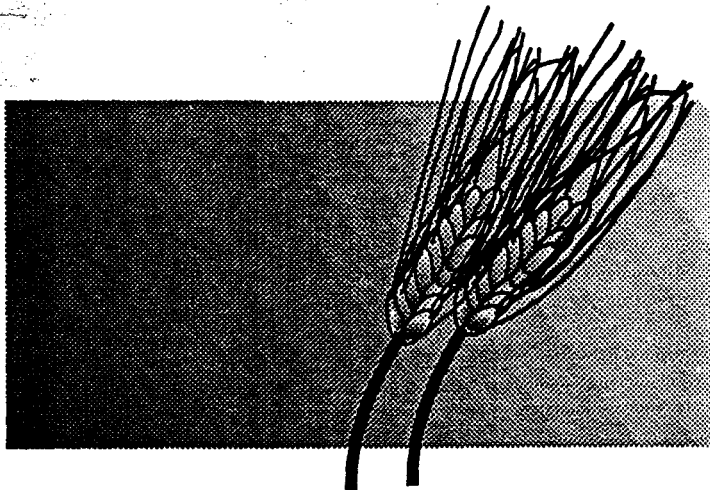
CONTACT: James Goehrung
994-6694
Local Government Center
Montana State University

complete handbook is available at the Montana Historical Society, 225 N. Roberts, Helena,
59601. Phone 406-444-4775

EXHIBIT 2
DATE 2.8.91
UP Long Range Planning

MONTANA
**SOLID
WASTE**
HANDBOOK

Working With Grassroots Government



*Local Government Center
Montana State University*

EXHIBIT

3

DATE

2-8-91

HB Long Range Planning

Working
with
**Grassroots
Government**

A Report From
**The Local
Government
Center**

EXHIBIT 4
DATE 2.8.91
HB _____

Testimony to Long Range Planning Committee

City of Polson - Wellhead Protection

RRD #8

Ladies and Gentlemen:

My name is Pat Trusler and I am the Administrator for Lake County Land Services.

Hardly a day goes by that the media doesn't have coverage on the importance of protecting our water resources. The California drought and the Persian Gulf oil slick make weekly front page stories. A bit closer to home the problem with groundwater and surface water contamination by underground petroleum storage tanks owned by the Church Universal and Triumphant made local and national headlines. A very unfortunate reminder that we many times take our valuable water resources for granted and that immediate attention is necessary if we expect to enjoy a high quality domestic water supply in the future.

I believe the City of Polson well head protection project is the first step in doing just this. A well head protection area is defined as "the surface and subsurface area surrounding a water well that supplies a public water system through which contaminants are reasonably likely to move toward and reach the water well". At this point in time the City of Polson has three

large production wells to supply a portion of its domestic water. If new more stringent federal regulations are enacted the primary source of water, a treated surface water supply, will no longer be acceptable for domestic use. Thus, the three wells will be the primary source of domestic water.

This grant will allow the City of Polson to serve as a demonstration project and example for local governments and public water supply systems in Montana. In addition it will also assist the State in meeting requirements of the Federal Safe Drinking Water Act.

With the time remaining I will attempt to give a brief overview on what we hope to accomplish. The first phase of the project will be to conduct a hydrogeological analysis of the groundwater aquifers which recharge the domestic wells. The aquifers along with the contributing areas of recharge will then be definitively mapped. At this point we can conduct a land use inventory of the mapped area to determine what the existing uses of the area are and if any pollution threats exist within the aquifer recharge area.

Finally - a series of recommendations will be developed for each wellhead to be enacted by the local governing body. These recommendations will no doubt include land use regulations, possible purchase of critical properties, and monitoring of any possible pollution sources.

7 p. 3
2-8-91
Long Range Planning

As you can see this project is very extensive; however, the City of Polson is making an attempt to recognize potential problems and resolve them through whatever means necessary. They realize the importance of their domestic water supply and the economic value it provides to the Flathead area.

Your favorable consideration to the grant project will be gratefully appreciated.

Paddy R. Trusler
Administrator
Lake County Land Services
Lake County Courthouse
Polson, Montana 59860

POLSON WELLHEAD PROTECTION PROJECT

O WHAT IS WELLHEAD PROTECTION?

The 1986 Amendments to the Federal Safe Drinking Water Act established the first nationwide program to prevent contamination of groundwater resources used for public water supplies.

The major focus of this new program is the determination of zones around public water wells within which pollution management strategies will be developed. These zones, called Wellhead Protection Areas (WHPAs) are defined as "the surface and subsurface area surrounding a water well that supplies a public water system through which contaminants are reasonably likely to move toward and reach the water well".

O DOES MONTANA HAVE A WELLHEAD PROTECTION PROGRAM?

Yes. Although EPA has not funded the State program in the past and program is not fully developed, the DHES Water Quality Bureau will make WHP a priority in Montana for the 1990's.

O WHY DOES THE CITY OF POLSON NEED WELLHEAD PROTECTION?

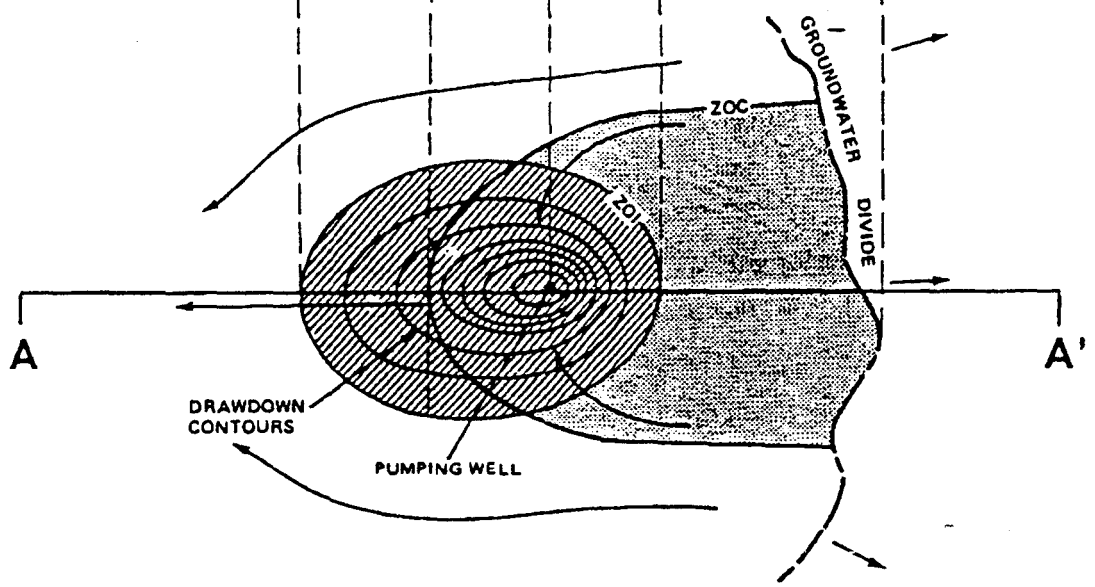
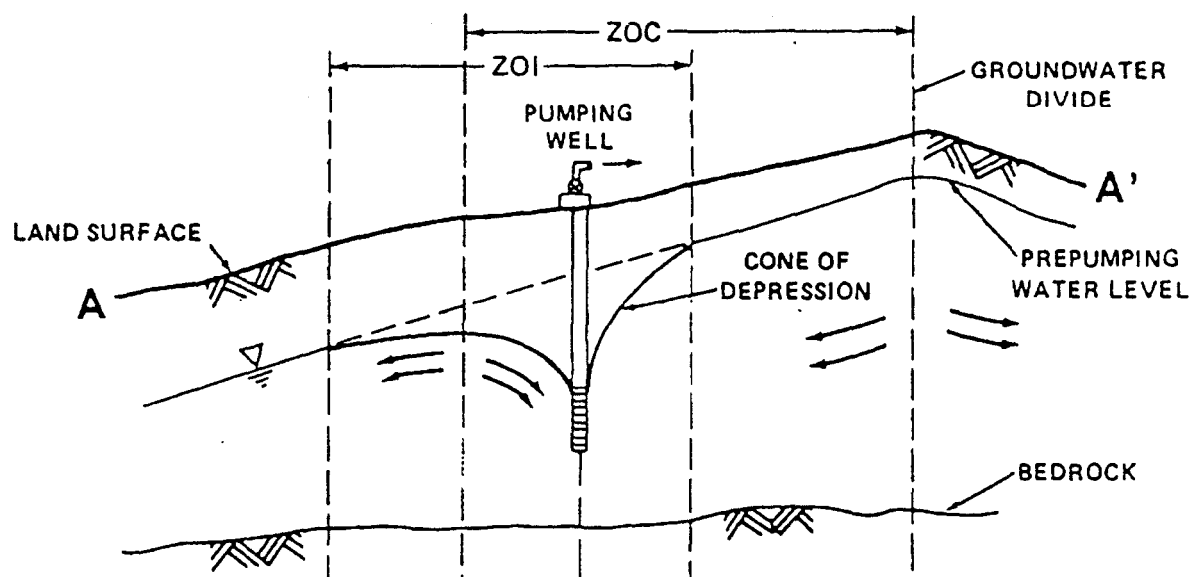
The City of Polson obtains a portion of its water supply from three large production wells that tap the groundwater aquifer under the city. In some areas of the city groundwater has become contaminated by petroleum products, pesticides and other contaminants.

Polson recognizes the importance of a clean and safe water supply to future growth and economic stability in the community. Long-range wellhead protection planning will help the community keep its water supply free of contaminants.

O HOW DOES THE POLSON PROJECT FIT INTO THE STATE WHP PLAN?

The Polson WHP project will serve as a demonstration project and example for other local governments and public water supplies in Montana. This project will also help the State meet the requirements of the Federal Safe Drinking Water Act.

