

5
301.3
E12r
1979-80

ENVIRONMENTAL QUALITY COUNCIL ANNUAL REPORT

1979-1980

PLEASE RETURN

STATE DOCUMENTS COLLECTION

1981
MONTANA STATE LIBRARY
920 E. Lyndale Ave.
Helena, Montana 59602



MEMBERS

REPRESENTATIVE DENNIS G. NATHE, CHAIRMAN
SENATOR WILLIAM F. HAFFERMAN, VICE CHAIRMAN
SENATOR MICHAEL M. ANDERSON
SENATOR HAROLD L. DOVER
SENATOR BILL THOMAS
REPRESENTATIVE VERNER L. BERTELSEN
REPRESENTATIVE DANIEL O. KEMMIS
REPRESENTATIVE ARTHUR H. SHELDEN
MR. FRANK DUNKLE
MR. ROBERT J. KIESLING
MS. DORIS H. MILNER
MR. NORMAN K. STARR
LT. GOVERNOR TED SCHWINDEN
GOVERNOR'S REPRESENTATIVE

MONTANA STATE LEGISLATURE
ENVIRONMENTAL QUALITY COUNCIL
STATE CAPITOL
HELENA, MONTANA

TERRENCE D. CARMODY
EXECUTIVE DIRECTOR

Montana State Library



3 0864 1003 9008 0

TABLE OF CONTENTS

AMBIENT AIR QUALITY STANDARDS	PAGE 1
CONFERENCE/ALTERNATIVE STATE AND LOCAL POLICIES	PAGE 4
CITIZENS' BROCHURE ENVIRONMENTAL IMPACT STATEMENTS ...	PAGE 5
EXCESSIVE BUREAUCRACY BY STATE AGENCIES	PAGE 6
EXPLORATION AND DEVELOPMENT OF URANIUM	PAGE 7
GRANT APPLICATION TO DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION	PAGE 8
HOUSE BILL 649	PAGE 9
INTERIM STUDY COMMITTEE ON CONTAINERS	PAGE 10
LOW HEAD HYDRO - SMALL SCALE HYDRO	PAGE 11
MONTANA LIVESTOCK COOPERATIVE	PAGE 12
OIL AND GAS INDUSTRY	PAGE 13
OPEN CUT MINING ACT	PAGE 15
PERMITS - ALCOHOL FUELS	PAGE 17
REPORT ON ENVIRONMENTAL QUALITY COUNCIL TRIP TO GLASGOW-MALTA AREA	PAGE 18
REPORT ON ENVIRONMENTAL QUALITY COUNCIL TRIP TO NORTHWEST MONTANA	PAGE 21
REREFINED OIL PAST, PRESENT AND FUTURE	PAGE 24
REST ROTATION GRAZING	PAGE 32
STATE SCIENCE ENGINEERING & TECHNOLOGY	PAGE 33
WATER POLICY REVIEW COUNCIL	PAGE 34
WATER QUALITY INCIDENTS REPORT	PAGE 35
WIDENING OF HIGHWAY 2 FROM HUNGRY HORSE TO WEST GLACIER	PAGE 42
HOUSE JOINT RESOLUTIONS	
HOUSE JOINT RESOLUTION 21	PAGE 43
HOUSE JOINT RESOLUTION 51	PAGE 47
HOUSE JOINT RESOLUTION 60	PAGE 48

AMBIENT AIR QUALITY STANDARDS

During the fall of 1977, the Department of Health and Environmental Sciences was considering legal enforcement action against several industries for violations of existing air quality standards. This rule (ARM 16-2.14(1)-S14140) had been in effect for more than ten years and was thought to have been enforceable. At the time the legal action was being prepared, it was discovered that doubt existed as to whether the Board of Health and Environmental Sciences had adopted the standards with the intent that they be enforceable. The Board then decided to adopt enforceable standards. A study was instituted to determine if the old standards were still appropriate or if new standards were justified. This study then became the Montana Ambient Air Quality Study (MAAQS).

The draft environmental impact statement was completed and released on January 3, 1979. The final environmental impact statement was issued a year later on February 14, 1980. In conjunction with the two environmental impact statements, an economic report was also completed and released. This report was titled, "Some Economic Aspects of Air Pollution in Montana" by Otis, Duffield, and Ruby (Otis et al). Since February 14, 1980 the Board of Health and Environmental Sciences had conducted a rule making hearing including the receipt of written and oral testimony concerning the environmental and economic aspects of the proposed standards.

The hearing held before the Board of Health and Environmental Sciences was conducted as a noncontested case hearing. This means the members of the Board could consider any pertinent information whether it was on the official record or not. All of the technical and expert witnesses were asked to prefile their testimony (paper hearing) to help facilitate the hearing process. These people who so requested, received a copy of all of the testimony from each of the witnesses. Rebuttal testimony was then filed with the Board before the start of the hearing process. A public hearing was held in Billings on May 7, 1980 to receive information, testimony, comments, etc., from those people who had not participated in the paper hearing. A similar hearing was held in Missoula on May 8, 1980.

The main public hearing on the proposed rules was scheduled for the week of May 27, 1980 and would continue for as long as necessary. The format of this hearing was for the Board to call several expert witnesses to allow the witness to expand or clarify his testimony and give the Board the opportunity to ask questions. The public was also given the opportunity to present testimony, comments, etc., after the expert witnesses were finished on the afternoon of the 27th, the morning of the 28th, and the evening of the 27th up to 11:45 p.m.

During an Environmental Quality Council meeting on July 22, 1980 the staff was directed to prepare a report on the Ambient Air Quality Standards. The purpose of the report was to try to determine if the Board of Health and

Environmental Sciences had sufficient economic data to arrive at the decision it did, and to trace the events which occurred between the Administrative Code Committee and the Board of Health and Environmental Sciences. The staff contacted the Department of Health and Environmental Sciences, Western Environmental Trade Association, Administrative Code Committee, Environmental Information Center, and the Montana Chamber of Commerce and asked each organization to supply whatever data they felt would support the position each had taken in reference to the air quality standards.

The staff report was written using only that material supplied by each of the five organizations. A draft copy was delivered to each participant to allow them to correct any inadvertent errors which may have appeared. Because of time constraints, all comments had to be received by September 5, 1980 to be incorporated into the final report. Comments were received from the Western Environmental Trade Association, Administrative Code Committee, and the Montana Chamber of Commerce. John Bartlett, Department of Health and Environmental Sciences did call to say he was on vacation and would not be able to comment until after his return.

The Environmental Quality Council held a meeting on September 16, 1980 in which the staff report on the air standards was discussed. Also a motion was made and passed that the Department of Health and Environmental Sciences respond to the staff report and that the Board of Health appear before the Council at the next meeting to discuss (1) problems of plant compliance, (2) jobs lost or increased, and (3) the rationale of why higher standards were adopted.

On September 19, 1980 the Board of Health and Environmental Sciences met in Great Falls to discuss those petitions for rehearing of the ambient air quality standards filed by the affected industries and other interested parties. The Board denied all of the petitions. The Board, after much discussion, voted to stay the fluoride in forage rule until its January meeting to allow the Department time to prepare additional economic data on the 20 ppm standard adopted by the Board in July as opposed to the 35 ppm standard studied by the Department throughout the environmental impact statement and hearing process.

At its regularly scheduled meeting on October 10, 1980, the Board of Health reaffirmed its position that additional economic information was necessary before the 20 ppm fluoride in forage standard could be adopted. This new position by the Board is in line with the position taken by the staff of the Environmental Quality Council in our report on the ambient air quality standards.

On November 7, 1980 the Environmental Quality Council held a meeting at which six members of the Board of Health and Environmental Sciences appeared. The purpose of having the Board members present was to allow them to provide the Council with an insight and understanding of the process which led up to the adoption of the new ambient air standards.

The Council members wished to be better informed on this very important subject in the event legislation was introduced during the 1981 session.

Members of the Board of Health gave an overview of the process through which they reviewed the nearly overwhelming volumes of material submitted as part of the official record. The Council members asked many questions of the Board to try to become as knowledgeable about the process and subject as they possibly could. Once the meeting had concluded, both groups agreed it had been a very stimulating and rewarding experience.

CONFERENCE/ALTERNATIVE STATE AND LOCAL POLICIES

Natural Resource Taxation: New Strategies for Public Finance, Environmental Protection and Economic Development

Environmental Quality Council members and staff attended the Natural Resource Taxation conference in Billings February 8th and 9th. The principal sponsors of the meeting were the Conference on Alternative State and Local Policies, Montana Farmers Union, Northern Plains Resource Council, Montana State Senator Tom Towe and the Youth Project.

Approximately 140 persons participated in the two day meeting. Keynote addresses emphasized the need for a regional natural resource tax policy to deter developers from playing one state against another. Court challenges to Montana's coal severance tax and congressional threats were discussed. Considerable attention was given to the validity of Montana's coal tax when compared to the sales taxes assessed by other states on utility bills. Special attention was also given to freight rates.

