

F I N A L   R E P O R T

PROVIDING  
SCIENCE & TECHNOLOGY RESOURCE CAPABILITY  
FOR THE  
MONTANA LEGISLATURE

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March 1979

A C K N O W L E D G E M E N T

This project was funded by the National Science Foundation under grant No. ISP77-25873. The amount of the funding was \$25,000. The Legislature of the State of Montana contributed \$13,710 toward the study.

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## INTRODUCTION

In 1971 the Montana legislature passed the Montana Environmental Policy Act (MEPA). The purpose of this Act is "to declare a state policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the state; and to establish an Environmental Quality Council."

The Environmental Quality Council (EQC) consists of four (4) senators--two from each party; four (4) house members--two from each party; two (2) public members appointed by the president of the senate with consent of the senate minority leader; two (2) public members appointed by the speaker of the house with the consent of the house minority leader; and the governor or his representative as a non-voting member.

The council appoints an executive director, who "shall be a person who, as a result of his training, experience, and attainments, is exceptionally well qualified to analyze and interpret environmental trends and information of all kinds; to be conscious of and responsive to the scientific, economic, social, esthetic, and cultural needs and interests of the state; and to formulate and recommend state policies to promote the improvement of the quality of the environment."

The executive director, with the approval of the council, hires the staff necessary to complete the tasks assigned by the council. At the present time, the staff consists of three researchers, all of whom have scientific backgrounds. The executive director and the three staff researchers all hold graduate degrees in one of the environmental or natural resource areas.

The duties and responsibilities of the staff of EQC are defined as follows:

1. To gather timely and authoritative information concerning the conditions and trends in the quality of the environment--both current and prospective; to analyze and interpret such information for the purpose of determining whether such conditions and trends are interfering, or are likely to interfere with, the achievement of MEPA; and to compile and submit to the legislature studies relating to such conditions and trends.
2. To review and appraise the various programs and activities of the state agencies in reference to MEPA for the purpose of

determining the extent to which such programs and activities are contributing to the achievement of the Act, and make recommendations to the legislature.

3. To develop and recommend to the legislature state policies to foster and promote the improvement of environmental quality to meet the conservation, social, economic, health, and other requirements and goals of the state.
4. To conduct investigations, studies, surveys, research, and analyses relating to ecological systems and environmental quality.
5. To document and define changes in the natural environment, including the plant and animal systems, and to accumulate necessary data and other information for a continuing analysis of these changes or trends, and an interpretation of their underlying causes.
6. To make and furnish such studies, reports thereon, and recommendations with respect to matters of policy and legislation as the legislative assembly requests.
7. To analyze legislative proposals in clearly environmental areas and in other fields where legislation might have environmental consequences, and assist in preparation of reports for use by legislative committees, administrative agencies, and the public.
8. To consult with and assist legislators who are preparing environmental legislation, to clarify any deficiencies or potential conflicts with an overall ecological plan.
9. To review and evaluate operating programs in the environmental field in the several agencies, to identify actual or potential conflicts both among such activities and with a general ecological perspective, and to suggest legislation to remedy such situations.
10. To transmit to the governor and the legislative assembly annually and make available to the general public, an environmental quality report concerning the state of the environment which shall contain:
  - a. The status and condition of the major natural, man-made, or altered environmental classes of the state, including, but not limited to, the forest, dryland, wetland, range, urban, suburban, and rural environment.
  - b. The adequacy of available natural resources for fulfilling human and economic requirements of the state in the light of expected population pressures.

- c. Current and foreseeable trends in the quality, management and utilization of such environments and the effects of those trends on the social, economic, and other requirements of the state in the light of expected population pressures.
- d. A review of the programs and activities (including regulatory activities) of the state and local governments, and nongovernmental entities or individuals, with particular reference to their effect on the environment and on the conservation, development, and utilization of natural resources.
- e. A program for remedying the deficiencies of existing programs and activities, together with recommendations for legislation.