Terminology for Wellhead Protection Area Delineation (Hypothetical Pumping Well in Porous Media)



- LEGEND:**
- Water table
 - Ground-water Flow Direction
 - Pumping Well
 - ZOI Zone of Influence
 - ZOC Zone of Contribution

NOT TO SCALE

SOURCES OF GROUND-WATER CONTAMINATION

CATEGORY I - Sources designed to discharge substances

- Subsurface percolation (e.g., septic tanks and cesspools)*
- Injection Wells*
 - Hazardous waste*
 - Non-hazardous waste (e.g., brine disposal and drainage)*
 - Non-waste (e.g., enhanced recovery, artificial recharge solution mining, and in-situ mining)*
- Land application*
 - Waste water (e.g., spray irrigation)*
 - Wastewater byproducts (e.g., sludge)*
 - Hazardous waste*
 - Non-hazardous waste*

CATEGORY II - Sources designed to store, treat, and/or dispose of substances; discharge through unplanned release

- Landfills*
 - Industrial hazardous waste*
 - Industrial non-hazardous waste*
 - Municipal sanitary*
- Open dumps, including illegal dumping (waste)*
- Residential (or local) disposal (waste)*
- Surface impoundments*
 - Hazardous waste*
 - Non-hazardous waste*
- Waste tailings*
- Waste piles*
 - Hazardous waste*
 - Non-hazardous waste*
- Materials stockpiles (non-waste)*
- Graveyards*
- Animal burial*
- Aboveground storage tanks*
 - Hazardous waste*
 - Non-hazardous waste*
 - Non-waste*
- Underground storage tanks*
 - Hazardous waste*
 - Non-hazardous waste*
 - Non-waste*
- Containers*
 - Hazardous waste*
 - Non-hazardous waste*
 - Non-waste*
- Open burning sites*
- Detonation sites*
- Radioactive disposal sites*

CATEGORY III - Sources designed to retain substances during transport or transmission

- Pipelines*
 - Hazardous waste*
 - Non-hazardous waste*
 - Non-waste*
- Materials transport and transfer operations*
 - Hazardous waste*
 - Non-hazardous waste*
 - Non-waste*

CATEGORY IV - Sources discharging substances as a consequence of other planned activities

- Irrigation practices (e.g., return flow)*
- Pesticide applications*
- Fertilizer applications*
- Animal feeding operations*
- De-icing salts applications*
- Urban runoff*
- Percolation of atmospheric pollutants*
- Mining and mine drainage*
 - Surface mine-related*
 - Underground-mine-related*

CATEGORY V - Sources providing conduit or inducing discharge through altered flow patterns

- Production wells*
 - Oil (and gas) wells*
 - Geothermal and heat recovery wells*
 - Water supply wells*
- Other wells (non-waste)*
 - Monitoring wells*
 - Exploration wells*
- Construction excavation*

CATEGORY VI - Naturally occurring sources whose discharge is created and/or exacerbated by human activity

- Groundwater - surface water interactions*
- Natural leaching*
- Salt-water intrusion/brackish water upconing (or intrusion of other poor-quality natural water)*

Mrs. Chair
Sens. Representatives

EXHIBIT 6
DATE 2.8.91

3rd P.M.
HB Long Range Planning

INTRODUCTION: This is Al Mello, maintenance supervisor, and I am Dale Huhtanen, Supt of Schools at Darby. We are here to speak on behalf of the Darby School Park Project. It is not just a project for the school, but rather a multi-use park located at the school.

While speaking of our proposal we will circulate pictures of our present site. We do not have photos of the proposed park, but we do have layouts and blueprints of what is planned.

I would like to begin by reading you a quote from the Stevensville Star on December 19, 1990. It is part of an article that Tom Bryan, a reporter, wrote after visiting the school site. Quoting him: "The bare, harsh, ground between Darby Elementary and Darby High School will soon become an oasis of grass, trees, water, and flowers if Darby gets lucky in the grant lottery. The land now is primarily a playground and is not a very good one. Several problems exist there. They can't get water to the grounds to make the grass grow in the summertime. However, knapweed and other weeds do flourish. In the fall the place is rock hard. It's cold and harsh in the winter and a mud hole in the spring. The kids ruin their shoes and clothes; they track mud, dirt, sand, and grit into the buildings. IT IS A MESS!!!!!"

We estimate this project to cost \$48,871.00 and have requested \$25,300 in funds. The remainder will come from the district and donated labor, equipment, etc. Earlier in the grant selection process this project ranked 17th, and we were recommended for funding. Presently, we still rank 17th, but because of shifts in funding, we are scheduled to receive no funds. This project is extremely important to the community, and the school district just recently spent \$6000.00 to purchase 2000 yards of top soil.

In 1986 the Board, administration, and maintenance personnel realized that something needed to be done to correct the situation. However, with limited funds our hands were tied, so progress has been slow. In 1987 we had a student injury on the playground and this speeded up the renovation process. Realizing that water was essential we started to explore other possibilities. This is when we approached Pat Vaughn of the Soil Conservation Service. Together with his help, Mr. Mello, the staff, and the community, the idea of the park evolved.

This park is not an ordinary park. It will be a multiple use park. It will have an area that can be used by the community for recreation, as well as areas that can be utilized by the entire student body at Darby Schools. Darby Schools serves four satellite areas, so thus in a sense, we could also be said to be serving ^{five} ~~four~~ communities. The students at Darby would not only have a place for recreation but would gain an outdoor physical education classroom, an outdoor science classroom, and a playground for the handicapped and non-handicapped.

Mr Mello will now explain our proposal further.



DARBY PUBLIC SCHOOLS

District No. 9
209 School Drive
Phone 821-3841
DARBY, MONTANA 59829

EXHIBIT 7
DATE 2.8.91
HB Long Range Plan.

Grant Project #17-39
School Park

This grant will help in the construction of a 6.5 acre multiple use park on the land between Darby's Elementary School and the High School.

This park will be used by the entire school as well as the general public.

The entire 6.5 acres will first be graded for proper drainage and run off.

An irrigation system is to be installed and topsoil placed. Trees, shrubs, flowers and grasses will be planted.

Various areas of the park will be utilized as outdoor classrooms where science projects relating to conservation, ecology and environmental studies will be done. Another area will be developed as a playground with emphasis placed on the needs and therapy of handicap students.

Another area will be established for the Physical Education Department and general school population as well as the community.

This project has a lot of support from the community as a whole.

We have received donations of top soil (2000 yds.). We as a district have so far spent \$6,000 towards this project and have invested much time and energy. We received much input and assistance towards the development of this project from:

Ravalli Co. Extension Office

Soil Conservation Office

Missoula City Parks Department

Trapper Creek Job Corp.

Community of Darby

BRIEFLY IMPLEMENTATION

We will first survey and grade the existing 6.5 acres for proper drainage or winter snow run off. At that time we would distribute 2" to 3" of top soil over the area.

a 3hp submersible pump would be installed along with 6 to 8 zones of automatic underground sprinklers. With the automatic system we will make better use of the water by evening irrigation and thereby freeing up the areas for daytime use by classes and recreation.

EDUCATION AREAS

Forced with short class periods (55 minutes) and the need for hands on experiences in general science, ecology, biology, and botany, the Darby school recognizes the need for improved facilities that could be accessed quickly and easily for the purpose of single class field trips in the areas of plant life, functioning ecosystems, population dynamics, biomass studies, soil composition and stratification, vertebrate and invertebrate life and the study of water conservation and irrigation systems.

The Gifted and Talented Program in the district is looking forward to the development of this program.

In the English department, creative writing classes can be used for any project at any of our sites.

The physical education area is looking towards being able to expand to outdoor activities.

And with our large handicap population (55), we could better facilitate

their needs in the physical therapy, physical education and science areas.

SCIENCE

A. Astronomical Observation Deck

1. Set up a compass rose to find specific stars.
2. Day time astronomy (sun dial)
3. Cloud observation platform.

B. Weather Station

1. Used to chart and predict local weather patterns.
2. Measure amounts of precipitation, wind speeds and direction, humidity and temperature.
3. Plant wildflower and native shrubs. Students could produce identification key for local flora.
4. Rock garden of local rocks and minerals. Identify types and origin.

C. Natural Tree Display

1. Plant coniferous and deciduous trees of area.
2. Study the annual growth rings and rate of growth.
3. Tree identification as well as leaf, needle and cone types.
4. Study plant succession in a natural forest setting.
5. Develop wind and snow barriers.
6. Aviary Development. Bird observation and identification of migratory and year round habitants.
7. Comparing soil moisture levels of forest and open grasslands.
8. Biplots in natural area versus biplots in heavy traffic areas.
9. Types of insects, animals, birds that are attracted by development.

D. Ditch

1. Soil horizon studies.
2. Sedimentation studies.
3. Natural versus man made erosion.
4. Water analysis.

E. Measurement Activities

1. Measurement and conversion of U.S. and metric systems.
2. Set up compass course to teach use of compass.
3. Math-angle measurements and computation.
4. Activities to compute energy, force, rate of speed, etc.
5. Measure effects of irrigation and precipitation in regards to various crops and grasses.

COMMUNITY

(H) Darby is a relatively small community and therefore the school is the center of activity for the area. It is well used on evenings and weekends.

With the improved grounds and park like setting, it provides a safe environment as well as allowing the public to see their tax dollars at work locally.

Thank You For Learning Our
Grounds & Your Consideration

February 8, 1991

Testimony before the 1991 legislature on the MISSOULA VALLEY AQUIFER MONITORING AND REMEDIATION PLAN.

My name is Alan English. I am an Environmental Health Specialist for the Missoula City-County Health Department.

I am here to testify on behalf of the Missoula Valley Aquifer Monitoring and Remediation Plan.

This project is part of a comprehensive aquifer management plan being developed by the Missoula City-County Health Department.

The Missoula Valley Aquifer is Missoula's only source of drinking water.

The aquifer was designated as a Sole Source aquifer by the United States Environmental Protection Agency in 1988.

Based on the current RENEWABLE RESOURCE DEVELOPMENT RANKING, I feel very strongly that the proposed monitoring plan should receive a higher ranking, and should be funded by the 1991 Legislature.

The establishment of a comprehensive groundwater monitoring program for the Missoula Valley Aquifer is an important and key component of an overall long term aquifer management plan

Our aquifer is highly vulnerable to contamination due to the following three conditions:

1. The top of the aquifer is very close to the surface. The water table is generally less than 75 feet below ground surface.
2. The geological materials that make up the aquifer and the zone above the aquifer are in general very coarse. There is no protective layer above the aquifer. This allows pollution to travel downward to the aquifer very rapidly.
3. The City of Missoula and the Greater Missoula Urban area have been developed directly on top of the aquifer. There are over 300 industrial wastewater disposal sumps, 3000 stormwater runoff sumps, and over 7500 individual septic systems that all discharge wastewater in to the ground directly above the aquifer.

The Public and private water supply wells for the Missoula Valley are located in the same area as the disposal wells. These wells are highly vulnerable and highly valuable.