Several panel speakers discussed the economic, social and environmental costs of increased resource production that are not mitigated by severance taxes. Other panels presented case studies of severance taxation in several western states and provided strategies to preserve and extend them to all nonrenewable resources.

Montana's severance tax trust fund was also a topic of discussion. Panel speakers addressed investment alternatives and proposed new investment policies for these publicly managed capital resources.

The general theme of the conference centered around public versus private interests--long term versus short term interests. In light of present energy, environmental, social, and economic problems, changing value systems necessitates that resource development be encouraged but subject to sound taxation and environmental rules. Funds derived from the taxation would help pay the costs of resource development and diversify the state's economy.

A CITIZENS' BROCHURE
ENVIRONMENTAL IMPACT STATEMENTS

The Environmental Quality Council staff prepared and published for distribution a brochure describing the environmental review process. It was prepared in response to numerous citizen inquiries about the process and environmental impact statements (EIS's). The information is relevant to people who, for the first time, want to read an environmental impact statement and gain as much as possible from it.

The publication attempts to give the reader a general perspective of Montana's concept of environmental assessment. It briefly describes the origins of environmental laws, current statutes and the preparation and contents of an environmental impact statement. It also discusses hearings, decision-making and permit granting.

The brochure was distributed to citizens' organizations, libraries, agencies, and other parties. The information serves to both inform and encourage citizen involvement. Copies are available at the Environmental Quality Council office.

EXCESSIVE BUREAUCRACY

BY STATE AGENCIES

The Environmental Quality Council and its staff have received several complaints by various members of industry which alledge harrassment, delays, overzealous enforcement of regulations, misinterpretation of the law and rules, etc. In each of these cases the opportunity has been extended to that individual to appear before the Environmental Quality Council to offer examples of where a particular state agency has overstepped its authority. In every case to date, they have refused. The staff has offered to meet with the industry representative in private to hear what facts they feel will show that they are indeed an aggrieved party. However, they have refused this offer also.

The companies feel that if the Environmental Quality Council were to start an investigation of a state agency, no matter how discreet, the agency would retaliate by denying permits, requesting environmental reviews, delayed or excessive inspections and investigations, etc.

For whatever reasons, members of industry feel things aren't as good as they should be, but do not want them to become any worse.

EXPLORATION AND DEVELOPMENT OF URANIUM

Before a company can begin active exploration for uranium, a great deal of homework must be completed first. Geologic publications, maps, aerial photographs, and other available information are examined and compared with similar data from known uranium producing regions. This is the preliminary stage which helps select areas for further study.

After an area is selected which might contain mineable deposits of uranium, a ground geochemical survey is instituted. A geochemical survey is used to sample rock, soil, water, and vegetation for specific chemical elements that may have been dispersed from their bedrock mineralization source.

Now that an area has been identified as having a potential deposit, exploratory drilling may begin. The companies must obtain the land owners permission by leasing the property or by direct purchase. State agencies have to be contacted concerning the procurement of all necessary permits. The drilling operation is very critical as negligence or gross error could allow surface or ground water to become contaminated.

The purpose of the drilling operation is to determine the size of the deposit and the concentration. These two criteria will help determine the mining method to be used. By examining the core samples taken during the drilling process, the company is able to determine if it will be economically feasible to mine the deposit.

The uranium mining methods used in the West consist of strip mine, open pit, underground, and in situ or solution mining. The first three methods mentioned involve removing the ore from the ground and taking it to a milling operation to remove the uranium in the form of UO_3 or "yellowcake". These three mining methods are used where the deposit is relatively shallow and somewhat concentrated. In Montana, from preliminary reports, the deposits are deeper and not nearly as concentrated. For these reasons, if development is pursued, the solution mining process will be employed. In solution mining a chemical leach solution is pumped into the ground and allowed to contact the ore body. After a predetermined amount of time the solution, containing the uranium, is pumped to the surface. This process is repeated until the deposit is depleted.

The building which contains the pumps and monitoring equipment for the injection and recovery operation also contains the uranium processing systems. The processing or milling operation removes the uranium from the leach solution and after several steps the end product is UO_3 or yellowcake. The leach solution is reinjected and thus is not wasted. The yellowcake is a relatively low hazard substance which is placed in 55 gallon drums for shipment to a uranium enrichment plant for further processing. At the present time there are only a few enrichment plants in the country, with none of those located in Montana.

GRANT APPLICATION TO
DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

In September, 1979 the Environmental Quality Council submitted a grant application to the Department of Natural Resources and Conservation under their Alternative Renewable Energy Program. The purpose of the grant was to determine the feasibility of using solid waste as an energy source on the Montana State University campus in Bozeman. The reason this grant was submitted was the fact that solid waste has a heating value of 5,000 BTU per pound whereas Montana coal is rated at approximately 8,000 BTU per pound. Also, in other parts of the country, solid waste is being successfully burned to produce both heat and electricity.

As stated above, the Environmental Quality Council application was submitted in September 1979, and subsequently denied by the Alternate Energy Advisory Council in December 1979. The grant request was for \$39,265 and would have required approximately eight months to complete.

During January or February of 1980, Mr. Dennis Blacksetter who is affiliated with Montana State University and who also is a member of the Alternate Energy Advisory Council submitted a similar grant request which was approved. It is our understanding that this grant is now in excess of \$100,000 and required a supplemental grant in addition to requiring much more time than the grant proposed by the Environmental Quality Council.

If the Environmental Quality Council grant application had been approved, the study would have been completed by August. If the study had demonstrated the feasibility of the project, Montana State University could have submitted a budget request to the 1981 legislature for funding to implement the project.

HOUSE BILL 649

House Bill 649 was introduced during the 1979 session to allow banks to give low interest loans for those wishing to install solar or alternate energy systems on homes.

The Department of Revenue was contacted to determine if they had complied with the mandate of House Bill 649. It was discovered that regulations had been drafted by the department but the administrative process had been discontinued due to the lack of interest on the part of the banking industry. The department has stated that they will not continue with the administrative process for noticing the rules as long as the banks are unwilling to participate in the program.

THE INTERIM STUDY COMMITTEE ON CONTAINERS

House Joint Resolution 56 was passed by the 1979 legislature. The resolution directed the Interim Study Committee on Containers to research the problems and possible solutions of instituting a litter control law and/or a "bottle bill" law for beverage and food containers in Montana. The Committee met four times in 1979 and was directed to have the study finished and a report issued prior to January 1, 1980.

The first Committee meeting was organizational in nature and set the direction the Committee wished to go for the Legislative Council staff. A public hearing was held during the second meeting which allowed industry, public interest groups, and the general public to present position papers and oral testimony. The third meeting of the Committee was devoted to developing the areas of agreement and disagreement between proponents and opponents of beverage container legislation.

The fourth and final meeting was used for the preparation of the final report. Little, if any, time was devoted to the food container portion of House Joint Resolution 56 due to time limitations, unavailability of Montana data, and the lack of support by interested groups.

The Study Committee on Containers developed three recommendations:

- (1) That the people of Montana carefully study the issues and information presented in this report (final report on HJR 56).
- (2) That the Montana Legislature not adopt legislation that would impose a litter tax.
- (3) That the Forty-Seventh Legislature enact a bill that would prohibit the sale in Montana of metal beverage containers which have detachable openings.

LOW HEAD HYDRO - SMALL SCALE HYDRO

Montana has many sites where a small dam could be built and electrified, or an existing dam could have electric generators added at relatively low cost with virtually no adverse environmental impacts.

The National Conference of State Legislatures (NCSL) in Denver instituted a program whereby they would come into an interested state and help that state develop a workable small scale hydro program. The Environmental Quality Council (EQC) contacted the National Conference of State Legislatures and informed the project manager that Montana was interested in the program. A survey team visited the state and conducted interviews with several of the state agencies and other knowledgeable people.

A preliminary report was given to the Environmental Quality Council at its meeting on April 24, 1980. The team from the National Conference of State Legislatures was directed to continue with the project and report to the Environmental Quality Council in July.

During the Environmental Quality Council meeting on July 22, 1980 the Council heard a report from the National Conference of State Legislatures staff which addressed the preliminary issues and options available to the state of Montana. Each issue was discussed in length and the Council voted to continue the process on most, but to delete several items as presented in the report. The staff members from the National Conference of State Legislatures were instructed to draft preliminary legislation and report back to the Council in September.

The Environmental Quality Council met on September 16, 1980 to review the small scale hydro project proposed options for draft legislation prepared by the staff of National Conference of State Legislatures. Each issue was carefully examined and where deemed necessary, amended or deleted. The members of the Environmental Quality Council decided which items should be drafted as possible legislation to be introduced in the 1981 session. The staff from National Conference of State Legislatures was directed to work with the Department of Natural Resources and Conservation, Legislative Council, and the staff from the Environmental Quality Council.