#### THE GRANT APPLICATION

The Environmental Quality Council, during its July 12, 1977 meeting, received notice that the state legislature was eligible to apply for a grant to the National Science Foundation for funding of a State Science Engineering and Technology (SSET) Program. At this time, it was necessary to determine who would apply for the grant--the Environmental Quality Council or the Legislative Council. A meeting was held between the chairman of the EQC and the Legislative Council. Because the EQC is primarily concerned with the natural and environmental sciences (science, engineering, and technology), the Legislative Council agreed that the EQC should apply for the grant. The leadership of both houses were contacted for their concurrence and a letter of endorsement. The leadership of both the house and senate agreed with the grant proposal; the proposal was submitted, and approved.

The grant was approved by the National Science Foundation and the money was received in late October, 1977. However, due to the unavailability of staff, work on the SSET project did not commence until the second week in January, 1978.

One point which should be mentioned early in this report is the fact that the Montana legislature meets for 90 days every other year. The start of the SSET project coincided with the year the legislature was not in session. This was indeed fortunate as the "calm" during the interim gave the staff a chance to become familiar with new surroundings and allowed them to "gear up" for the upcoming session.

#### LEGISLATIVE NEEDS

One of the first tasks attempted was to determine the need of the legislators for the next legislative session. A questionnaire and cover letter (Figure 1) were sent to each of the 100 house members and 50 senators. Each

FIGURE 1

QUESTIONNAIRE RESULTS

<u>NUMBER</u>	<u>SUBJECTS</u>	<u>%</u>
13	Water Resources (ground, surface, and rights)	65
4	Air Pollution	20
7	Water Pollution	35
5	Solid Waste	25
7	Subdivisions	35
7	Reclamation	35
8	Strip Mining	40
4	Hard Rock Mining	20
9	Energy (solar, wind, geothermal, hydro, nuclear)	45
7	Land Management (grazing, forest, crop)	35
7	Natural Mineral Management (coal, gas, oil, bentonite)	35
5	Pesticides	25



was asked to list those items which he/she felt would be an important issue in the next session. The unfortunate part of the survey was the response. Only 25 out of 150 (16.7%) returned the questionnaire. The poor return rate may be explained in part by one or more of the following reasons:

1. It had been nine months since the last session and twelve months before the next session was to begin.
2. Confusing EQC, a legislative committee, with a local environmental group.
3. Past staff members of EQC had been lobbying for bills during the last session.
4. Past staff members of EQC were more concerned with long-range research projects than short-term responses to inquiries.

Whatever the reasons for the small return, it can be seen by those questionnaires returned that the most important issue was perceived to be water resources (65%), and especially water rights. The next most important issues were energy (45%), strip mining (40%), water pollution, subdivisions, reclamation, and land management--all 35%.

Further investigation, both before and during the session, has shown that legislators desire and need short, concise and quick responses to their inquiries. Most of the responses should be returned in a time frame of 3-4 days.

As was stated previously, the Montana legislature meets for 90 days every other year. During the 1977 session the senate introduced 450 bills and 50 senate joint resolutions. The house introduced 842 bills and 106 house joint resolutions. This produced a total of 1448 pieces of legislation introduced. During the 1979 session, the house introduced 922 bills and 63 house joint resolutions, while the senate has introduced 523 bills and 36 senate joint resolutions for a total of 1,544 pieces of legislation. Besides the brevity of the session (90 days), all bills except taxation and appropriations, must pass to the opposite chamber before the 45th day.

It is therefore imperative that all inquiries receive a response within three days. Committee chairmen normally schedule hearings with 72 hours' notice. If a committee member has a question on a certain part of the bill or needs to have a specific point clarified or substantiated prior to the hearing, the turn around time could be less than 72 hours.

In the past, legislators have obtained their science and technology information from a variety of sources. These include, but are not limited to, constituents, lobbyists, public interest groups, committee hearings, the Legislative Council, the Environmental Quality Council, and others. The degree and quality of information received from each group may be difficult to ascertain given the success of our original survey discussed earlier.

To insure an unbiased source of information, legislators should rely on an agency from inside the legislature. Information from the executive branch may or may not be of an unbiased nature, but this surely does not maintain the doctrine of separation of powers. That information received from constituents, lobbyists, public interest groups, and committee hearings may be truthful up to a point, but to make an informative decision, a legislator must have both sides of an issue.

The Legislative Council is a great asset to the legislative process. One of their primary functions is to provide full-time legal and administrative staff support. However, "there is no formal mechanism for science or technology assessment or for the utilization of scientific or technical information in policy formulation."