The MISSOULA VALLEY AQUIFER MONITORING AND REMEDIATION PLAN is designed to protect the aquifer by detecting problems at an early stage.

It is also designed to prevent future contamination by determining potential sources, and eliminating those sources.

The cost of the project is only a fraction of the cost of cleaning up just one large contamination event in the aquifer, or trying to develop an alternative surface or groundwater supply.

The project will allow the Missoula Health Department to do the following:

1. Inventory and inspect potential sources of contamination.
2. Develop educational materials for businesses.
3. Establish a monitoring network to guard the aquifer.

and finally

4. To repair or purchase the necessary equipment to run the monitoring network.

MAP

The primary goal is to establish a monitoring well network.

On this map I have shown the locations of the wells which will be included in the network.

Also shown on the map are the major contamination events that have occurred in the Missoula valley Aquifer.

Most of the wells in the network are pre-existing, and only four additional wells are proposed.

Shown on the map in dark green are U of M monitoring wells that will be used in the network.

In blue are Mountain Water Company wells that are uncontaminated.

In light green are MWC wells that have tested positive for VOC's (volatile Organic Compounds).

In dark orange are MWC wells that are off line due to high levels of VOC contamination.

Shown in bright orange are three of the four proposed monitoring wells. Some of these wells may be constructed so that water quality and quantity can be measured at several depths from a single location.

These wells are located in key areas as follows;

1. Hellgate Canyon; Approximately 80-90% of the surface and groundwater that recharges the Missoula Valley Aquifer comes out of the Hellgate canyon. In addition the Milltown Reservoir EPA Superfund site is located 5 miles upstream. Water quality and quantity data are lacking in this area.

2. Another well is proposed in a residential area within the City limits. Up gradient of this site are several VOC sources, and down gradient are several public supply wells which are contaminated with VOC's. This site will be used to help determine the cause of the current perchloroethylene contamination in Missoula.

3. A third well is proposed along the Clarkfork River in this general location. Water from the river is seeping into the aquifer upstream of this site. Downstream of this site water is seeping out of the aquifer back into the river. The well site will be designed to study this transition zone, and collect water quality data. This information can be used to refine the existing computer flow model of the Missoula Valley Aquifer.

4. The fourth well will be located during the study based on information gathered during the early stages of the project.

CONTAMINATION EVENTS

To show the importance of a monitoring network I would like to review the present and past contamination problems in the Missoula Valley Aquifer.

The major areas are as follows:

1. A leachate plume containing heavy metals from the Missoula Landfill, discovered in 1986.

2. A large plume of gasoline contamination that occurred when the Yellowstone gas pipeline broke in 1973. An estimated 250,000 to 500,000 gallons of fuel was spilled.

3. County Weed Control. A large herbicide plume was detected here in 1978. The contamination was and traced back to a storm drain sump that was being used to dispose of rinse water from spraying equipment.

4. **The Burlington Northern refueling station.** An unknown amount of fuel is floating on the aquifer in this area. Between 4 and 32 inches of product is floating on the water over an undetermined area.

5. **Champion International gasoline spill.** Discovered in 1985, approximately 600 gallons of gasoline was lost from an UST. 21 private water wells were contaminated.

6. **Hart Refinery.** Soils in this area have been contaminated by petroleum byproducts, and have caused contamination of groundwater.

7. **PERC** has been detected in several municipal and private water supply wells in this area. The cause is under investigation, industrial waste disposal sumps and dry cleaners are possible sources.

8. **Linda Vista Subdivisions.** Groundwater here is being contaminated by individual septic systems. High nitrate levels have been detected in this area for the last 8 years.

These events underscore the need for a proactive, comprehensive groundwater management plan for the Missoula Valley aquifer.

A complete monitoring well network is a key component of the management plan.

It is for these reasons that I ask you to reconsider the Missoula Valley Aquifer monitoring and Remediation Plan. I feel the project should receive a higher ranking, and should be funded by the 1991 legislature.

Over 65,000 people in the Missoula area rely on the Aquifer.

The 1990 census shows that Missoula County, and the City of Missoula continue to grow.

In the future the demand on the aquifer will increase.

In the last several years a great deal of progress has been made towards understanding and protecting Missoula's groundwater.

Future work needs to be based on a good scientific footing, which can only be supplied by data collected from monitoring wells.

THANK YOU FOR YOUR CONSIDERATION!

KERIN & ASSOCIATES

consulting engineers/planners

RICHARD T. KERIN, P.E.
principal

219 East Mendenhall Street
Bozeman, Montana 59715
Phone 406/586-8407

February 12, 1991

Claudin Montange
House of Representatives
Capital Station
Helena, Montana 59620

EXHIBIT 9 P.1
DATE 2-8-91
HB Long Range Planning

RE: DNRC Renewable Resource Grant Funds For County Water and Sewer District
Big Sky, Montana

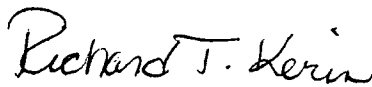
Dear Ms. Montange:

On behalf of my client, the Gallatin Rural Improvement District No. 305, I am enclosing a synopsis of my presentation to the legislative sub-committee on Friday (2-08-91) for the above referenced project. I appreciated your comments after my presentation. I realize that we are in an uphill battle seeking grant funds, simply because we represent Big Sky. I wish to reiterate again that the state needs to take care of these economically healthy areas and to not handicap them because they do something successful. The key problem we face is in creating the County District the fact the RID has really no authority to spend the money for the creation of a combined district. Lone Mountain Springs Water Company, the other participant, by merely the way it is managed and operated has no money for the project either. It is a very marginal operation, much like the Butte Water Company.

All Big Sky is asking for is some seed money to set up the administrative framework so that the combined district can get off the ground on solid footing. Otherwise all the past headaches that plague each utility will be merely transferred to the new district.

Thank you for hearing us out. We again ask that you set aside our requested seed money to help this District come about and come about right.

Sincerely,



Richard T. Kerin, P.E.

Kerin & Associates
Consulting Engineers

RTK/sb

Enclosure

EXHIBIT 9 p. 2
DATE 2-8-91
HB Long Range Plan.

ADDENDUM SUMMARY (II)

**DNRC WATER DEVELOPMENT AND
RENEWABLE RESOURCE GRANT APPLICATION**

FOR

LEGISLATIVE SUB-COMMITTEE HEARING ON GRANT APPLICATION

2-08-91

FOR

**COUNTY WATER AND SEWER DISTRICT
BIG SKY, MONTANA**

The purpose of our grant request is to provide the initial funding or seed money for the planning and creation of a "Combined County Water and Sewer District" for Big Sky, Montana. These funds are needed to address the legal, financial, administrative /management, technical basis and methodology for combining the Lone Mountain Springs Water Company, a private water utility, owned exclusively by Everett and John Kirsher (a/k/a Boyne Mountain USA) and Gallatin County Rural Improvement District No. 305 (a/k/a Big Sky Sewer District). The lead entity in this grant, the Gallatin County RID No. 305, realizes that their chances are slim in securing a grant for their project in light of the competition for these funds across the State and how Big Sky may be perceived by the rest of the grant reviewers.

Previous reviewers of this grant request have openly stated they feel Big Sky is capable of funding the creation of a District themselves. The Legislative reviewers of this application may feel the same way that Big Sky can go it alone, without state financial assistance. True, the economy of Big Sky is generally health in comparison to many areas across the State. The legislature should not handicap Big Sky, though, because of this and consider the facts surrounding the grant request and what it will mean for the area. In general Big sky should not be handicapped because they are doing something successful. The State of Montana needs health areas like Big Sky if it is going to compete for tourist dollars. Tourism is our leading industry. It is important for the legislature to protect this growth node and help it along the way just as they help those areas that are not as healthy in an economic sense and rely exclusively on grants from numerous sources to fund needed improvements. Big Sky will get an opportunity to re-direct and re-organize itself into a more efficient political entity with the grant. From there they should be able to take care of themselves. The RID is not asking for money to fund their major capital improvements, merely to seed money to create a County Water and Sewer District.

It is a relatively simple procedure to create a County Water and Sewer District. Montana statute spells out the requirements an area must go through in order to create one. First of all, a petition is circulated, then a vote is held among area residents, and then a board of directors is elected by eligible voters in the District. The problem is convincing the local residents, who will vote on this matter, that the combined District is a good thing for them. Area residents at Big Sky are cautiously looking at this District to see if they are buying a "pig-in-a-poke". They are wondering if they are merely taking over the burden of the water and sewer utilities that rightfully belongs to Boyne Mountain USA and others before them. If residents feel they will be looking at substantial rate increases to upgrade and expand these utility systems, they certainly are going to think twice about allowing the creation of a combined District.

One of the key concerns residents have now is the fact that when each land owner bought property in the original platted subdivision of Big Sky, they were verbally told the price of a lot included a hook-up to the water and sewer utility. The sewer system is now at or near capacity and there are still a significant number of vacant lots in the original platted subdivisions of Big Sky. In other words, the Sewer District (RID No. 305) has to seriously consider assessing these properties a buy-in charge to the system. Charging such a hook-up fee is not going to be a favorable position to take for them.

There are some important parts of the grant application that I think need to be highlighted in this addendum submittal. First of all, both utilities, the water utility and the sewer system are plagued with shoddy workmanship and shortcuts that characterize the construction of both of these utilities over twenty years ago when the resort was first developed. Very little money has gone into either utility for major capital improvements since that time. It is important to understand this as the residents and owners have been living with these defects ever since and are now paying and will continue to pay the price to replace and rehabilitate both systems.

It is important that the grant application reviewers to understand just exactly how the water company as we know it today, Lone Mountain Springs Water Company, and Gallatin County RID No. 305, the Sewer District, were created. When Chet Huntley's dream fell apart in 1975 and the area was sold for about five cents on the dollar to Boyne Mountain U.S.A. all of its original corporations holdings were sold as well. This included the original water system which was also sold at a substantial discount. It was an after thought by Boyne Mountain USA after the resort was purchased by them to separate the water utilities from the ski corporation into what we know today as Lone Mountain Springs Water Company. The Kirshers', have no plans to spend the needed funds to first of all complete the capital improvements to the systems that are needed to bring the water utility into compliance with health department standards. The water company is routinely at odds with the State Department of Health and most recently with the Public Service Commission over the compliance issue.