The Environmental Quality Council met again on November 7, 1980. One of the issues discussed was draft legislation for the small scale hydro project.

Each piece of proposed legislation was discussed to assure that it contained acceptable language. Those items which were accepted will be sent to the Legislative Council for final drafting and eventual introduction.

MONTANA LIVESTOCK COOPERATIVE

The Montana Livestock Cooperative is an organization which owns 270 acres of land at the northeast edge of Great Falls. As this group is contemplating some type of development, they requested the Environmental Quality Council to help in the permit process. Several of the activities which may be explored include a slaughter facility to handle up to 400 head of cattle per day, a gasohol plant, beef processing plant, commercial feedlot, asphalt plant, cement plant, and a facility to burn waste generated by the city.

The staff of the Environmental Quality Council prepared a list of all state and federal permits which would be required to build any or all of the facilities listed above.

In addition, flow charts of each individual permit were included to further assist the developer in obtaining the permits.

OIL AND GAS INDUSTRY

In 1978 the Environmental Quality Council travelled to the Northeast corner of Montana. One of the reasons for the trip was to meet with local land owners and to observe both good and bad oil and gas well drilling practices.

One of the major problems has been the salt water disposal pits. Because of the geologic conditions, salt water and/or salt based drilling muds are required in this area in the actual drilling operation. But the problem arises with the improper handling of or disposal of the produced salt water and drilling muds.

It must be mentioned right from the start that there are always a few members of any group which for one reason or another do not abide by the rules and regulations established to govern the entire industry. It is these few members that our overall scrutiny has been directed.

After the Environmental Quality Council returned from its fact finding tour to the Northeastern part of the state, the staff was directed to utilize its oversight function and draft a report on the Board of Oil and Gas Conservation.

The report was compiled by interviewing the Board's staff members in Helena, Billings, and Glendive. Also, land owners in the Northeastern corner of the state were contacted for their comments. The board's laws, rules, and regulations were reviewed to determine what authority the employees and Board had insofar as enforcement actions were concerned.

The report was able to arrive at several apparent conclusions: (1) the oil and gas industry as a whole is doing an acceptable job; (2) the staff of inspectors in the field needs to be increased to handle the expanding workload, and (3) it appears that when violations are discovered, little or no enforcement action is instituted by the staff or Board.

We have met with members of the Northeast Montana Land and Mineral Owners Association on many separate occasions in an effort to assist them with problems they have encountered with the seismic industry, the oil and gas industry, and the Board of Oil and Gas Conservation. There have been many instances where the Association's members have called the Environmental Quality Council to voice a complaint after apparently receiving little or no help from the Board of Oil and Gas Conservation. The staff of the Environmental Quality Council has been able to help the affected land owner by utilizing the Montana Petroleum Association and the Montana Department of Health and Environmental Sciences, Water Quality Bureau. In addition, the staff of the Environmental Quality Council has worked with the land owners association in Havre and the one in the Cut Bank - Shelby area.

On several separate occasions, a member of the Environmental Quality Council has appeared before the Board in an attempt to elicit cooperation on the issue of adequate enforcement of the rules and regulations presently in existence.

At one such meeting, the Board of Oil and Gas Conservation asked the Environmental Quality Council to meet with representatives of the oil and gas industry, land owners, staff of the Board, and other interested groups. The purpose of the meeting was to develop and maintain an open line of communication between the various groups and also to establish recommendations for the enforcement of existing laws, rules and regulations.

The chairman of the Environmental Quality Council appeared before the Board on December 4, 1980 to present a report on the meeting with the various groups held on October 6, 1980 in Sidney. The Board appeared to be unreceptive to the suggestions on upgrading its enforcement program. The Board's attorney stated they would consider the recommendations after the legislative session. Several legislators present at the meeting reminded the Board members that the option exists whereby legislation could be introduced.

It would appear that the situation remains unchanged. The Board is attempting to hire an additional field inspector to work in the north-eastern part of the state. The attitude of the Board has to change in respect to the enforcement of its rules and regulations. The oil and gas industry by and large is attempting to adhere to the regulations. It is the few who refuse to cooperate which is giving the entire industry a black eye.

OPEN CUT MINING ACT

The Department of State Lands has proposed changing several sections of the Open Cut Mining Act. As the Environmental Quality Council staff had completed House Joint Resolution 51, a review of the bentonite industry in Montana, those companies which are presently engaged in mining operations in the state were contacted to solicit comments on the proposed changes. Following is a list of the proposed amendments:

(1) Enforcement - Change the criminal penalty, as it is now for a violation, to a civil penalty. In addition the fine would be not less than \$100 nor more than \$1,000 for each separate offense. Also, a fine of not less than \$100 nor more than \$2,000 shall be imposed for each day the violation is allowed to continue. The fine would be imposed for operating without a contract as well as operating in violation of the terms of an existing contract. Finally, the Department of State Lands would want to use the Attorney General's Office for prosecuting possible violations, instead of the County Attorney.

(2) Bonding - At present the limit which can be required is \$1,000 per acre. Department of State Lands feels that most reclamation work may be as high as \$3,000 - \$7,000 per acre. For this reason the Department of State Lands feels the bonding limit needs to be raised.

(3) Clarify the definition of affected lands to be reclaimed to include the area from which the overburden or minerals have been removed and tailings ponds, waste dumps, roads, conveyor systems, leach dumps, and all similar excavations, or covering resulting from the operation and which have not been previously reclaimed under the reclamation plan.

(4) Expand the time period for issuing operating permits from present 60 days up to 90, 180, 270, or possibly 365 days depending on the circumstances and complexity of the permit application.

(5) Change the definition of opencut mining (82-4-403(7) by eliminating the reference to the removal of overburden. There may be some areas where a company could mine an outcrop without removing overburden.

The following is a table which lists the company's response to each of the five proposed changes listed above.

COMPANY COULD ADJUST TO CHANGE IN THE LAW

AMERICAN COLLOID	Yes	No	No	No (\$100- \$536)	Yes	No (30 days)	No
INTERNATIONAL MINERAL & CHEMICAL CORPORATION	No	No	No	No (\$300)	Yes	No	No
FEDERAL BENTONITE	Yes	Yes	Yes	No (\$350)	Yes	No	Yes
WFO - BEN	Yes	Yes	Not addressed	No	Yes	No (60 days)	Yes
N. L. BAROID	Yes	Yes	Yes	No (\$600)	Yes	No (60 days)	Yes
	CRIMINAL TO CIVIL	C. A. TO A. G.	FINES	BONDING (Present Cost)	AFFECTED LANDS	REVIEW PERIOD	OPEN CUT MINING DEFINITION

PERMITS - ALCOHOL FUELS

The Council directed the staff to identify permit requirements for the production of alcohol in Montana. This paper summarizes the federal, state and local regulations which may apply to the construction and operation of alcohol facilities.

The paper discusses federal regulations governing the taxation, production, denaturation, and distribution of fermentation ethanol. It describes the permit procedures for both commercial and experimental production distilled spirits plants (DSP).

State jurisdiction involves solid waste, water quality, air quality, and water supply. Regulations are sited and procedures for applications are identified.

Building standards, including mechanical, electrical, and storage facilities are discussed. Applications for dealers and distributors are identified for those who contemplate blending and selling gasohol within the state.

Listed also are the OSHA recommendations for safe construction and location of equipment, fire protection, and safety in fermenting, distilling and alcohol handling.

REPORT ON
ENVIRONMENTAL QUALITY COUNCIL TRIP TO
GLASGOW-MALTA AREA

The Environmental Quality Council embarked on a fact finding tour to the Glasgow-Malta area on November 6, 1979. The first stop was the Glasgow Air Force Base (Valley Industrial Park) 18 miles north of Glasgow. Members of the Board of Directors, County Commissioners, and other interested people presented a brief history of the Park and what their plans, hopes, objectives, etc. are for the future. We then boarded a bus and took a tour of the entire facility.

Valley Industrial Park is trying to attract industry and businesses. Housing, schools, recreation, and adequate floor space is available. Buildings may be rented for a very reasonable fee which includes all utilities. If the business prospers for five years, Valley Industrial Park will give the building and ground to the business for free, just to get them on the tax rolls.

On November 7 (Wednesday morning) we boarded a bus for the trip to Fort Peck. We met with John Kuncheff and Captain Gruner with the Corps of Engineers in Fort Peck and Mr. D. Buse from Omaha with the Corps of Engineers. The purpose of the meeting was to become informed on the proposed rereg dam which will be located several miles below Fort Peck Dam. Also in attendance were four landowners from the area of the proposed dam site. The Corps feels the rereg dam is necessary to allow Fort Peck to function as a peaking facility. The rereg dam would help stabilize the river elevation and prevent dangerous fluctuations.