The Legislative Council has a research division. The director of the division has a degree in botany while the legislative researchers have degrees in history, political science, religion, geography, and sociology. Although the staff members are no doubt competent in their respective fields, they do not have educational backgrounds in the science, engineering or technology fields. As was stated in the recommendations of the Oregon Science and Technology Final Report, "We recommend that the science information specialist have a background in the natural sciences. This background will serve the needs of the Legislative Assembly in at least two ways. First, by being part of the scientific community, the individual will share a common understanding of scientific concepts with information sources outside the Assembly. Second, the amount of time that the individual will spend understanding scientific concepts, even outside of his or her specialty, will be greatly reduced." For this reason, all technical requests for natural resource and environmental issues should be directed to the staff of EQC.

#### ANALYSIS OF FIRST AND SECOND ROUND GRANT RECIPIENTS

Another of the tasks to be performed under the grant involves studying what other states have done to further science and technology capabilities for the legislature. A letter was written to each of the first and second round grant recipients asking how the money was to be used and what mechanism would be explored for providing an S & T capability for their respective legislatures.

We experienced a response rate of 67%. Below is a tabulation of those states which responded and the mechanisms employed to provide a S & T capability:

1. Legislative Council (or similar organization)	9	47%
2. Science Office	4	21%
3. University System	4	21%
4. Advisory Council with Staff	1	5%
5. Staff of house and senate members as liaison	1	5%

In addition to the various mechanisms listed above, most of the states have incorporated other procedures such as links with the university system, assembling a list of technical experts, using science interns, faculty members on leave for part or all of the legislative session, and hiring outside consultants.

#### ATTITUDES OF THE 1979 SESSION

It appears that the 1979 Montana Legislature may have joined the 1978 tax-cut bandwagon. From Figures 2 and 3, the total number of bills introduced in the house and senate with subject content relating to natural resource or environmental issues are listed. The figures are given also for the 1977 session, but are not broken down into the separate subject matter. The number of bills and resolutions introduced in the 1979 session totals 1,544, while the total for the 1977 session was 1,448. The 1979 House introduced 922 bills and 63 resolutions for a total of 985 measures. Of these, 104, or 10.6%, dealt with natural resource or environmental issues. This is down somewhat from the 129 (13.6%) issues introduced during the 1977 session. The 1979 Senate introduced 523 bills and 36 resolutions for a total of 559 measures. Of these, 38 (6.8%) dealt with the natural resource and environmental areas. The 1977 senate, however, introduced twice as many (13%) measures dealing with the environment or natural resources. However, the 1977 session introduced more legislation dealing with natural resource and environmental issues (193), than did the 1979 session (142). It appears at this stage that the "environmental awareness movement" may have peaked during 1976-1978.

The major subjects of interest this session appear to be tax cut measures and fiscal responsibility. Evidently both houses of the legislature feel they have their natural resource and environmental "houses in order," and attention can now be turned to issues which are on everyone's mind--taxes and cutting state spending.

In trying to find a key to the switch from environmental concern to one of monetary concern, the occupations of the two houses and the two sessions were compared. Figures 4 and 5 show the results of this comparison. In each instance, the numbers are within one or two of each other all the way down the line. The trend must be at least regional, if not national.

#### ALTERNATIVES

After reviewing the material sent by the first and second round grant recipients, and reviewing the legislative structure used by Montana, below is a list of options available to the State of Montana to establish a mechanism to provide science and technology information capabilities:

1. Two additional researchers with scientific backgrounds could be added to the Legislative Council. These two researchers would handle all requests for information which fall into the science engineering, and technology categories. The very minimum cost

FIGURE 2

SENATE BILLS

1979 Session

NATURAL RESOURCE AND ENVIRONMENTAL AREAS

Pollution Abatement	9
Energy	11
Natural Resources	13
Public Health	4
Miscellaneous	<u>1</u>
	38