The problems inherent to this system are very similar to those of the Butte Water Company. The Lone Mountain Springs Water Company, is owned and operated by people who are not utility operator people. They are ski-lift operators and resort management people. Their interests are not in utility management, maintenance and operation. For one it does not make money for them. Boyne Mountain USA as owner of Lone Mountain Springs Water Company is simply not on top of the required replacements, renewals, upgrades and expansions, and operation and maintenance needs of this system to effectively manage it. The situation that happened to the Butte Water Company is happening to the Lone Mountain Springs Water Company. Similarly, Anaconda was interested in mining copper, not in running a water utility; hence, the deterioration of the Butte Water system and likewise the deterioration of the Lone Mountain Springs system.

The condition of the sewer system is better; however, the RID is not the framework to operate the sewer utility anymore. First of all, it has no legal jurisdiction to expand the sewer system. The RID is actually only a maintenance district, which has charge to simply operate and maintain the original sewer system. The RID was created by the Gallatin County Commissioners when the resort was developed in the early '70s to install the sewer system. The capital cost of funding the improvements were made by Big Sky, Inc. in 1971.

Recent conversations with the Big Sky Owners' Association, will reveal that there are significant development pressures on Big Sky right now. Under the existing framework of the RID, it is questionable whether this new development will be able to come on-line simply because the RID may not be able to legally annex them under the existing framework. The plant needs expansion and the RID procedure is not the framework for it. In order to expand the sewer system a whole new RID is required; hence, creating another layer of administration on top of an already over taxed one. The logical choice is to roll the RID over into a County Water and Sewer District along with the water utility. A County Water and Sewer District at that point will have municipal standing just like any city or town does. One of the beauties of the County Water and Sewer District is that it is not regulated by PSC; so, the combined District can tax and assess itself to whatever level the market will bear.

On top of all of this the Lone Mountain Springs Water Company has only one employee, the individual was an employee of the original Big Sky, Inc. of the early 1970's and now works full time for Boyne Mountain U.S.A. Incidentally, he also works half-time for the water company and half-time for the Sewer District. He is the only link that the present corporation, Boyne Mountain U.S.A. has with the original corporation. He is fully responsible to operate both the water and sewer system in addition to his full time duties with the ski corporation. This gets to be a severe conflict of interest for him at times. The owners know little of what he know of the system. This gentleman is now sixty-eight (68) years old and in two years time will be retiring. He has a difficult time keeping up on records simply because he is over worked. "As-built" drawings of both the water and sewer systems are not in good shape as he simply does not have the time to get them in shape. The condition of the "as-built" drawings for the Meadow and Mountain Villages came home to roost this last summer during a construction project in one of the subdivisions. Efforts

were made to locate existing water and sewer lines in that subdivision. The mains were simply not in the location where they were shown on the plans. In other words record drawings, which are an intricate part of a utilities normal operation, were in very bad shape.

Since sending in the grant application, the Big Sky Owners' Association has reported seven documented water outages this past summer alone in the Meadow Village area. All three water systems: the Mountain Village system, Hidden Village system, and the Meadow Village system, have all had reported outages for extended periods of time in the past, all well beyond what is normal for a utility. All three of these individual water systems are supposed to be controlled through what is called a electronic telemetry system. This system controls the filling of the storage tanks of which there are six of in all three systems combined; i.e., more tanks than any city of the first class in Montana. The water operator routinely has to control the availability of water to storage by manually turning on pumps and manually inspecting storage tanks to see if well water is filling them during the early morning hours. This is certainly no way to run a utility.

Another point of interest, is that the Lone Mountain Springs Water Company recently completed a leak detection survey, that study revealed that as much as 200,000 gallons of water are being lost in leaks alone. To put this figure into perspective for you the average daily flow at the sewage treatment plant during the peak winter months of November thru March is approximately 160,000 thousand gallons a day; so, this leakage from the water system alone is equivalent to 125% of the average daily sewage flow. Normal leakage for a municipality should be 5-10% of metered usage.

The Lone Mountain Springs Water Company and RID No. 305 serve a base yearly population of around 300+ people. Seasonal highs have gone to as much as 5,000 people on a peak ski day during the winter. This is a wide swing in population. It is also a wide swing in terms of water to provide and sewage to process.

Big Sky has made steps in the past to incorporate themselves into a city of the third class. Certain wording in the statute has prohibited this from happening to this point. Efforts are still being made to change the law so that the area can become incorporated, but, it looks as though this will be a length process it may take several legislative sessions before it eventually happens.

The logical next step is the combined County Water and Sewer District which is the subject of this application in the first place. The creation of a combined District would be a smooth transition for both the RID and the water company. The Big Sky Owners' Association (BSOA) has been very supportive of efforts to create this County Water and Sewer District. The BSOA Board of Directors have recently appointed a public works committee to look into the pros and cons of the combined District and report to the BSOA Board of Directors as to their findings. If successful with this grant, it will supply the needed impetus for primarily the water company, but, also the RID to initiate the process to create the District. Without this grant the creation of the District may still happen, but,

KERIN & ASSOCIATES

consulting engineers/planners

219 East Mendenhall Street
Bozeman, Montana 59715
Phone 406/586-8407

Plan.

IN, P.E.

February 12, 1991

EXHIBIT 9 P.1
DATE 2-8-91
HB Long Range Planning

Ms. Judith Montange
House of Representatives
Capital Station
Bozeman, Montana 59620

Re: DNRC Renewable Resource Grant Funds For County Water and Sewer District
Big Sky, Montana

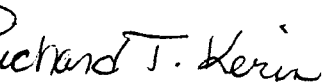
Dear Ms. Montange:

On behalf of my client, the Gallatin Rural Improvement District No. 305, I am enclosing a synopsis of my presentation to the legislative sub-committee on Friday (2-08-91) for the above referenced project. I appreciated your comments after my presentation. I realize that you are in an uphill battle seeking grant funds, simply because we represent Big Sky. I wish to reiterate again that the state needs to take care of these economically healthy areas and not handicap them because they do something successful. The key problem we face is creating the County District the fact the RID has really no authority to spend the money on the creation of a combined district. Lone Mountain Springs Water Company, the other participant, by merely the way it is managed and operated has no money for the project either. It is a very marginal operation, much like the Butte Water Company.

What Big Sky is asking for is some seed money to set up the administrative framework so that the combined district can get off the ground on solid footing. Otherwise all the past headaches that plague each utility will be merely transferred to the new district.

Thank you for hearing us out. We again ask that you set aside our requested seed money to help this District come about and come about right.

Sincerely,


Richard T. Kerin, P.E.

Kerin & Associates
Consulting Engineers

TK/sb

Enclosure

KERIN & ASSOCIATES

consulting engineers/planners

ERS

219 East Mendenhall Street
Bozeman, Montana 59715
Phone 406/586-8407

12, 1991

Montange
Representatives
Montana 59620

RC Renewable Resource Grant Funds For County
Big Sky, Montana

Water and Sewer District

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T. Kerin
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Associates
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municipal • structural • studies •

design • survey

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DATE 2-8-91
HB Long Range Plan.

the process will take much longer and with much more confusion as the key reason for the grant is to improve accounting, legal, and technical framework of the existing utilities so each can make a clean break into the new District. If successful, this grant would furnish the level of enthusiasm needed to get matters off dead center.

Reference was made in the grant application that Lone Mountain Springs Water Company would retain the Mountain Village utilities and sever off only the Hidden Village and Meadow Village water systems. Subsequently, Boyne Mountain USA has decided to place all three systems up for sale. The RID made it clear that all three water systems would have to join the District.

Those close to the scene at Big Sky, have asked "Why doesn't the Lone Mountain Springs Water Company merely raise rates to pay for their needed improvements?". The answer to this is that Lone Mountain Springs Water Company does not even have sufficient funds to pay for the necessary financial reports required by PSC to initiate a rate increase application. In addition there are on-going PSC proceedings brought on by the condominium group of Silver Bow condominiums to determine the exact extent of responsibility for the water company. The water pipes to this large condominium complex are in a state of serious disrepair and leak profusely. It will be the PSC's call to determine who is responsible for the repairs of these pipelines. Lone Mountain Springs Water Company claims no responsibility for them.

All that the RID and BSOA really want is to just make sure that the framework is in place so that when these utilities come under one roof they will be managed effectively and the books for each utility are in proper order. In addition, the officials and management of the new District need to know the extent of capital improvements which will be needed to bring each utility into compliance with State Standards and the capacities of each system. There is no way this kind of information will be prepared unless the RID receives some grant funds to do them. Confusion over what is there and what is needed will merely be transferred to the new District. If the Lone Mountain Springs Water Company can not even afford audits necessary to keep track of the accounting on their system now and if the RID has no legal authority to expand itself, it becomes clear that if the seed money is not granted the project the necessary groundwork will simply not get done. It will not be created with the same kind of organization and management structure that is needed to allow it to "hit the ground running". Big Sky can probably take care of themselves financially once they have the mechanism in place to tax and assess property owners through revenue bond procedures instead of RID procedures.

Infrastructure improvements at Big Sky are extensive. The RID services their customers through approximately twenty-miles of collector sewers and trunk lines. The water company has approximately fifteen-miles of mainline pipeline. In addition there are numerous mechanical and electrical systems to maintain and operate. The improvements are beyond the capabilities of both the RID and water company to operate and maintain effectively.

The District Court of Gallatin County imposed a moratorium three years ago, saying no more hook-ups to the sewer system. The RID got involved in this litigation over poor advise and documents which stemmed back to the original corporation of the early '70s. Because of poor record keeping at the time the documents simply were not available to address the financial, legal and technical information required by the court. While much of the litigation stemmed from commitments made by Big Sky, Inc. in the early 1970's, the RID inherited those commitments and is now suffering the consequences for them.

A great deal of useful information did eventually come out of that litigation for the RID. They took it upon themselves to get their act in order. A facility plan was written addressing the current capacity and projected needs of the sewer utility. The RID started to log sewage flows and repair some of the many leaks in the mains and services. They started repairing and cleaning sewer lines, addressing odor problems at the treatment plant, monitored plant performance, and maintaining accurate administrative and accounting records. The RID most recently implemented a new rate schedule which allows the RID to more equitably charge their residential and commercial customers for sewer usage. This new rate schedule was a big step for the RID in helping them meet the challenges of converting to county water and sewer district.