The landowners stated their opposition to the dam on the grounds that some of their farm land would be covered with water due to the rise of ground water. The Corps would have to run surveys and ground water elevation tests before the project would be submitted for funding.

After lunch, our trip continued on south from Fort Peck. The next stop would be the Circle West Project. Due to mechanical difficulties, we were not able to spend as much time on the site as desired. We met with people from Burlington Northern, Dreyer Bros., Inc., Basin Electric, several other coops, and members of the McCone Agriculture Protection Organization. We heard a brief presentation on future plans of the project and then went out in the field to view first hand their proposal.

The site for the coal fired generator was seen along with a test pit for reclamation of a coal mine. It is now up to Basin Electric to determine which site in Montana and Wyoming to place the newest coal fired generator.

That evening a public meeting was held in Glasgow to give the local citizens an opportunity to voice their concern to a group of legislators on environmental and natural resource issues. The meeting was not as animated as some we have had in the past, but good discussions were held on the proposed rereg dam, Federal Bentonite, and the Valley Industrial Park.

On Thursday, the Council visited the Federal Bentonite plant 18 miles south of Glasgow. Mr. Ed Morrow, reclamation specialist from Belle Fourche, South Dakota, and Mr. Marvin Kron, plant manager made a presentation on the mining, manufacturing, and reclamation processes associated with the Federal plant.

The Council went to several mine sites to view the process and equipment involved. As Federal has not been mining in the Glasgow area for all that long a time, they only had one small reclamation plot to show. Montana's reclamation laws appear to be adequate in requiring the complete restoration of a mining site. As Federal had planted their one site this fall, it will be one year at least before any results will be obtained. Due to the fact the plant was closed at the time of our visit, the horizontal rotary kiln and other equipment were not in operation. The Council saw a slide presentation on the operation of the plant before walking through it.

In the afternoon, the Council drove to Malta to view the American Colloid bentonite plant. Mr. Bob Baker, reclamation engineer from Belle Fourche, South Dakota, Mr. Weaver, plant manager, and several other members of the company were present for the tour to answer questions about the operation. As American's mining sites are located approximately 25 miles from Malta, time did not permit a visit.

The American Colloid plant was in operation and gave members of the Council an opportunity to see first hand how the product is handled from the crude raw stage to being placed in bags ready for shipment. The plant is not completed as of yet, but the work is continuing. Employees of American Colloid were able to answer questions concerning mining, reclamation, processing, transportation, taxation, and marketing. The Council appeared to gather a great deal of first hand knowledge concerning the bentonite industry.

At 8:00 p.m. that evening, the Council held a public meeting in Malta. The purpose of the meeting was again to allow the local citizens a chance to talk with legislators on natural resources and environmental issues. The crowd in Malta was certainly more active than the night before in Glasgow.

The first and foremost issue was the American Colloid plant. Local farmers and ranchers downwind from the plant were concerned about air pollution problems and the fact that the dust from the plant could be sealing their farm land. Representatives from the plant assured the people present there was no danger of the ground becoming sodic. The company tried to explain that they were in compliance with the Department of Health and Environmental Sciences construction and operation permit. The plant is almost completed and when finished, there should not be any more air pollution episodes.

Other questions raised during the meeting were the construction of a private haul road to eliminate the use of public highways for bringing the bentonite from the mine to the plant, coal ash from the dryer and how it might affect the ground water table, and the RARE II studies presently going on. The meeting ended with both American Colloid and the citizens of Malta agreeing to open a better line of communication to prevent future misunderstandings.

REPORT ON
ENVIRONMENTAL QUALITY COUNCIL TRIP TO
NORTHWEST MONTANA

On Sunday, June 10, the Environmental Quality Council met in Libby to begin its northwest Montana fact finding trip. That evening we heard a presentation from Mr. Jack Bingham on the ASARCO-Troy mining project. Mr. Bingham explained both the mining aspect of the project and the pollution abatement techniques to be employed. Also on the program was Mr. A. E. Rainey, Assistant Manager for Northern Lights which is proposing a hydro-electric project at Kootenai Falls between Troy and Libby. The project will consist of a 30' tall dam with the intake, generators, turbines, etc. to be located out of view, and for the most part, underground.

Monday morning the Council and guests boarded a bus to view the proposed Kootenai Falls project and the ASARCO mine site. At the Lions Club picnic area the dam site was viewed. There was approximately 3000 cfs (cubic feet per second) flowing over the falls with most going along the north shore. Mr. Rainey stated that almost all of the dam would not be visible from the picnic area. Mr. McGregor Rhodes, Libby Rod and Gun Club, stated his opposition to the project because the dam would only allow 800 cfs over the falls and would have a visual impact on those using the river banks.

The ASARCO mine site was visited. Construction has started on the facilities to handle the ore once mined. Concern was raised over the tailings pond. In the environmental impact statement written by the Department of State Lands, it was mentioned that up to 1170 gallons per minute would be lost due to seepage. Mr. Bingham disputed that claim by stating the soil on which the pond will be constructed is nearly impervious. The question was raised over placing the tailings back into the mine after each section had been completed. Mr. Bingham stated this was a feasible alternative which would be explored completely once the mining process has begun. It was learned from Bill Martin, Cabinet Resource Group, that a suit was filed against the Department of State Lands for issuing the necessary permits without adequately addressing the Montana Environmental Policy Act.

In the afternoon the Council met with the U. S. Corps of Engineers to discuss the Libby Reregulating Dam and additional generators. There was considerable discussion on the need for the power, which would all be peaking. The Corps' position is that the need is there, but others say the need is not there and with conservation and different rate pricing, may never be there. A tour was taken through the dam including the power house. At the present time, the four additional generating units are under construction.

A public meeting was held Monday night in Libby to give the local citizens an opportunity to voice their concern to a group of legislators on environmental and natural resource issues. On this particular evening, the major concerns were the ASARCO-Troy mine, the Kootenai Falls hydro-electric project, and the Libby Reregulation Dam.

Of the people who addressed the Council, most (14-9) were in favor of the projects, because of taxes, jobs, and keeping young people home. Those who were opposed were against the two power projects because of the loss of the river and because they felt the need for the additional power was not firmly established.

Tuesday morning was spent with John McBride, forester with St. Regis Company in Libby. We toured their greenhouse area where seedlings are raised for transplanting as part of the company's reforestation project. The Council was then shown several St. Regis properties where they have tried various reforestation projects--some of which were successful, and some which were not. According to Mr. McBride, they have learned a great deal from their mistakes and are making every effort to replant trees within two to three years after harvesting.

In the afternoon the Council traveled to Kalispell to observe firsthand the growth of subdivisions on prime agricultural land, and the proposed highway widening through Hungry Horse and on into West Glacier. Kathy Jones, Flathead Conservation District, showed the Council many instances where prime agricultural land had been taken out of production for subdivisions and a golf course. Many of the subdivisions consisted of lots 20 acres and larger.

Tom Barnard, Montana Highway Department, gave a presentation on making U. S. Highway #2 a four-lane from just west of Hungry Horse to West Glacier. Mr. Barnard stated the present road is narrow, dangerous and carries a great deal of traffic. Mr. Brad Chase, Canyon Coalition, presented the view that that the two-lane, if widened and straightened, would better serve the three towns. The proposed four-lane would cause the moving of houses and businesses, eliminate 40% of the city park in Hungry Horse, and only help traffic two months of the year.

A public meeting was held in Kalispell after a dinner Council meeting. The main topic of the meeting was the proposed widening of Highway #2 to four lanes. Of all those who spoke, the majority were against the four-lane proposal. However, they did agree the two-lane needs to be straightened and improved.

Representative Bennett, District 15, offered an alternative route which would have the four lane going north of Coram, Martin City, and Hungry Horse and joining the existing highway west of Columbia Falls.

Norman Starr, Council Member, stated it appeared to him that the shop keepers and businessmen in the three towns wanted the two-lane road for business reasons.

We have learned since the Kalispell meeting that several groups who support the four-lane concept claim they did not learn about the meeting until after it was over. The news media in the Kalispell area were notified about the tour and the public meeting. In addition, each of the legislators in the area were also notified.

One gentleman brought to the Council's attention the fact that nuclear wastes are being shipped through the state without apparently having a contingency plan in the event of a disaster. The Council agreed that the Governor and civil defense personnel should at least be aware of the shipments so that in the event of an accident the state is prepared to act quickly and effectively.

REREFINED OIL
PAST, PRESENT AND FUTURE

As we all know, crude oil is a nonrenewable resource. There is only so much of it in the ground. When that amount is removed and used, there won't be any more. The United States has 6% of the world's population, yet uses in excess of 35% of the crude oil reserves, importing nearly 50% for domestic uses. There will shortly come a time when the well will be dry and this country will have to develop alternate energy resources and lubricating substances.