1979 SESSION

523 Bills  
+ 36 Resolutions  
559 Measures

$$\frac{38}{559} = 6.8\%$$

1977 SESSION

450 Bills  
+ 50 Resolutions  
500 Measures

$$\frac{64}{500} = 13\%$$

FIGURE 3

HOUSE BILLS

1979 Session

NATURAL RESOURCE AND ENVIRONMENTAL AREAS

Pollution Abatement	7
Energy	41
Natural Resources	34
Public Health	13
Miscellaneous	<u>9</u>
	104

1979 SESSION

922 Bills  
+ 63 Resolutions  
985 Measures

$$\frac{104}{985} = 10.6\%$$

1977 SESSION

842 Bills  
+ 106 Resolutions  
948 Measures

$$\frac{129}{948} = 13.6\%$$

FIGURE 4

OCCUPATIONS OF SENATE MEMBERS  
1977 AND 1979 SESSIONS

	<u>1979</u>	<u>1977</u>
1. Farmer/Rancher	18 (36%)	19 (38%)
2. Businessmen	<u>12</u> (24%)	13 (26%)
3. Educator	5 (10%)	3 ( 6%)
4. Attorney	5 (10%)	4 ( 8%)
5. Doctor	4 ( 8%)	4 ( 8%)
6. Retired	3 ( 6%)	4 ( 8%)
7. Other Professionals	2 ( 4%)	1 ( 2%)
8. Labor	1 ( 2%)	2 ( 4%)

FIGURE 5

OCCUPATIONS OF HOUSE MEMBERS  
1977 AND 1979 SESSIONS

	<u>1979</u>	<u>1977</u>
1. Farmer/Rancher	27 (27%)	28 (28%)
2. Businessman	23 (23%)	22 (22%)
3. Educator	14 (14%)	16 (16%)
4. Retired	12 (12%)	12 (12%)
5. Labor	8 ( 8%)	6 ( 6%)
6. Attorney	5 ( 5%)	4 ( 4%)
7. Other Professionals	5 ( 5%)	5 ( 5%)
8. Housewife	4 ( 4%)	5 ( 5%)
9. Student	1 ( 1%)	2 ( 2%)
10. Fireman	1 ( 1%)	

of these two additional science researchers would be \$33,600/year for salaries and benefits. Any support help, travel, telephones, etc., would, of course, be additional.

2. Establish a separate agency and mandate this agency to do all S & T research for short-term inquiries and mid-range interim projects. The new office would be responsible for fielding all S & T inquiries during the session and interim. The minimum cost of this new office would be \$65,000/year for salaries and benefits of a director, two researchers, and a secretary. In addition, money would have to be allocated to provide offices and accessories, travel, and miscellaneous expenses.
3. Establish a mechanism whereby the university system, on a rotating basis, would provide a faculty person to provide the necessary information to the legislature. The faculty member would have to move to the state capitol to be accessible during the 90-day session and some alternative mechanism would have to be established to help staff the various interim committees. The university would have to make arrangements to provide additional staff to cover those assignments vacated by the person on leave to the legislature.
4. Establish a separate fund for each house of the legislature to be administered by the chairman of the respective Natural Resource Committee. This fund could be used to hire expert witnesses to provide unbiased testimony on issues currently before the committee. In addition, consultants could be hired to perform both middle and long-range research projects. The fund necessary would have to be large enough to insure that the committee would have adequate reserves to complete the session.

Many problems exist with this approach. A particular witness will never please everyone on the committee. The turn-around time on requests may extend past the 72-hour notice for committee meetings. The amount of paying the fees and expenses of a witness, especially if from out of state, could be prohibitive.

5. Utilize the staff of the Environmental Quality Council as it was intended. The staff consists of an executive director, three science researchers, and an administrative assistant/secretary. The executive director and three science researchers all have graduate degrees in one of the environmental or natural resource sciences. As the office is already functioning, there will be no additional costs to cover salaries, benefits, travel, etc.



## RECOMMENDATIONS AND CONCLUSIONS

It is the recommendation of the project director that the necessary function of providing a Science and Technology capability be assigned to the staff of the Environmental Quality Council. At a time when legislatures across the country and the U.S. Congress are accepting the mandate of the people to reduce spending and to try to balance the budget, it does not seem plausible that the Montana legislature would want to create a new agency unnecessarily or increase staff in an administrative agency to provide the expertise and S & T capability which presently exists with the legislature's own EQC staff.