The sewer utility at Big Sky desperately needs another administrative framework in which to operate. The RID like the water company is plagued with many physical problems. The following are some examples:

- 1) Leaky sewers and manholes
 - 2) Poorly installed mains
 - 3) Leaky storage cells at the plant
 - 4) Collapsed mains
 - 5) A sewage treatment plant which is at or near capacity and needs to be expanded
- and 6) A spray irrigation system which needs expansion

Items 3 and 5, above are estimated to cost \$1.4 million alone.

The sewer utility was plagued with a serious infiltration/inflow problem before they undertook a needed repair program in 1986. Since that time the RID has been successful in reducing infiltration by about 50-60%. Infiltration still plagues the collection system and accounts for nearly 50 percent of the flow in the system on an annual basis. From the attached flow records one can see that plat flows are highest during April, May and June when usage at the resort is at a seasonal low (refer to flow chart).

The water and sewer utility are directly related utilities. Winter time water consumption which is when the bulk of the usage occurs at Big Sky, directly impacts the sewer utility. There is no conservation of usage by customers and guests of the resort because rates in the past were too reasonable to conserve. Admittedly, it is difficult for a resort area like Big

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sky to tap visitors and guests for usage unless this is done through a special taxation. Sewer user rates and water rates need to keep pace with the times, the RID only recently took steps in this direction. The water utility needs to follow suit, but only under a different administration.

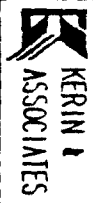
The RID asks that you support and fund its grant request; so, Big Sky can organize its two major utilities under one roof now. The momentum is there. You can trigger this effort with the grant.

The RID and Lone Mountain Springs Water Company realize that the ranking of their project is not going to be changed by the legislature. This does not diminish or belittle the need for this project however. It is a very important one for the area. The RID also realizes that there is extensive demands for grant funds across the state but, again, that does not diminish or belittle the fact that the State of Montana and its legislatures need to protect healthy areas like Big Sky just as they try to assist areas across the State, which are not economically sound. The RID is not asking for capital improvement dollars but merely the start up funds to get the new District on sound footing from an administration and management point of view.

Big Sky wishes to leave the legislative committee with one passing thought. In an effort to fund Big Sky with the recommended ranking system the legislature needs to appropriate more money to the DNRC water development programs. Our project needs funding as do the others across the state and encourages the legislature to increase the level of funding to this program. This will serve to strengthen the economy at Big Sky; hence, strengthening the economy of Montana.

Respectfully Submitted,

Richard T. Kerin for Gallatin County RID No. 305

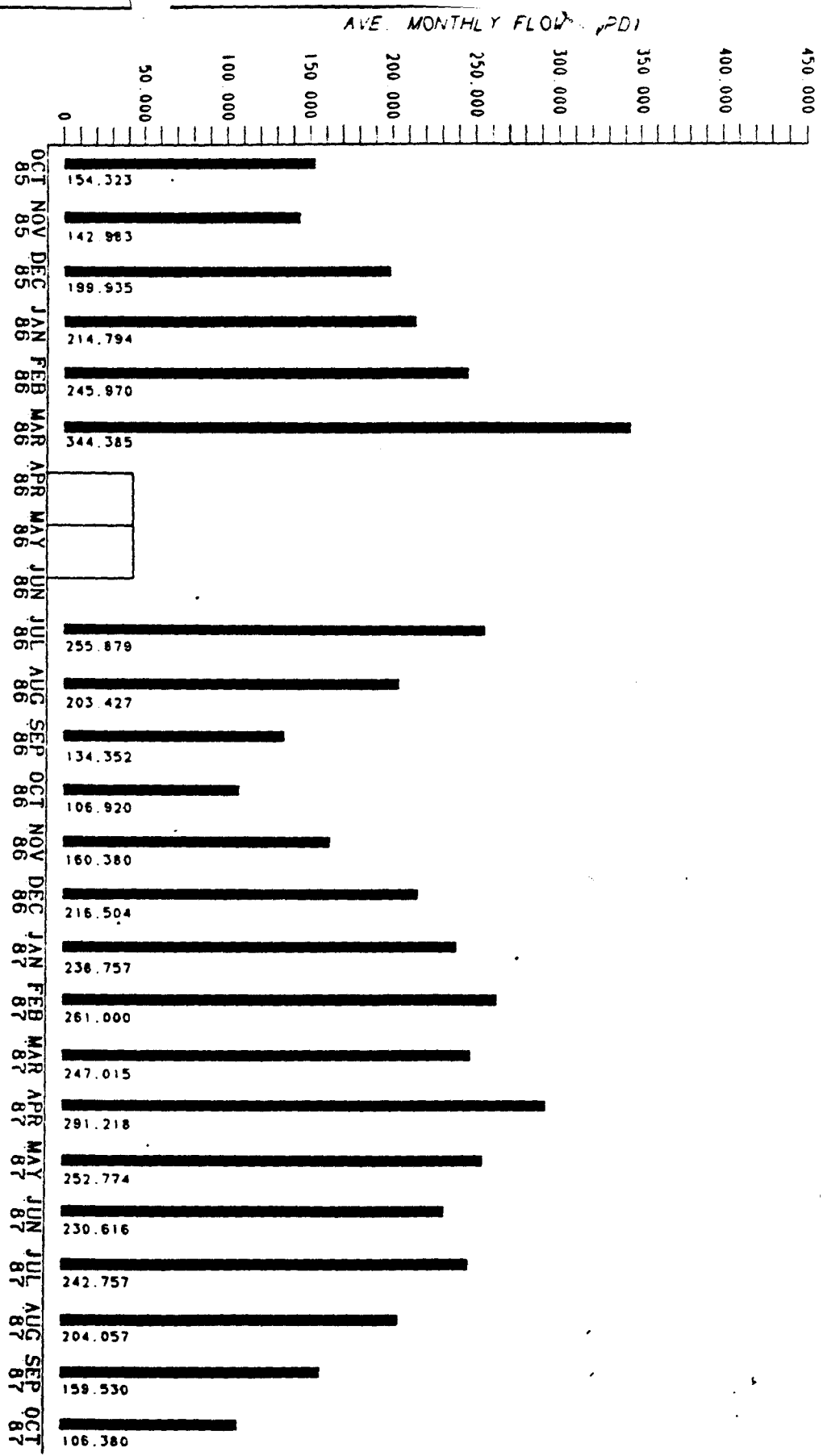


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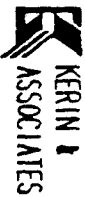


FIGURE 3 - AVERAGE DAILY SEWAGE FLOW RATES FOR MONTH
90 - V - NOTCHED WEIR

BIG SKY WASTEWATER TREATMENT PLANT
BIG SKY SEWER DISTRICT



AVE. MONTHLY FLOW PDI



CONSULTING ENGINEERS/PLANNERS
 515 E. WASHINGTON ST. BOZEMAN, MT 59715



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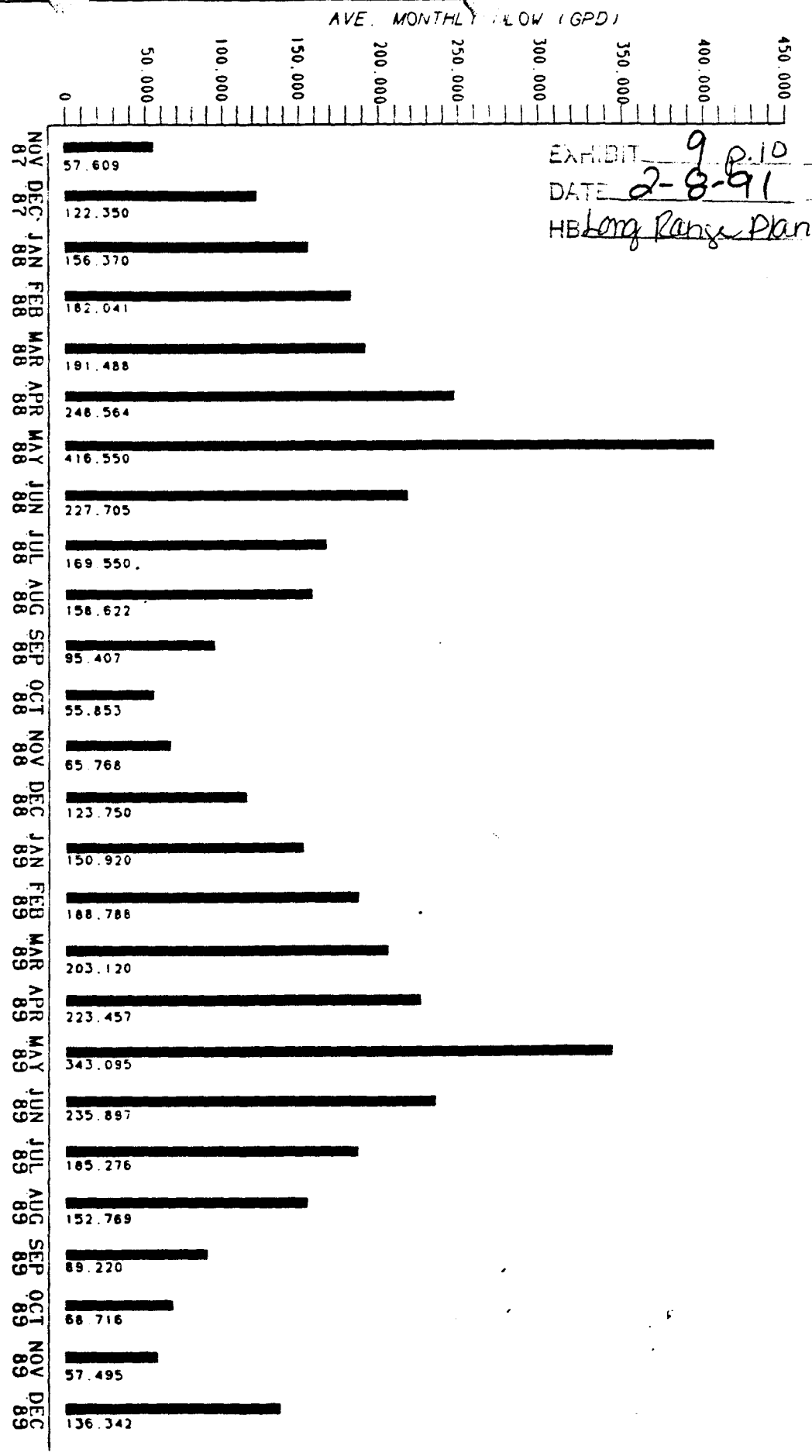