The first attempt to "rerefine" oil was around 1915. The process probably consisted of letting the used oil settle and selling all but the sludge. This oil was used as a heating fuel. The Armed Services expanded the process further by centrifuging, but again, the end use was a heating oil. During the 1930's commercial airlines had instituted a closed loop system in which engine oil was utilized over and over by the rerefining process. In 1939, approximately 12 billion gallons of used oil were rerefined. During World War II 29,000,000 hours of flight engine time was logged using rerefined oil with no reported deleterious effects on engine performance or life. In fact, engine life actually increased over 50%.

The introduction of the jet age in the early 1950's led to the decline of use with the Air Force. On the other hand, domestic use peaked in 1960 with 20-30% of the oil used being rerefined oil. Many factors have led to the demise of rerefined oil, among these being increased use of additives, low price per barrel of crude, inflation causing the price of rerefined oil to approach virgin crude, increasing difficulty for rerefiners to remove contaminants and additives, disposing of resultant sludges, and to a large extent, some rerefiners packaging a shoddy product and selling it as new.

The Department of Defense dealt the industry a crucial blow during the mid-1960's when because of poor quality from a minority of rerefiners, it refused to buy any petroleum lube product which contained rerefined oil constituents. If that wasn't enough, two other agencies delivered a few blows of their own. The Federal Trade Commission ruled that all rerefined oil products must be labeled in plain sight, "Made From Previously Used Oil." In 1965 the Internal Revenue Service removed the 6¢ tax advantage enjoyed by the rerefined oil industry, thus further equalizing the price differential.

At the present time in the United States over 1.1 billion gallons of used oil are generated. Of this amount half (500 million gallons) is lost from a resource recovery point of view. Do It Yourself (DIY) oil changers waste

100 million gallons of used oil a year. Considering the entire country, 43% of used oil generated was burned as fuel (480 million gallons), 31% is unknown, 18% was used as road oil or asphalt (200 million gallons), and only 8% was rerefined to lube oil. In Montana, approximately 4.5 million gallons of used oil was generated (1971 figures). Of this 90% or 4.05 million gallons is able to be rerefined. If 50% of that oil is generated by the do it yourself oil changers, 2.025 million gallons is generated by one group. If it is possible to collect 57% of this amount, that means 1.15 million gallons of used oil is available for rerefining in Montana. This oil is the most desirable quality-wise as feedstock for recycling because of uniformity, but the least likely to be returned.

At the peak of popularity, there were in excess of 150 companies rerefining used oil. The number has since fallen to 25 remaining active companies. Environmental considerations have added to the woes of the industry also. The acid/sludge process reclaims only 50%-60% of the used oil feedstock. The rest must be disposed of including a very acidic sludge. Many used oil collectors are selling the oil to industry and large boiler owners for use as fuel. However, this could be a very dangerous practice health wise as used oil has an average lead content of 7,300 ppm. Each 10,000 gallons of used oil burned without pretreatment gives off on combustion 1,000 pounds of metallic oxides, 50% of which is lead.

With the large increase in the price of oil since the Arab Embargo and the public awareness for environmental concerns, rerefined oil is becoming more lucrative as a potential product and used oil is looked upon as something that must be disposed of properly. The Environmental Protection Agency is considering naming used oil as a hazardous waste, thus almost preventing the burning of untreated used oil and requiring the proper disposal of it. Several bills have been introduced in Congress to remove the adverse labeling requirements. The Resource Conservation Recovery Act of 1976 requires that federal agencies buy rerefined motor oil when it is available and of a similar quality to virgin motor oil.

The technology now exists whereby used oil can be rerefined into a product equal to or even superior to that made from virgin crude without the environmental hazards associated with the old acid/sludge process. One process, developed by Phillips Petroleum Company, has a 90% recovery rate. The amount of solid waste generated each day is 700 pounds which except for the lead content is mostly inert. This material can be incorporated into asphalt with very little leachate problem. The sulphur content of the oil is treated as H_2S and burned in a flare. The waste water can be treated in a city treatment plant unless the city's volume is small. If this is the case, a small pretreatment plant is required to handle the phenols. There are other advantages also. Each gallon of lube oil produced from a used oil stock represents a savings of 50% - 85% of a gallon of new oil. Because rerefining is a cleanup process, rather than a total catalytic cracking refining process, it consumes only 25% of the energy required to produce the same amount of oil from a virgin refining process. It should be mentioned here that used oil

cannot be added to crude oil at a conventional refinery because metallic contaminants present in the used oil can adversely affect some key catalytic refining processes.

Many people complain that rerefined oil is inferior in quality to virgin oil. Oil, like water, does not break down in normal use. Oil, like water, can be cleaned and returned for further use. One of the reasons for the periodic oil changes is to remove dirt, water, metal shavings, excess fuel, etc. which contaminate the oil. Oil does not break down, but the additives in the oil do and need to be replaced. Changes in viscosity, flash point, pour point, etc. occur due to contamination, not due to basic organic change in base oil.

Several independent laboratories have run complete series of tests on rerefined oil and found no basic difference between it and virgin crude oil products. In fact oil from the new Phillips plant with conventional additive treatment has successfully completed all API Service SE/CC and MIL-L-46152 engine tests. In San Diego, virtually all of the city's vehicles have been lubricated entirely with rerefined oil, grease, and hydraulic fluid for a period of three years and none had ever experienced a mechanical failure that could be blamed on lubricants. In another test, the examination of operating records, comparing test units to the parallel operation of more than 100 similar vehicles running with Phillips first line quality motor oil, showed no difference in engine performance. The Department of Energy has run tests which show that properly rerefined oil is comparable to virgin crude. Below is a small list of companies and organizations which use or have tested rerefined oil and found no difference in quality compared to virgin crude:

- (1) Al Keith - San Diego Equipment Division Superintendent
- (2) Roger Humphrey's - Nelco Oil Refining Corporation - Southern California
- (3) McDonnell Douglas Aircraft Corporation
- (4) Department of Energy
- (5) Bayside Oil Corporation - Northern California
- (6) Union Pacific Railroad
- (7) Exxon Chemical Company
- (8) Lubrizol Corporation
- (9) Southwest Research Institute

Since the 1974 oil embargo nations that consume more oil than they produce have sought greater self-sufficiency. These nations have viewed used oil recycling as a way to reduce oil imports and minimize balance of payments deficits. To emphasize these points, it must be remembered that in the United States, the rerefining industry reclaims less than 10% of the

nation's more than one billion gallon a year potential. In addition, the do it yourself oil changer has jumped from 30% of the retail market in 1973 to 60% today. Without adequate laws and incentives this increase in used oil will find its way into the environment. On a nationwide basis, it has been estimated that of all the oil polluting the harbors and streams, 40% is from crankcase drainings.

As was mentioned several times throughout this report properly rerefined oil is as good as, and sometimes superior to, oil from virgin crude. It has the properties to be rerefined into a good lube oil or used as a feedstock in the manufacture of other petroleum products. In fact, properly rerefined oil has been refined three times, once from crude, once in the engine where some of the volatiles and unstable molecules are driven off, and during rerefining.

Many of the states and the federal government have come to the realization that we can't continue to waste a natural resource while at the same time polluting our air, water, and land. Those states which have passed legislation dealing with used oil are making it illegal to dump used oil on the land or in water, requiring retailers who sell more than 500 gallons of oil a year to provide collection facilities or at least post signs stating where the nearest collection facility is located, and requiring their purchasing department to buy rerefined oil when available and when it is comparable in quality to virgin oil. The federal government has passed legislation requiring all federal agencies to purchase rerefined oil when available at comparable quality. Legislation was recently introduced in the United States Senate which would remove the FTC requirement on rerefined oil, would require virgin oil to carry a statement about recycling of used oil and encourage the states to develop programs of recycling used oil and using rerefined oil. An appropriation in the amount of \$25 million would be available to assist states in the development of programs to recycle used oil and to encourage the public to purchase rerefined oil of comparable quality to virgin oil.

The state of Montana purchasing agency put out a bid in 1979 for 134,000 gallons of oil and lube products. In the bid was a statement saying the products must be from "new or unused oil." Even if a rerefiner could meet all of the specification, he was precluded from the bid process. The motor pool cars in Helena are under contract to private garages for oil changes and lubrication. Oil costs are \$1.26 per quart which includes labor, a filter costs \$4.25, and a lubrication costs \$6.00. The 1979 state bid for oil was 10W40 at \$1.63 per gallon. The 1980 bid, due to the increase in virgin oil costs, should be considerably higher. Because of this fact, the bid should be opened to rerefined oil which can show it meets all applicable criteria.