To develop such a capability to effectively serve the legislature, it will be necessary to assemble an up-to-date list of resource personnel in the state and the immediate region. This list would contain the name, address, telephone number, and area of expertise of all individuals who would be willing to provide a timely and concise response to a legislator's inquiry. These experts would be providing their time and talent for no charge. While no in-depth research project would be undertaken, it is our hope that the responses would be kept to 2-3 typed pages. Where more than one expert is identified, all would be requested to respond to an inquiry to obtain more than one opinion.

We intend to establish a link with the University System in Montana. Instead of obtaining a list of all faculty members on the six campuses, we would request the Commissioner of Higher Education's office to appoint one contact person on each campus who would receive our inquiry and assign it to the appropriate person for a response. The faculty person would finish the response and send it directly to our office for inclusion with other responses from other experts.

A third reference tool which will be utilized will be a computer hookup with other state legislatures. At the present time we are using the EIES/Legitech computer conferencing network established by Dr. Harry Stevens and funded by a separate NSF grant. This conferencing network allows us to interact with 25 legislative agencies, 20 federal agencies, and NCSL. If the researcher at the terminal does not have an immediate response to an inquiry, the answer may be obtained within a matter of a few days. Using this system, the inquiry is sent on a one-to-one basis, but it is received by at least 50 separate organizations.

In addition, we have access to the State Library which has a separate computer system and is able to obtain information and publications from libraries both in the state and the region. The county has a new library, plus the State Law Library is located in the Capitol also.

With all of these resources available to us, plus the many publications sent directly to our office from various federal and out-of-state agencies, we have the capability to provide information on nearly any subject which may arise during a legislative session.

## SUMMARY

This study was conducted with the assistance of a \$25,000 grant from the National Science Foundation and \$13,710 in-state matching funds. The purpose was to develop a mechanism whereby a Science and Technology capability would be developed for the legislature. While in session, all short-term inquiries would be answered within five days, with a targeted response time of 72 hours. During the interim, longer range research projects would be assigned by the various committees of the legislature, including the Environmental Quality Council.

The Environmental Quality Council and its staff appear to be making great strides in providing S & T information to legislators. A brochure was professionally designed and printed which described the function of the EQC and its staff, what services were available, and the qualifications of the staff. The brochure, along with a cover letter, was sent to each of the 150 members of the 1979 session before they arrived at the Capitol. In addition, a ring-down telephone was placed just outside the house chambers and another in a senate committee chairman's office. Both phones are connected directly to our office to alleviate the need of dialing or the use of the capitol complex operator. The phones were deemed necessary as our office is located three blocks from the capitol due to space limitations.

As the current session continues, we are receiving more requests for information on environmental and natural resource issues. Our turn-around time has been less than five days and in some cases a report is handed to the legislator within 24 hours of his request.

In the appendix is a summary of the projects conducted by the staff during the interim period January 1, 1978 to December 31, 1978. Most of the reports were written at the request of a legislator or by a member of the Council. This summary gives a brief indication of the types of reports written and the diversity of subject matter explored in this one-year period.

Also in the appendix is a copy of our final budget including all estimated and actual expenses. As actual expenses did not reach the projected \$25,000, some money was returned to NSF.

A P P E N D I X

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## Energy

### An analysis and Review of Saskatchewan's Poplar River Complex

This report includes a chronology and description of the Poplar River Complex from its announcement up to the present. It explores possible hurdles to a satisfactory settlement of the air and water quality problems the complex might create for northeastern Montana, and briefly describes the positions of the State of Montana, Saskatchewan and the U.S. State Department.

### Framework for an Alternative Regional Power Planning Bill

This is a summary of a regional power planning bill giving increased responsibility to the individual states, particularly their siting authority. Other areas in which increased state responsibility is recommended include the allocation of BPA power and the administration of conservation measures. Also included is a schematic description of the proposal.

### Alternative Energy Standby Charge

This report analyzes standby charges and their relationship to questions concerning existing rate structures. Claims that alternative energy users' intermittent reliance on conventional energy sources create disproportionately high demand costs for utilities, and lead to rate discrimination against full time users are discussed. The report predicts a severe impact on the state's goal of conserving energy and encouraging renewable energy development if standby charges are implemented. It also points out the

technical problems of defining what constitutes an alternative energy system, and hence, when standby charges would be applicable. Responses to the report by the Montana Power Company are appended.