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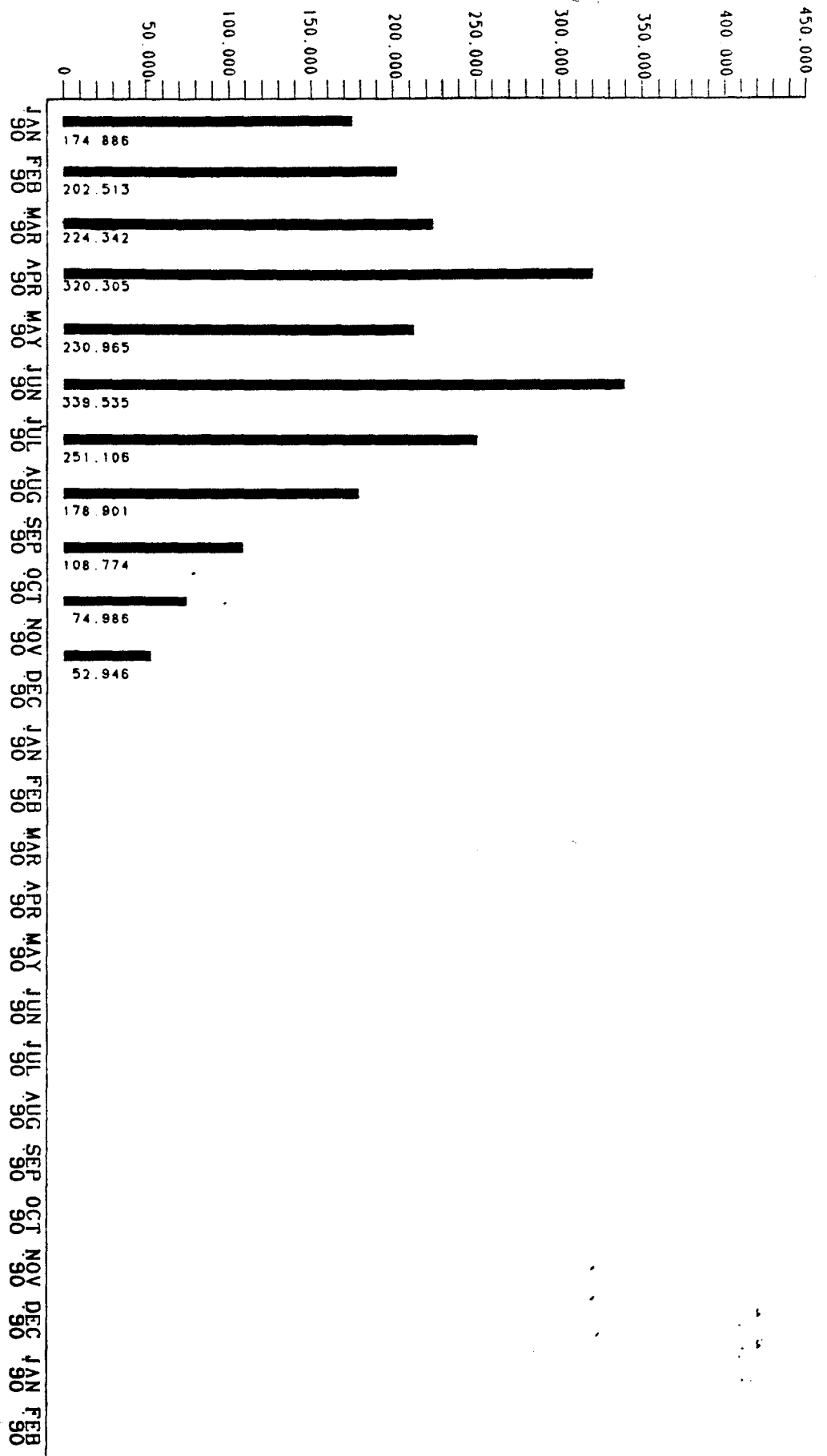
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 CONSULTING ENGINEERS/PLANNERS
 215 E. WASHINGTON ST. BOZEMAN, MT 59715



**FIGURE 3 - AVERAGE DAILY SEWAGE FLOW RATES FOR MONTH
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**BIG SKY WASTEWATER TREATMENT PLANT
 BIG SKY SEWER DISTRICT**

AVE MONTHLY FLOW (GPD)



How Much Does Big Game Really Cost Landowners?

By John Lacey and Keith Jamtgaard

WILDLIFE is an important resource for all Montanans. However, early reports estimate that 65% or more of the feed for Montana's wildlife is produced on privately owned lands. In many areas where private lands provide the forage and habitat for wildlife, landowners are bearing an economic burden whose benefits are captured by the general public.

The "equitability issue" in south-

west Montana is discussed in this report. Results are based on the impact of big game on private land. Information was collected during a recent survey of landowners (Dec. 1989 - Jan. 1990). The Headwaters RC&D Big Game Committee, Inc. sponsored the survey.

Methods

A questionnaire was mailed to 858 rural landowners in seven

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Land	Mean Number Of Wildlife Months Per/Landowner	Forage Consumption Estimate	Number Of Animal Units Months Per Landowner
Wilde Deer	389	0.17	148
White-tail Deer	635	0.13	82
Elk	408	0.53	214
Antelope	487	0.10	49
Moose	17	0.87	15
Bighorn Sheep	14	0.18	2
Total AUMs/Landowner			510

counties (Beaverhead, Madison, Jefferson, Silver Bow, Deer Lodge, Granite, and Powell). All landowners were randomly selected from Agricultural Stabilization and Conservation Service county mailing lists.

Results
 Fifty-three percent, or 456 questionnaires, were returned. Thirty-two percent of the respondents owned fewer than 500 acres while 20% owned more than 5,000 acres. Because the U.S. Census of Agriculture reports a similar distribution of ranch sizes, we believe that our data were collected from a representative sample of the population. The high number of returns also makes the results statistically valid.

Data from the survey indicate that many private landowners in southwest Montana are concerned about the number of big game animals on private land. For example, 4% percent of the landowners

reported that there were too many elk in terms of their private land management objectives. Forty-eight percent of the respondents were satisfied with present numbers, while only 9% wanted more elk. Thus for each landowner who wanted more elk, there were nearly five landowners who wanted fewer elk.

More than 60% of the landowners reported that big game reduced alfalfa and grain yield. More than 50% reported that big game reduced forage production on pasture and range land. Less than 2% believed that big game increased forage and grain yield. Thus, for every landowner who believed that the presence of big game was beneficial to forage production, about 30 landowners believed that big game had a negative impact on forage yield.

Forty-nine percent of landowners reported that big game damaged haystacks. Sixty-five percent of the landowners reporting damage incurred losses of one to 10 tons. The

average loss per landowner was eight tons, or 5480 (at \$60/ton).

Sixty-four percent of landowners reported that big game animals increased fencing costs. Eighty percent of these landowners spent from one to 10 days of additional labor to fix fence damaged by big game. The estimated additional cost of material and labor averaged \$314 per landowner.

The accompanying table depicts the average big game populations on private land, as reported by respondents.

Assuming that all of the forage consumed by big game could have been harvested by livestock and that an AUM on private land was worth \$11 in 1989, \$5,610 of forage was consumed on the average ranch. By confining the losses from damaged hay and the additional fencing cost, the big game-related expenses averaged \$6,404 per landowner. This estimated cost does not include the reduction in bushels of grain, the reduction in the productive life of hay and pasture lands, the long-term deterioration of rangeland due to the inability to control grazing animals, nor the cost associated with assisting hunters.

Seventy-seven percent of the landowners allowed hunters access to their private land. The landowners reported an average of 227 hunting days on their private lands. Since only 4% of the landowners

charged hunters an access fee, most are not economically compensated for the non-market value of hunting activities.

One measure of the cost that landowners bear for hunters can be calculated by dividing the cost of \$6,404 by the 227 hunter days. The private landowner is absorbing a cost of \$28.21 for each day that the hunting public uses his land. Several publications by the Montana Dept. of Fish, Wildlife and Parks suggest that hunters are willing to pay much more than \$28.21 per day of big game hunting.

Big game animals in southwest Montana are a public resource. However, private landowners incur a substantial cost in providing forage and habitat for wildlife. Few receive monetary returns associated with the big game populations.

Because of this inequity, we expect more private landowners to advocate fewer big game animals on their private lands, to request financial compensation for private land forage consumed by big game, or to charge access fees for hunting on private lands. Reducing animal numbers to the carrying capacity of the land is the most feasible solution.

Lacey is an extension range management specialist, and Jamtgaard is an assistant professor, both at MSU.

Livestock Grazing on Federal Lands: A Boon to Montana's Economy

John R. Lacey
James B. Johnson

During the livestock industry's early years in the West, stockmen basically had almost unlimited access to huge amounts of land (Clawson 1950). During periods of intense settlement like the years 1867 to 1885, when herds of cattle were moved into the northern plains, use of the huge acreages they passed through was free. Only the presence of Indians restrained use of the land.

Some ranches eventually began to protect their grazing land from other stockmen by acquiring "key tracts" or base property. A key tract usually contained the only water available to stock in the area. By preventing trespass on the land he owned, a rancher could obtain exclusive use of all the land that could be used by livestock watering on his land. Although public land adjacent to ranches was often useless for grazing because of a lack of water, the key tracts themselves were usually too small to sustain a viable livestock operation. Since stockmen lived in these areas, while the federal presence was at best a distant one, the former were able to make use of both types of land (Clawson 1950).

The first real regulation began when the federal government — through the U.S. Forest Service in 1906 and the Grazing Service in 1934 — implemented formal range management policies. They began regulating the number of stock allowed on public lands, the season of use, the way livestock should be managed, etc. To control grazing, use of rangelands was reserved for specific livestock operators. The initial recipients of "right-to-graze" permits were usually established stockmen who could demonstrate



Grazing on the Beaverhead National Forest, Montana

Photo/John Lacey

historical use of the range. Even then, grazing fees were controversial, although at the time it was because of their very existence rather than their level.

Yet these fees were initially quite low. As noted by Secretary of Agriculture Henry C. Wallace in 1923:

When the first grazing fees were established in 1906, they were designedly low, representing approximately the cost of administration rather than the intrinsic value of the forage consumed.