To help alleviate environmental concerns, the state should institute a used oil collection program and a public education program to encourage the use of rerefined oil. To this end, we would like to submit the following recommendations:

- (1) It shall be illegal for anyone to dump used oil on the ground, in any body of water, in the sewer system, in garbage cans, or at a landfill or dump.
- (2) It shall be illegal to burn used oil unless it has been treated to remove lead and other heavy metals.
- (3) Used oil shall not be used as a dust suppressant on coal or roads unless it has been treated to remove lead and other heavy metals.
- (4) The state shall purchase rerefined oil if available and of comparable quality to virgin oil.
- (5) Those retailers which sell in excess of 500 gallons of oil each year shall provide a place to collect used oil or post signs by the retail oil stating where the nearest used oil collection point is located.
- (6) The state shall develop a program to encourage the collection and recycling of used oil and the use of rerefined oil which is of a quality comparable to virgin oil.
- (7) The State Highway Department shall establish collection facilities at each of their maintenance shops, division headquarters, or other related facilities.
- (8) All used oil haulers, rerefiners, and used oil storage facility operators shall be certified or licensed by the state.
- (9) The Department of Highways shall establish and maintain laboratory facilities to test virgin and rerefined oil.
- (10) The agency shall develop a strong enforcement section.
- (11) The agency shall establish a used oil information center.

A workable program can be developed to encourage the public to recycle used oil and to purchase rerefined oil. With the supply of oil getting smaller each year and with the potential of more oil ending up in the environment, careful consideration must be given to a program which can accomplish both objectives at the same time.

PROPOSED RESOLUTION
FOR
USE OF REREFINED OIL

Whereas, crude oil is a finite resource in the world, and

Whereas, the United States has 6% of the world's population, but uses 35% of the world's petroleum resources, and

Whereas, the price of oil, both domestic and imported, is expected to increase each year, and

Whereas, the western Pennsylvania and west Texas fields, which have historically provided much of the domestic crude used for refining into lubricating oils, are in serious states of depletion, and

Whereas, less than 2% of the average crude oil stream is suitable for use in manufacturing lube oils without greatly increasing the energy cost of production, and

Whereas, rerefined oil can return from 55 - 85% of that amount of crude oil refined for lubricating purposes, and

Whereas, rerefined oil requires only 25% of the energy as crude oil to make a lubricating product, and

Whereas, only 10% of the used oil generated in the United States each year is rerefined, and

Whereas, used oil may contain up to 7300 ppm of lead, and other heavy metals, and

Whereas, of all the oil that is presently polluting our lakes and streams, 40% is from crankcase drainings, and

Whereas, used oil placed on unpaved roads to suppress dust releases harmful elements into the environment and loses its effectiveness in two weeks, and

Whereas, the number of do it yourself oil changers has increased from 30% to 60% in less than 7 years, and

Whereas, burning of used oil removes it from the mainstream of usefulness, rerefining of used oil continuously reintroduces the lube fraction back into that same mainstream as a feedstock, and

Whereas, inexpensive tests exist whereby a sample of oil can be analyzed for certain specifications, and

Whereas, the state purchasing contract specifically excludes rerefined oils, and

Whereas, automotive warranties do not specifically prohibit the use of rerefined oil, they do state that the warranty is void if engine failure occurs due to lack of lubrication, and

Whereas, the Water Pollution Control Act of 1972 directs the EPA to study the problems and monitor the progress of used oil recovery, and

Whereas, the Energy Policy Conservation Act of 1975 encourages used oil recycling and promotes the use of recycled oil, and

Whereas, the Department of Energy Organization Act emphasizes the development and commercial use of recycling used oils and other techniques that use renewable energy resources, and

Whereas, the National Energy Act of 1978 allows tax exemptions for lubricating oils sold for use in mixing with rerefined used oils, and

Whereas, the Resource Conservation Recovery Act (RCRA) of 1976 requires federal agencies to purchase and use rerefined oil when said oil is of equal or superior quality, and

Whereas, Senate Bill 2412 introduced by Mr. Domenici of New Mexico, amends RCRA to further encourage recycling of used oil and the increased use of rerefined oil, and

Whereas, a survey of do it yourself oil changers indicated a willingness to return used oil, provided a convenient mechanism for doing so exists,

Therefore, be it resolved by the Senate and the House of Representatives of the State of Montana:

That the state highway department be directed to purchase and use rerefined oil when it is shown to be equal to or superior in quality to lubricating oil made from virgin crude oil.

That the department be directed to establish an educational program to inform the public of the hazards of dumping used oil and the benefits of recycling used oil and purchasing rerefined oil.

That the department be directed to examine the possibilities of establishing a system for collecting used oil in the state of Montana.

That the staff of the Environmental Quality Council be directed to monitor the system presently in use in North Carolina and other states which currently have a successful program implemented.

REST ROTATION GRAZING

Rest rotation grazing is a concept whereby certain tracts of land are set aside for parts of the year to allow the vegetation time to recover. This concept has been advocated for a good many years by its founder, Mr. A. L. "Gus" Hormay.

The Environmental Quality Council heard a presentation on this concept as it applies to the C. M. Russell Game Refuge. Departments of State Land, Natural Resources and Conservation, and Fish, Wildlife and Parks, and area ranchers feel the program has merit. The Fish and Wildlife Service and the Bureau of Land Management claim that present budget constraints prevent them from testing this concept on the refuge.

The Environmental Quality Council voted to endorse the concept of rest rotation grazing. Letters were written to our Congressional delegation and to the Fish and Wildlife Service, and to the Bureau of Land Management.

The main reason for wanting to test this concept on the C. M. Russell Refuge was the enhancement to vegetation for wildlife. At the present time there is a diverse wildlife population plus a large number of grazing leases issued to area ranchers. If the concept is initiated and proves successful, all parties could benefit.

STATE SCIENCE ENGINEERING & TECHNOLOGY
(SSET)

During the fall of 1977, the Environmental Quality Council was notified by the National Science Foundation that grant money was available to the legislature to develop a State Science and Engineering Technology (SSET) capability. The purpose of the grant was to allow the Environmental Quality Council to develop a system whereby all questions concerning the natural resources and environmental areas could be answered quickly and effectively.

After receiving the grant, a study was instituted to determine the needs of the legislature and the most effective way to meet those needs. A survey questionnaire was sent to all 150 legislators requesting their input on this very important subject. Although the response was less than anticipated, a great deal of useful information was obtained.

One of the first tasks undertaken was to identify and inventory over 300 experts in the natural resources and environmental field. These people have indicated they would be willing to provide short responses to any question posed by legislators for no charge. The experts are in government, university systems, private consultation firms, public interest groups, and industry.

In addition, as part of a separate National Sciences Foundation grant, the Environmental Quality Council was connected to 20-25 other state legislatures and 20 federal agencies by computer. The computer terminal was on loan from the New Jersey Institute of Technology and our connect time and phone bills were paid by a private consulting firm in Massachusetts. The purpose of the system was to allow each participating state legislature to enter questions onto the system and depending on the extent of usage, receive an answer within two or three days. Because of the lack of participation by our own legislature, we determined that we were spending far more time answering other states' questions than receiving answers to our own. When this particular grant ended, we decided to terminate our association with the group.

If you should have any questions concerning our list of experts or desire a copy of our final report to the National Science Foundation, please contact our office.

WATER POLICY REVIEW COUNCIL

The Water Policy Review Council is an advisory body to the Department of Natural Resources and Conservation. Its function is "to advise the Department on reviewing water resource programs administered by the Department, and to recommend a long term water policy and ways to improve the direction and coordination of such programs."

One of the members of the Environmental Quality Council requested the staff to obtain a list of members of the Water Policy Review Council to determine if fish and wildlife interests were represented. A letter was written to the director of the Department of Natural Resources and Conservation inquiring as to the composition of the Council. Shortly thereafter, four additional members were named to the Council with at least one of the new members having an interest in the protection of fish and wildlife interests.

REPORT ON
WATER QUALITY INCIDENTS
IN 1979

A list of water quality incidents was received from the Water Quality Bureau of the Department of Health and Environmental Sciences and the Environmental Management Division of the Department of Agriculture.

These reports are summarized and included for your information as follows.