The Montana Environmental Policy Act and the Colstrip 3 & 4 Twin 500 KV Power Lines

This report critiques the Department of Natural Resources' handling of the centerline studies for the Colstrip 3 & 4 Powerlines in reference to the Montana Environmental Policy Act and recommends steps to facilitate compliance.

Streamlining the Siting Act

Changes in the Energy Facility Siting Act proposed by the Department of Natural Resources are discussed. The proposed changes attempt to shorten review time and divide the decision making process into two steps; the first dealing with questions of need, type and location, the second with the specifics of facility design. The report summarizes the reaction of state agencies and industry to the proposed changes.

Flathead Hydropower Study Workshop

These reports are based on a series of public workshops, sponsored by the Corps of Engineers, on possible hydropower sites in Western Montana. The workshops discussed the most likely sites for hydropower development and their potential environmental problems.

Notes From the Environmental Quality Council's Tour of the Colstrip and Decker Areas

See MINING

Three Short Reports on Gas Flaring

See OIL AND GAS DEVELOPMENT

Yellowstone Level "3" Study

See WATER RESOURCES

Uranium Solution Mining

See MINING

Report of the Department of State Lands, Oil, and Gas Leasing  
Program

See OIL AND GAS DEVELOPMENT

Northern Border Pipeline Proposal

See OIL AND GAS DEVELOPMENT

The Montana Environmental Policy Act and Regional Development

See MONTANA ENVIRONMENTAL POLICY ACT

Review of Board of Oil and Gas Conservation

See OIL AND GAS DEVELOPMENT

LAND USE

Wilderness Studies Reports

The Environmental Quality Council's staff has monitored two wilderness controversies; the Elkhorn Wilderness Study, and RARE II. These reports review contending viewpoints and analyze the controversy.

Subdivisions and the Montana Environmental Policy Act

This report examines subdivision activity in four selected counties; Park, Gallatin, Ravalli, and Flathead. It focuses on subdivision impacts on agricultural and wildlife lands, and discusses development patterns which tend to impact those land uses. It reviews

the role of the Montana Environmental Policy Act in the Department of Environmental Health and Sciences subdivision review process, specifically in reference to the Hensler subdivision in Ravalli county. The implications of the Beaver Creek South Supreme Court decision on subdivision review are also discussed.

Report on Department of State Lands, Oil, and Gas Leasing Program

See OIL AND GAS DEVELOPMENT

Northern Border Pipeline Proposal

See OIL AND GAS DEVELOPMENT

Notes from the Environmental Quality Council's Tour of the Colstrip and Decker Areas

See MINING

Streamlining the Siting Act

See ENERGY

MINING

Notes from the Environmental Quality Council's Tour of the Colstrip and Decker Areas

A review of the issues discussed by council members on a tour of Southeastern Montana. Discussion centered on problems, successes and goals of state's reclamation efforts.

Uranium Solution Mining

This report is a synopsis of the Board of Environmental Health and Sciences hearing on proposed uranium solution mining regulations. It describes the uranium solution mining process and possible environmental problems which it might entail, and summarizes Industry's

the board and the oil industry on the issue of the waste of natural gas through gas flaring.

Report on the Department of State Lands, Oil, and Gas Leasing Program

This is a review of the Oil and Gas Leasing Program, and its environmental review process. It describes the program's bid application process, environmental review process, stipulations attached to leased tracts, and provisions for public participation.

The congruence of the program with the goals of MEPA is examined. The report concludes that the programs mandate to generate as much revenue for school trust fund as possible, and its time frames, make adequate public participation and a thorough environmental review difficult to achieve. Report recommends changes in program which mitigate those problems.

Northern Border Pipeline

A brief description of Northern Border Pipeline proposed for northeastern Montana. The description includes a map.

Review of Board of Oil and Gas Conservation

This review describes the administrative structure of the Board of Oil and Gas Conservation and the environmental protection measures it enforces on the oil and gas industry. It critiques the Board's enforcement procedures and poses recommendations.