Early in its history, the Forest Service set monthly fees at about twelve cents per head

for cattle and three cents for sheep; the Grazing Service established fees of five cents for cattle and one cent for sheep.

John R. Lacey is an extension range management specialist in the Animal and Range Science Department at Montana State University; he holds a PhD in range science from Utah State University.

James B. Johnson is a professor and farm management specialist in the Department of Agricultural Economics at MSU; he holds a PhD in agricultural economics from Oregon State University.

A History Of Range Conditions On Montana's Public Lands

By John Lacey and Duane Whitmer

THE Bureau of Land Management administers about 8 million acres of rangeland in Montana and 300,000 acres in South Dakota. Most of this land is located in southwestern or the eastern one-half of Montana.

The lands annually provide about 1.2 million animal unit months (AUM) of livestock grazing. An AUM is the amount of forage or feed required by a cow for one month. Along with the livestock grazing, these same lands provide habitat for 100,000 big game animals, 15,057 million board feet of timber, and visitors spend 24 million hours hunting, fishing and hiking and sight-seeing on them. Because of these multiple uses — many Montanans are concerned about the condition of public rangeland.

An Early Range Condition Study

In 1936, Senate Document 199 reported that 95% of the public domain rangeland had declined in range condition since 1900. It reported that 1.5% of the range was moderately depleted, 14.3% was materially depleted, 47.9% was severely depleted and 36.3% was extremely depleted.

Because the "depletion" terminology is not used today — it is assumed that the 1936 depletion classes are roughly equivalent to today's concept of condition classes — excellent, good, fair and poor. Thus,

Lacey is an extension range management specialist at Montana State University and Whitmer is a natural resource specialist with the Lewistown district office of the Bureau of Land Management.



Buffalo grazing on Northern Great Plains (photo by L.A. Huffman, courtesy of Coffrin's Old West Gallery, Miles City).



Moving cattle into the Northern Great Plains (photo by L.A. Hutton, courtesy of Coffrin's Old West Gallery, Miles City).

April 3, 1986

EXHIBIT 10
DATE 2-8-91
HB Long Range Plan

1.5% of the range was in excellent, 14.3% in good, 47.9% in fair and 36.3% in poor condition.

The reasons for so much poor and fair condition range are not fully understood. Periodic drought and large herds of wildlife were major ecological factors and are partly responsible. Excessive livestock grazing in the 1800s also deserves some of the blame for the poor condition rangeland.

The Montana Situation

The 1936 rating included all public rangeland in the western states — not just Montana's. In all likelihood, the condition of Montana's rangeland was probably higher than the public domain rangeland in the southwestern states. Not only is Montana's environment less fragile — more forgiving in terms of precipitation and inherent productivity

PERCENT BY CONDITION CLASS OF PUBLIC RANGELANDS*

Year	Excellent	Good	Fair	Poor
1963-64	3	48	42	7
1983-84	5	66	27	2

* 8 million acres in Montana and 300,000 acres in South Dakota are included in these figures.

— but Montana ranchers were more concerned about range condition. Their concern had a direct impact on our nation's history. The Mizpah-Pumpkin Creek area lies south of Miles City. Like many other areas in Montana, it had been homesteaded in the early 1900s. Nevertheless, the drought of 1919 and the hard winter of 1919-20 had accelerated the homesteader exodus. By 1926, most of the homesteaders had gone, leaving dilapidated shacks, rusty windmills, patches of plowed ground and scattered quarter-sections and half-sections of fenced-in property. Both publicly and privately owned lands within the area soon became a grazing commons. It was overstocked and overgrazed.

At this time (1926), Nick Monte, rancher, Evan Hall, agricultural development agent for the Milwaukee Railroad, and Paul Lewis, Custer County extension agent, developed a plan that would enable a cooperative association to lease, or otherwise gain control of the lands in question, and reapportion grazing on a permit system. Sen. Thomas J. Walsh and Rep. Scott Leavitt, both of Montana, endorsed the idea. In 1928, Congress approved a bill to allow the Secretary of the Interior to enter into agreements with the state of Montana and various private landowners to bring the Mizpah and Pumpkin Creek lands together for the purpose of joint leases to stockmen.

The experiment proved to be a success. Private landowners received revenue from their lands, taxes were paid, and the grass conditions improved dramatically. The success stimulated interest in many different parts of the west. The end result was the Taylor Grazing Act, legislation adopted by Congress to regulate use of the public-domain land.

Montana Public Range Improves

Most range managers agree that the overall condition on Montana's public rangelands has substantially improved during the last 50 years. Some of this improvement is verified by the two accompanying photographs taken on public rangeland near Dillon.

Educated Public And Politicians Important To Public Land Policy

LEGISLATION is continually being proposed to reform livestock grazing, logging, oil and gas exploration, recreation and other uses that characterize public land policy. While much of the legislation is introduced and supported by legislators and citizens who are not directly involved with the public lands, in contrast, the people most affected by the legislation are not adequately involved in the process. With proper education, more involvement in the observation, evaluation and determination of public land policy could be obtained. Determining the attitudes and knowledge of county political leaders and extension educators regarding public land management is essential. Their "grass roots" information will be useful in developing public education programs to create an informed citizenry. In turn, influence on the legislative process by the informed public will lead to laws and administrative rules and ultimately shape public lands policy.

The involvement of the "public" in education is a key element. Extension evolved with the "cooperative" idea of bringing the colleges and the national, state and local governments together to solve problems. The three-way partnership involving federal government, university and grass roots is a strength of the extension system. To underestimate the importance of grass roots involvement would be counterproductive to rural America. Last spring, a questionnaire was mailed to 179 county commissioners and 50 county extension agents in Montana. The questionnaire was designed to collect information of the economic importance of the natural resources on public lands, attitudes regarding current levels of resource use and educational needs. A total of 192 questionnaires were returned (83% response rate). Forty-six of the respondents were extension educators. More than 80% of Montana's county commissioners' and county extension agents rated public lands resources



+3.2 +24.5 +12.6 +24.9 +43.0
Sire: Trovler 124 Dam's Sire: Sky High
Born 1-13-90 B.W. 89 lbs. — Wt. 11-27, 1035 lbs.

We have always maintained that our cow herd keep an abundance of natural fleshing ability, some width across the back and a powerful heart girth. We insist on this for a couple of different reasons. First, we have found that with this power type of cow, she can have an abundance of milk and will maintain herself and rebreed even under rough conditions. Secondly, she passes on these valuable characteristics to her progeny; productive heifer calves, and bulls with a rear quarter and natural fleshing ability. She is the bottom line to less maintenance and higher productivity, resulting in more profit.

ATTEND OUR ANNUAL
PRODUCTION SALE
MARCH 12, 1991

At The Ranch, 1 mile east of Manhattan on Frontage Road.
Lunch 12 Noon — Sale 1 P.M.

TITLE: Education Program in Natural Resource Management on Public Lands
HB

PROBLEM:

Billings GAZETTE
Sept. 1990

Grazing destroys public rangeland

Consider the environmental costs associated with riparian zones impacts due to heavy livestock grazing. In Arizona, less than 3 percent of the state's original endowment of riparian vegetation remains and yet 75 percent of all the state's wildlife species are dependent upon this critical thin green line. Livestock grazing, though not the only reason for this decline, is nevertheless, a major factor. Is this loss, multiplied to varying amounts around the entire West figured into the sustainability of livestock? No way.

Guest columnist



George Wuerthner

When the Spanish first brought livestock to the arid West, nobody bothered to ask if it was a good idea and for the most part it remains an unexamined question even today. The overriding environmental parameter of the West is its aridity and aridity has its costs. Cows, for example, originated in moist, humid Europe. They are not adapted to life in a dry climate. In order to grow cows in a place where they do not belong, we have had to ravage the natural environment and manipulate much of the West in a futile attempt to make the land fit the needs of a non-native alien animal. This has had just as major ecological consequences as if the farmer...

low this feed to be grown, but we also tolerate the dewatering of our rivers to the detriment of fish aquatic ecosystems...

LETTER from Bzm.
1st week of April 19

Wildlife being killed to benefit livestock

Letters

Here are two excellent reasons to get livestock off public lands:
1) The killing of bison on the boundaries of Yellowstone National Park. According to the Montana Fish, Wildlife and Parks Department, the only reason these animals are being killed is that they supposedly transmit disease to cattle. If the cattle were not present on public lands around Yellowstone, there would be no reason to kill the bison. Last year 569 died. We have plenty of cows, but very few bison, especially wild ones. If, as some people believe, the bison's range is overgrazed and they must move to avoid starvation, then where are the population studies, range condition analyses and management plan to support this? Why remove the cows and give the bison the room they appear to need?
2) The Animal Damage Control Unit of the U.S. Department of Agriculture. This agency, under the U.S. Fish and Wildlife Service until 1986, exists solely to dispose

money used to kill public wildlife, often on public land, with no public input — all to benefit a handful of heavily subsidized ranchers and farmers."
North American wildlife is already severely depleted due to habitat loss, poaching, overhunting, pesticide poisoning, roadkill, etc., etc. The last thing they need is the ADC's war on wildlife!
All this for a hamburger. Is it worth it? Let's abolish the ADC (All the Dead Critters) and free our public lands!
Philip R. Knight
P.O. Box 6151
Bozeman

Just say no to cows

I recently hiked in several different mountain ranges on the Beaverhead National Forest including the Upper Ruby, West Pioneers and Gravelly ranges. In each area the impacts from cows were evident everywhere. There were trampled riparian zones, cow-bombed springs, polluted and fouled streams.

If I were to pollute the waterway with raw sewage, I'd be considered a vandal or a criminal. If I went in and trampled streamsides, destroyed wildlife habitat and created downstream soil erosion like the cows, I'd be put in jail for destruction of public resources. Yet cows do this everyday on millions of acres of our public lands with

Bozeman
Chronicle

DESCRIPTION:

An educational project will be developed, implemented and conducted to increase Public understanding of history, current status, economic importance, and management of livestock grazing on Montana's Public Lands. (32 Month Duration).