HAZARDOUS WASTE SPILLS

1-1-79 to 11-28-79

44 oil spills
11 other hazardous waste spills

CRUDE OIL PRODUCTS

	50 gals.		W L		50-250 gals.		W L		250-1000 gals.		W L		1000 gals.		W L	
Pipeline Breaks	5	3	2		3		1	2		7			4		2	2
Truck or Train	1		1		1					2		1	1	11	3	8
Other	3	2	1		2		2			2		1	1	2	2	

W = Water

L = Land

HAZARDOUS WASTE SPILLS

CRUDE OIL PRODUCTS

1/15/79 3,000 gallons stove oil - truck wreck

2/26/79 4,000 gallons slush oil leaked from bottom of railroad tank car

3/7/79 9,000 gallons of diesel from Town Pump station in Chinook - Ran into storm sewer and out into Milk River

3/16/79 10,000 gallons from pipeline break. 250-300 gallons reached a storm sewer

4/4/79 40,000 gallons oil into Yellowstone River at Billings

4/9/79 35 barrels of oil reached Dohrs Creek via pipeline break

4/20/79 Undetermined amount of diesel fuel from railroad car

5/3/79 2,000 gallons of pole oil spilled on land from tank truck wreck

6/4/79 4,000 gallons of #2 diesel consumed by fire

6/7/79 100 barrels of oil and 50 barrels of water from pipeline break spilled into a ravine

6/20/79 3,600 gallons of asphalt spilled into Beaver Creek

7/1/79 Undetermined amount of material spilled into Wolf Creek

7/10/79 45 barrels of oil from pipeline break on ground - was recovered

7/16/79 7,000 gallons oil, truck accident, some ran into the West Fork of the Flathead River

8/8/79 8,500 gallons diesel from truck accident, soaked into the ground

8/9/79 4,000 gallons diesel, truck accident, soaked into the ground

9/9/79 4,000 gallons hot asphalt from truck accident - some into Lolo Creek

10/2/79 4,000 gallons #1 burner oil - truck accident on McDonald Pass

HAZARDOUS WASTE SPILLS

OTHER HAZARDOUS SUBSTANCES

2/5/79 22 railroad cars of wheat, derailment near Flathead River

2/27/79 Undetermined amount of seed peas near Kootenai River

4/25/79 Phenol spilled in Con-Agri's yard in Lewistown

9/19/79 Less than 30 gallons of liquid seed disinfectant from a grain elevator fire ran into Wolf Point storm sewer

9/20/79 Undetermined amount of safflower grain from a truck accident

9/21/79 2 gallons of PCB spilled onto the ground from a ruptured capacitor

9/27/79 36,000 pounds of phenol-formaldehyde spilled from a truck wreck, some into McGregor Lake

10/12/79 1 gallon/24 hours of Na OH from a Union Pacific railroad car

11/13/79 1,300 barrels of oil from Chevron pipeline break

12/7/79 1,000 gallons of settled sewage effluent into the Missouri River

12/20/79 20 to 25 gallons of PCB into Milk Creek

MILL CREEK FISH KILL - MISSOULA COUNTY

Applicator - Lenus Ekstrand: licensed commercial government applicator
licensed for Big Flat Irrigation District
Hired to treat Frenchtown Ditch by the
Frenchtown Irrigation District.

Chemical - Xylene (unlabeled)

Date of application - July 19, 1979

- Action Taken:
- A. Label Violations
 - 1. label - not consulting Fish, Wildlife & Parks
 - 2. label - allowed contaminated water to escape into state waters
 - B. Regulation Violations
 - 1. Water contaminated with Xylene escaped into Mill Creek resulting in fish kill
 - 2. Unlabeled pesticide was used
 - C. Aquatic license temporary revoked for ten days
 - D. Mr. Ekstrand's use of Xylene or any restricted use aquatic herbicide was suspended until July 1, 1980

BEAVERHEAD FISH KILL

Applicator - Richard Kennedy: certified governmental aquatic herbicide
applicator for East Bench Irrigation
District

Chemical - Magnacide H (Magna Corp)

Date of application - July 16, 1979

- Action Taken:
- A. Label Violations
 - 1. Fish, Wildlife & Parks was not consulted (supposedly incorrect and was to be modified)
 - 2. Water not contained for six days
 - 3. Treated water was allowed to escape into Beaverhead River, thus polluting it
 - B. Kennedy's license temporarily revoked for ten days until, within ten days, a decision on further action could be made.
 - C. Further Action
 - 1. Temporary Revocation cancelled upon the following restrictions:

- a. Kennedy or East Bench Irrigation District will not apply Acrolein until July 1, 1980.
- b. Kennedy must put in writing by signing the order that if he used Magnacide H again, he will read and comply with the label.
- c. Kennedy will proceed to a resolution of the damages.
- d. All applications of aquatic herbicides in the future shall be done according to rules 4.10.110 4.10.150.

MILL CREEK FISH KILL - MADISON COUNTY

Applicator - Laurence Judd: certified commercial aquatic applicator

Chemical - Magnacide H (Magna Corp)

Date of application - August 3, 1979

Action Taken: A. Label Violations

1. Fish, Wildlife & Parks not consulted
2. Water not contained for six days

B. Regulation Violations

1. Treated water allowed to escape into Mill Creek, thus polluting it
2. Escape of treated water into Mill Creek resulted in death of fish

C. Judd's aquatic license revoked for ten days

D. No application of any aquatic herbicide will be allowed between August 20 and August 31, 1979

E. Mr. Judd will proceed to resolution of the damages

F. Mr. Judd will not apply Magnacide H until July 1, 1980

LITTLE BIG HORN RIVER FISH KILL

Applicator - Walter Egged: certified governmental aquatic applicator for the Bureau of Indian Affairs

Chemical - Magnacide H (Magna Corp)

Date of application - August 3, 1979

Action Taken: A. Label Violation
1. Failure to contain water for six days

B. Order to comply with all directions on the label

Conclusion of investigation that dead fish observed in the river were the fish from the canal that flowed into the river.

BLACKTAIL CREEK FISH KILL

Applicator - Mike Swetish: licensed private applicator for the Canyon
Ditch Company

Chemical - Magnacide H

Date of application - July 10, 1979

Action Taken: None

No conclusive evidence of Acrolein causing the fish kill. Other factors such as Weed District spraying the ditches, dynamite blasting in the stream, low water levels and high temperatures, and dead fish from the canal, all add to the inconclusiveness of this case.

WIDENING OF HIGHWAY 2
FROM HUNGRY HORSE TO WEST GLACIER

On June 12, 1979 the Environmental Quality Council was on a fact finding tour of the northwest part of Montana. One of the issues to be addressed on this particular trip was the widening of the highway from West Glacier to Hungry Horse. The highway at present is two lanes with many curves and hills which makes it very dangerous, especially during the tourist season. The Department of Highways proposal would replace the present two lanes with four lanes and a median.

The Canyon Coalition is a group of concerned businessmen and citizens along the route of the proposed project who are not in favor of the department's proposal. They feel that although the present road is dangerous, it would serve the intent and purpose of the four lane if the highway was widened and straightened in those dangerous spots but kept at two lanes. The proposed four lane would cause the moving of houses and businesses, eliminate 40% of the city park in Hungry Horse, and may only help traffic two or three months of the year.

The State Department of Highways has held several public meetings on its proposal, has written an environmental assessment, and feels it has complied with all applicable laws and regulations. The Canyon Coalition has gone to court several times in an effort to stop the four lane expansion from being developed. At the present time, the case is before the U. S. Court of Appeals in San Francisco.

H O U S E

J O I N T

R E S O L U T I O N S

INTRODUCED DURING
1979
LEGISLATIVE SESSION

HOUSE JOINT RESOLUTION 21

House Joint Resolution No. 21 requested the Environmental Quality Council to study the best means of promoting and developing industries that will use Montana's resources within the state while preserving the environment.

The resolution directed the Council to provide unbiased, factual information as to the controversy and reasons for exportation of Montana's resources and to assemble facts relative to the state's past, present, and future economic and social position.

The study was intended to afford the public and private sectors of Montana a basis for better management of our existing capabilities and for new and innovative means of future improvement of such capabilities.

Following is a brief narrative of the work generated in response to the resolution. Each is on file in the Environmental Quality Council office and is available upon request.

PROMOTING INDUSTRIAL GROWTH AND DIVERSIFICATION IN MONTANA
University of Montana, Intern Program

This report reviews comprehensively the available evidence concerning the impact of state and local taxes, regulations, and industrial promotion efforts on the level and pattern of business development.

The general economic factors which affect the location of industry are discussed. These factors include transportation costs, labor, energy, capital, market access, and raw materials availability. They are applied to the situation in Montana to assess both the pattern of development which currently exists and the lines along which expansion and diversification of the state economy might reasonably be anticipated.

In addition, secondary factors such as physical environment, governmental policies, and the quality of information are discussed.

The report reviews the empirical evidence concerning the impact of taxes and regulations on business location. This information is not specific to Montana but is very useful in assessing the relative importance of government decision making in the process of state and local economic development. It includes taxes and tax concessions and the effects of regulation such as pollution abatement and control.

The report describes the various techniques used by state governments to promote industrial development and reviews the studies which have been done assessing the effectiveness of such techniques. This includes state industrial finance authorities, local industrial bond financing, statewide development credit corporations, and local industrial development corporations.

The paper also includes a useful summary of the diversification and development issues in Montana.