WATER RESOURCES

Yellowstone Level "B" Study

This report summarizes a meeting on the draft recommendations



maps, and reports on public hearings on a proposed copper and silver mine and the Libby re-regulating dam are appended.

Statutes not Consistent with MEPA

A review of existing statutes that are in direct conflict or are inconsistent with the Montana Environmental Policy Act.

The Montana Environmental Policy Act and the Colstrip 3 & 4 Twin 500KV Lines

See ENERGY

Report on the Department of State Lands, Oil, and Gas Leasing Program

See OIL AND GAS DEVELOPMENT

Subdivision and MEPA

See LAND USE

OIL AND GAS DEVELOPMENT

Three Short Reports on Gas Flaring

#1 is a discussion of the "associated gas" produced as a byproduct of crude oil production and of factors which lead to "gas flaring" as a means of disposal. It breaks down into percentages the amount of Williston Basin gas which is sold, flared, or disposed of in other manners.

#2 is based on a Montana Petroleum Association meeting concerning the flaring of associated gas, which explores the economic and physical barriers which impair marketability of such gases.

#3 comments on a hearing by the board of Oil and Gas Conservation, elaborates on causes of gas flaring, and summarizes dialogue between

response to regulations.

The Montana Environmental Policy Act and Regional Development

See MEPA

MONTANA ENVIRONMENTAL POLICY ACT (MEPA)

A Review of Administrative Rules of the Department of Fish and Game Concerning the Montana Environmental Policy Act

Fish and Games' administrative rules are reviewed and compared with the recommended administrative rules adopted by the Montana Commission on Environmental Quality for the implementation of MEPA. Conflicts are discussed.

Proposed Revised Guidelines for Implementing the Montana Environmental Policy Act

This report outlines the suggested guidelines for revising MEPA rules. Their main thrust is to make the environmental review process more streamlined and more accessible to the public. The revised rules have been sent to the Montana Commission on Environmental Quality for approval.

The Montana Environmental Policy Act and Regional Development

This report describes the numerous proposed developments concentrated in the northwestern corner of the state, including copper-silver mining, hydroelectric development, powerline, and road construction. It discusses the potential for significant cumulative impacts from those developments, examines whether a regional environmental impact statement is required under MEPA and considers the obstacles to and benefits of such a review. The report includes

of the Missouri River Basin Commission. It discusses slurry U.S. rail transport of coal, water rights, and scenic and recreational river proposals.

Report on Montana Water Development

This is a summary of the Montana Water Association's discussion of a proposed water appropriations and adjudications bill. Summarizes bill and criticisms of bill by industry, agriculture, and state agencies.

Analysis and Review of Saskatchewan's Poplar River Complex

See ENERGY

The Montana Environmental Policy Act and Regional Development

See MONTANA ENVIRONMENTAL POLICY ACT

ENVIRONMENTAL QUALITY COUNCIL

NSF GRANT SUMMARY

ESTIMATED AND ACTUAL PROJECT COSTS

	<u>NSF</u>		<u>CONTRIBUTED</u>	
	<u>ESTIMATED</u>	<u>ACTUAL</u>	<u>ESTIMATED</u>	<u>ACTUAL</u>
Salaries and Wages - Senior Staff	\$ 6,000	\$ 5,156	\$ 5,000	\$ 2,545
Salaries and Wages - Other Professional	-13,500	12,626	4,000	2,643
Clerical Salaries	<u>3,600</u>	<u>--</u>	<u>--</u>	<u>3,555</u>
Subtotal	23,100	17,782	9,000	8,743
Staff Benefits	<u>--</u>	<u>2,549</u>	<u>3,210</u>	<u>1,227</u>
TOTAL SALARIES, WAGES & STAFF BENEFITS	\$23,100	\$20,331	\$12,210	\$ 9,970
Equipment and Supplies	--	--	500	250
Travel	1,000	1,406	1,000	2,002
Publication Costs	900	--	--	--
Other Costs				
Rent	--	--	--	755
Telephone & Postage	--	108	--	725
Duplicating & Xerox	--	--	--	200
Subcontracting	<u>--</u>	<u>86</u>	<u>--</u>	<u>--</u>
TOTAL DIRECT COSTS	\$25,000	\$21,931	\$13,710	\$13,902