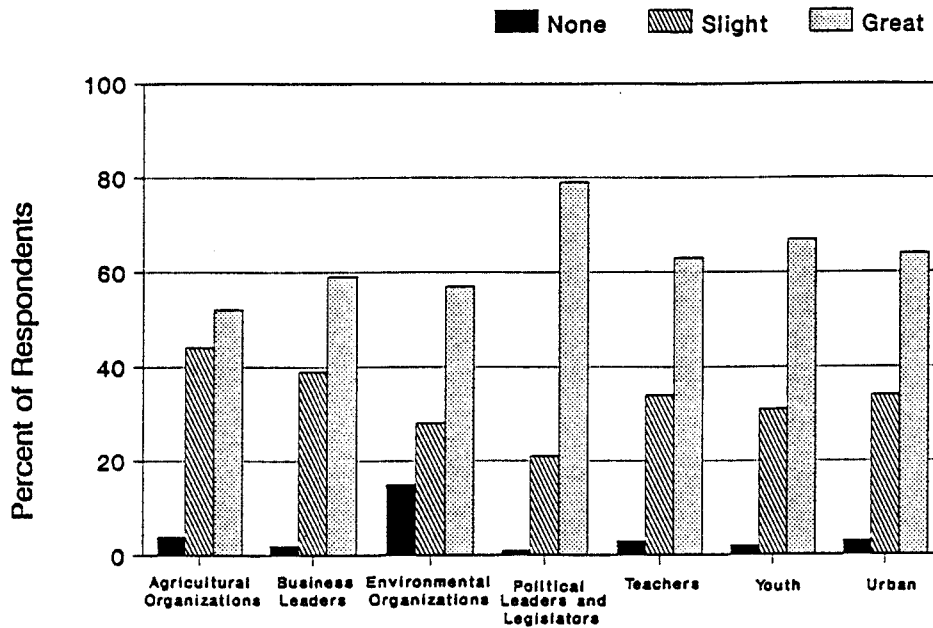
PLAN:

MSU will lead the effort. Montana Public Lands Council and Private Citizen Task Group will specify problem areas and provide direction.

PREVIOUS WORK:

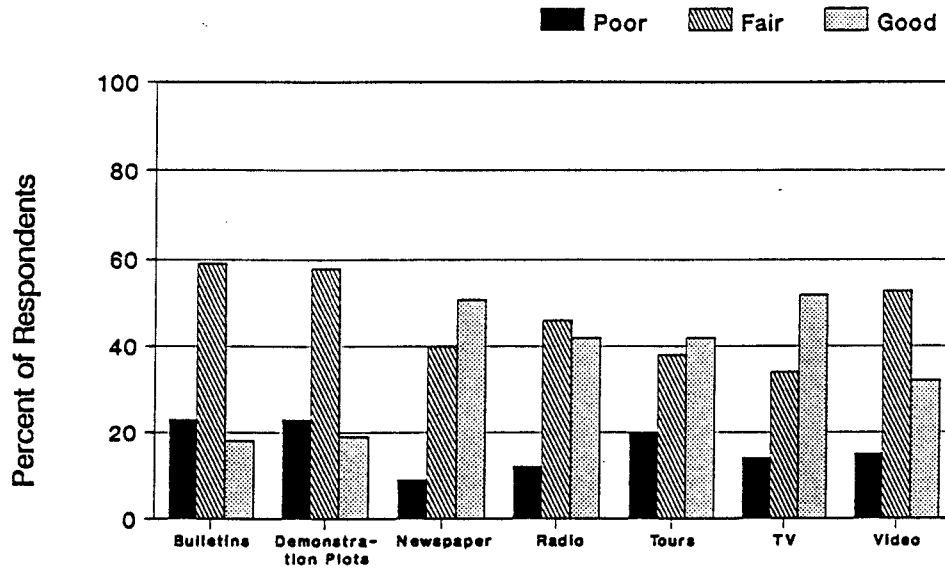
Survey of County Commissioners and Ag Agents
Economic Value of Public Land Grazing (Lacey and Johnson)

10
DATE 2-8-91



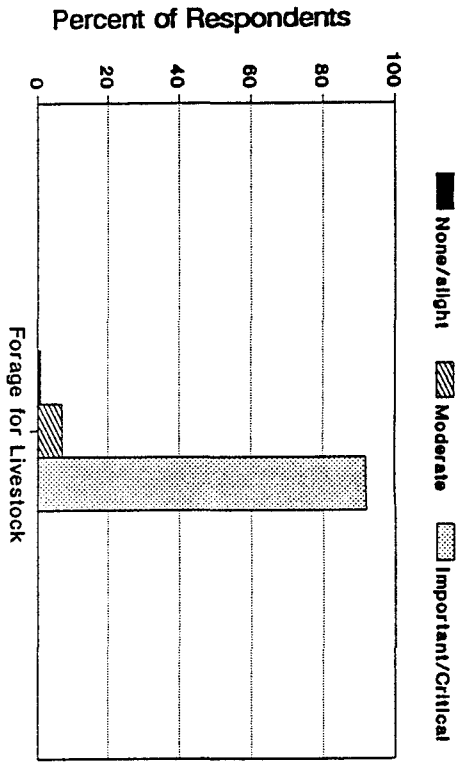
Uses of Public Lands

Respondents indicated that the need for educational information on Public Lands varied among potential audiences.

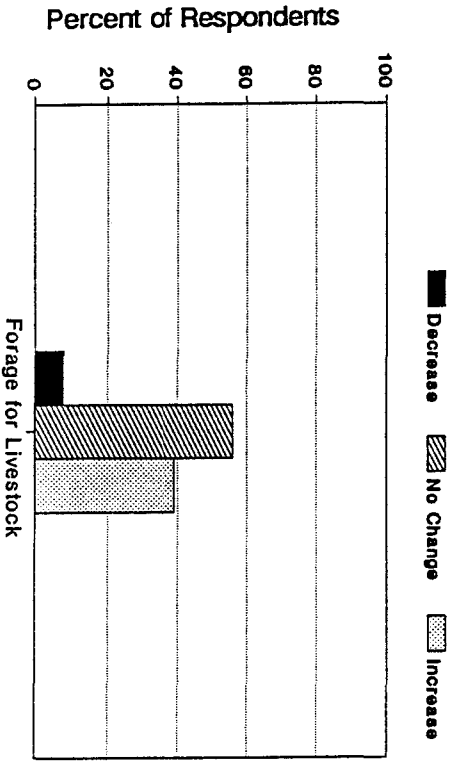


Method of Distributing Information

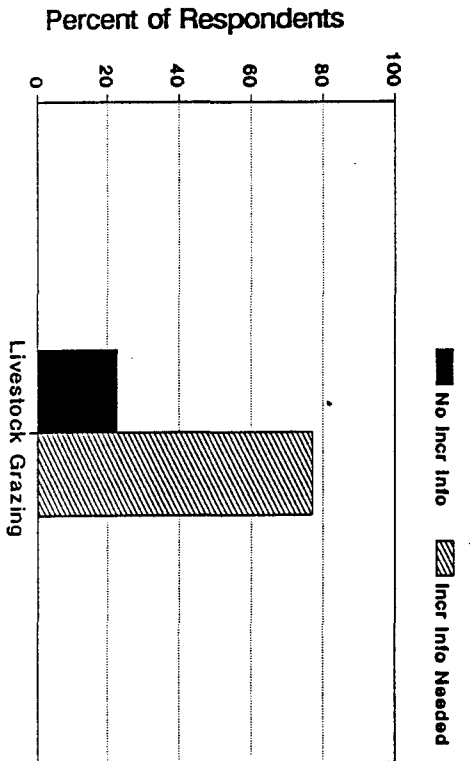
Respondents rated the methods of disseminating Public Lands Information to Montana citizenry.



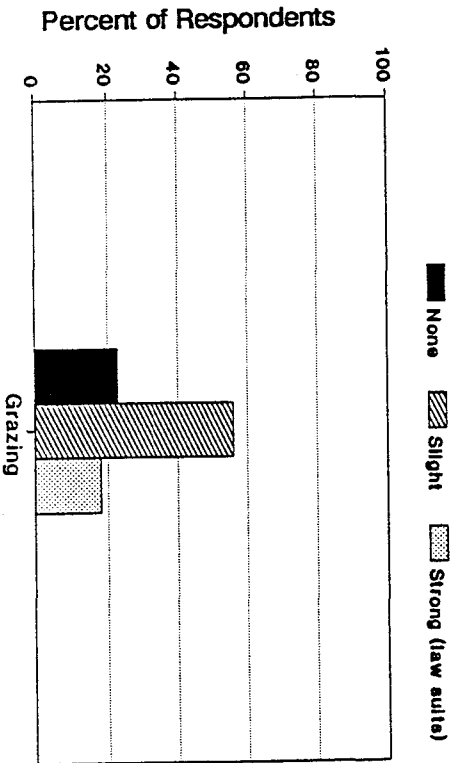
Most County Commissioners and Ag Agents thought livestock was important/critical for Montana's economy.



Most County Commissioners and Ag Agents either want the same or more livestock grazing on Montana's Public Rangelands.



Most County Agents and County Commissioners wanted the education of Public land grazing to be increased.



There is a lot of disagreement regarding livestock grazing on Public Lands (County Commissioners and Ag Agents).

**HOUSE OF REPRESENTATIVES
VISITOR REGISTER**

Montana Planning Com SUBCOMMITTEE

DATE 2/8/91

DEPARTMENT (S) DNR - WD and RRI
Grants

DIVISION _____

PLEASE PRINT

PLEASE PRINT

NAME	REPRESENTING	
Gerson Higgins	Montana Watercourse	
Dennis Nelson	Montana Watercourse	
Pat Truster	City of Polson / LAKE Co.	
James Goehring	Loc Gov Center Bozeman	
Pete Rebish	East. Bench Irr. Dist	Pillon.
Holly Franz	MT Power Co.	
Jim Wedeward	Bureau of Reclamation	Billings
Lynn ENGLES	BUREAU OF INDIAN AFFAIRS.	PABLO
Dale Hultman	Dorby Schools	Dorby
Alice Mayo	Dorby Schools	Dorby
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John Campbell	Polson	
Jon Shannon	MISSOULA/POLSON	
Daniel Kemmis	City of Missoula	
Sarah McDonald	MSLA Co. Conservation Dist	MSLA
Geoff Badenoch	CITY OF MISSOULA	
Rick Kerin	GALLATIN COUNTY RID NO. 305	
Butch Joseph	Lakeside County Sewer District	

PLEASE LEAVE PREPARED TESTIMONY WITH SECRETARY. WITNESS STATEMENT FORMS ARE AVAILABLE IF YOU CARE TO SUBMIT WRITTEN TESTIMONY.