A SURVEY OF INDUSTRY EXPERIENCES AND ATTITUDES IN MONTANA 1980
Bureau of Business and Economic Research, University of Montana

In pursuing the objective of House Joint Resolution 21, the Environmental Quality Council approached the Bureau of Business and Economic Research to conduct a survey designed to obtain attitudes of natural resource firms toward Montana state regulatory activities. The Bureau consented with the understanding that it would represent opinion, not unbiased factual information as called for in the resolution.

The survey was conducted during the summer of 1980 and the results were published by the School of Business Administration, University of Montana.

The work describes the survey respondents and identifies the types of firms they represent. The survey asked participants to identify problems encountered in establishing new or expanded activities in Montana, including the financing of new projects. The survey includes the nature of contacts with regulatory agencies, their dealings with these agencies and the kinds of difficulties experienced in complying with regulations. The work also includes helpful actions or procedures by state agencies.

Recommendations for improving state regulations and/or regulatory procedures are also included. And finally, attitudes towards regulations in general and the impressions of the way in which they are administered are cited.

HOUSE JOINT RESOLUTION 21

SUMMARY

This work includes a summary of all efforts and contributions pursuant to the purposes and intent of House Joint Resolution No. 21. Various approaches were applied to satisfy the directives of the resolution including: a staff literature search, oral presentations, a research paper on economic diversification, and an opinion survey of resource based industry.

STAFF LITERATURE SEARCH The specific focus of this effort was the research of property and severance taxes, tax incentives, plant locational factors, plant closings, and job generation processes.

PRESENTATIONS Representatives of various industries, government officials and an independent economist were invited to present perspectives at an Environmental Quality Council meeting. Speakers were requested to address taxes and natural resource laws which were felt to be detrimental to the implementation of industry in Montana.

RESEARCH PAPER This report reviews comprehensively the available evidence concerning the impact of state and local taxes, regulations, and industrial promotion efforts on the level and pattern of business development.

OPINION SURVEY This work surveys the attitudes and opinions of resource-based industries towards state regulations and their administration, problems encountered, and financing.

HOUSE JOINT RESOLUTION 51
THE PROBLEMS AND BENEFITS OF MINING BENTONITE IN MONTANA

The 1979 Legislature assigned HJR 51 to the Environmental Quality Council for an indepth study of the problems and benefits of mining bentonite in Montana. At the time Federal Bentonite was building a processing plant south of Glasgow and American Colloid was reportedly building the "world's largest processing plant" in Malta. With this much development taking place in the state, concerns were raised about the adequacy of the reclamation laws and the taxing situation.

Bentonite is the "clay of 1,000 uses." It is used in the oil and gas drilling industry, as a binder for sand molds in the foundry industry, for a pelletizing binder in the taconite industry, sealing lagoons, binder in cattle feeds, and in the cosmetic industry. Wyoming, Montana, and South Dakota reportedly have 90-95% of the known reserves of sodium bentonite. Montana supposedly has approximately 25% of this total.

The reclamation law was passed in the early 1970's and appears to be adequate. However, as the industry is relatively new in the state, the end results of reclamation have yet to be observed. The law requires topsoil and subsoil to be removed separately and stockpiled. When the pit has been mined out, that material which was closest to the bentonite layer is replaced first. The subsoil is replaced next, with the topsoil last. The slopes are kept at 4:1 or flatter to allow farm machinery to do the seeding, usually at 12-15 lbs/acre.

The taxing situation is very complex at best. When only the taxes on the bentonite itself are considered, Montana's taxes are less than those of Wyoming and South Dakota, even though the total county mill levy in Montana is 3-4 times that of counties in Wyoming. Industry contends that Montana's overall tax picture should be included, which may shift a higher portion of taxation back on to Montana. They contend that Montana's income tax, both personal and corporation, is the reason the overall tax picture favors Wyoming.

Transportation by rail appears to favor the Wyoming plants over the two Montana plants. It is very difficult for the two Montana plants to obtain favorable rates to markets east of Chicago or to the oil and gas drilling industry in the southwest part of the country. Trucks are competitive with the railroads only up to 1,000 miles. The two plants in Montana will have an advantage shipping to the small market in Alberta.

For further information on House Joint Resolution 51, we invite you to obtain a copy of the final report.

HOUSE JOINT RESOLUTION 60
COORDINATION OF PERMIT PROCEDURES

The 46th Montana Legislature assigned the Environmental Quality Council the study of "statutory provisions relating to review procedures for permits required for projects which contemplate the use of the state's natural resources; to prepare recommendations for the coordination of such permit procedures for the benefit of the applicant, the reviewing agencies, and the members of the public; and to report its findings and recommendations to the regular session of the 47th Legislature."

The following is a brief narrative of the work generated in response to the resolution. Each is on file in the Environmental Quality Council and is available upon request.

Preliminary Work, October, 1979

This paper discusses the historical background of regulatory structure and illustrates the relationship of environmental protection with regulation and permit-granting.

The work includes the research and the experiences of other states who have attempted permit coordination programs. Inherent problems and complexities of coordinating Montana's permitting program are brought to light, the most paramount being divergent philosophies, fragmented regulation, federal involvement, and local political realities.

General procedural concepts of a coordinated procedure, not currently formal elements of Montana's permit review, are proposed. These include master applications, permit registers, informal hearings, conceptual reviews, and scoping techniques. The rationale for each is discussed.

This preliminary work was circulated to state agencies, developers, citizens' groups, legislators, and interested parties. The intent was to encourage involvement, identify concerns, and mitigate problems and conflicts.

Working Paper, February 4, 1980

The working paper expands the general concepts presented in the preliminary work. It details a permit coordination procedure (in the form of draft legislation) that incorporates the purposes and objectives of HJR 60 with the research and input. It suggests mandating, by statute, a coordinated procedure which would formally and comprehensively encompass all concerns raised in the resolution. Procedures, roles, time frames, and responsibilities are specifically defined, and would be, if adopted formally, instituted within the framework of a fully unified program.

The paper describes application procedures, the roles of all participating agencies, meetings, hearings, and environmental impact statement process. In addition it incorporates conceptual review, scoping, decision making, and judicial review.

This, like the previous work, was circulated to solicit input.

Schematics - HJR 60, May, 1980

In the process of evaluating various proposals that address HJR-60, the Council requested the preparation of additional material relative to procedures and time frames of the various major permitting statutes. In response, the staff prepared generalized schematics (charts) for each of Montana's major permitting procedures - 14 in all.

The schematics outline the procedures and time frames for application, notices, hearings, environmental impact statement preparation, and decisions. Very brief narratives are included which provide the reader with a quick reference for comparison purposes.

The paper includes schematics for each of the following:

- (1) Major Facilities Siting Act
- (2) Mine Siting Act
- (3) Mine Reclamation Act
- (4) Hard Rock Reclamation
- (5) Open Cut Mining Act
- (6) Water Pollution Control
- (7) Public Water Supplies
- (8) Solid Waste Disposal
- (9) Clean Air Act
- (10) Flood Plain Management
- (11) Regulation of Subdivisions
- (12) Water Rights
- (13) Montana Environmental Policy Act Environmental Impact Statement Procedure
- (14) HJR 60 Working Paper

Summary and Comparisons - HJR 60 - May, 1980

This paper is a summary and comparison of the Environmental Quality Council Working Paper and the Executive Branch Proposed Alternative. It first outlines the purpose and threshold of HJR 60 along with the overall, general approach taken by both proposals.

It then details the executive branch proposal which consists of four separate actions intended to:

- (a) improve provision of information and assistance to applicants,
- (b) encourage agency efficiency in the processing of permits,
- (c) increase opportunities for early public involvement,
- (d) explore methods of achieving communication and cooperation before applications are filed

The work then details the Environmental Quality Council's working paper approach to meeting the same goals. It summarizes the proposed coordinated procedure and provides some of the rationale for the particular approach.

Given the choice of two alternatives to the coordination of permit procedures, the paper poses the following question: how extensive should the coordination efforts be in order to satisfy the threshold and mandate of HJR 60? In hopes of resolving this issue other questions are also raised for Council consideration.

HJR 60 Findings and Recommendations - September 16, 1980

This report constitutes the findings and recommendations of HJR 60 to be presented to the 47th Montana Legislature. It is a summary of all efforts pursuant to the resolution. It includes the purpose, direction, and threshold of HJR 60.

The paper describes the attempted strategy of overcoming the inherent complexities and problems of an all encompassing program. It discusses meetings, input and feedback. It summarizes the involvement of legislators, agencies, developers, citizens groups, and other interested parties.

It describes pertinent discussions of the July Environmental Quality Council meeting which prompted the Council to move that permit review programs prepared in response to HJR 60 be given a negative recommendation. It also includes an appendix of all relevant material and correspondence.

Three hundred copies of this public document were published at an estimated cost of \$1.60 per copy, for a total cost of \$479.37, which includes \$429.37 for printing and \$50.00 for distribution.