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(2A)* # IMPLEMENTATION OF THE MINNESOTA ENVIRONMENTAL POLICY ACT

(2B) FINAL SYSTEMS REPORT

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I. INTRODUCTION

The environment consists of a complex array of complicated systems. It has only been fairly recently that citizens across the nation have come to any clear realization of the delicacy of this environmental balance and the impact of man's activities on his surroundings. Adverse environmental effects are seen increasingly as deleterious to the quality of life and a danger to the health and well-being of the nation's citizens. It is obvious that a consistent and logical means must be found to ensure that new projects, programs, and other actions enhance (or at least do not destroy) the quality of the environment. Further, if man is to live in productive harmony with the natural and man-made resources with which he is blessed, it is imperative that he understand the integral interrelationships and interdependencies of his existence with the ecological systems he interfaces.

The Minnesota Environmental Policy Act of 1973 (MEPA) constitutes a strong statement of the recognition of this need for environmental awareness, protection, and enhancement. The purpose of the present study is to evaluate the effectiveness of the system that has been put together under MEPA to date and to recommend a detailed program for implementation of the Act which would fully exhaust its potentialities in an efficient way. This report contains our recommendations in full detail.

The present report is best seen as divided into four basic parts. The first, consisting of Sections I, II, and III and Appendix A, provides introductory and background information including a summary of the methodology of the study and the work completed to date and a summary of problems, concerns, and dangers relating to the implementation of MEPA. The present problems and the dangers relating to system change that are identified here provide the parameters for recommendations in the following sections.

The second part is Section IV, supported by Appendix B. This section presents our primary recommendations for change in the MEPA program. We have attempted to identify not only the changes that would make for a better program, but the nature and costs of the actions required to implement them as well.

The third major part of this report encompasses Sections V and VI and Appendices C, D, E, F, and G. Section V details at considerable length our recommendation on the statewide environmental impact statement (EIS) process which many of the primary recommendations in Section IV are designed to produce. Appendix C presents forms recommended for consideration and/or use at various points in the EIS process. Appendix D constitutes our detailed recommendation on the format of guidelines for decisions on the environmental significance of proposed projects. Some suggested tools and techniques for use in the review of EISs are presented in Appendix E. And Appendices F and G offer examples of the EIS process at work. Appendix F presents a hypothetical proposed project and shows how it might be processed through the system recommended in Section V.

Appendix G provides examples of how local governments of varying sizes and types might opt to implement the proposed system locally. Section VI of this report consists of our recommendation on the handling of "non-project actions", a particularly problematic aspect of MEPA's implementation.

The fourth and final major part of this report is Section VII. It has long been recognized that an environmental policy act and its implementing processes and tools should not only provide for specific site environmental analysis and public disclosure with respect to the effects of projects on the environment, but that it should also enhance, and be enhanced by, the various planning processes at work in local jurisdictions and state government. Section VII has been designed to present specific details as to how the MEPA process can evolve and be integrated into a comprehensive, environmentally sensitive planning program. This section provides discussion on the interrelationship between environmental analysis found in the EIS process and that which should be found in the comprehensive planning process, presents a recommended planning development program, and finally gives detailed planning tools the implementation of which should mitigate the need for environmental impact statements as presently conceived.

The present document is the culmination of an intensive work program not only by the consultant, but by numerous public and private individuals alike, who donated time and valuable experience in an effort to help make the study worthwhile and the final recommendation strong. We gratefully acknowledge the assistance of all who so diligently worked with this difficult subject matter. It is our hope that this report will provide some explicit solutions to the complex problems caused by the way in which MEPA is currently implemented.

II. METHODOLOGY OF THE PRESENT STUDY AND SUMMARY OF WORK TO DATE

The Minnesota Environmental Policy Act (Minnesota Statutes Section 116D.01 et seq. (Supp. 1973)) was passed during the 1973 session of the Legislature of the State of Minnesota and became effective August 1, 1973. Rules and regulations governing the EIS program established in MEPA were subsequently promulgated by the Minnesota Environmental Quality Council (EQC) pursuant to authority granted in Minn. Stat. Section 116D.04, subdivision 2. The rules and regulations were filed with the Secretary of State and Commissioner of Administration on April 4, 1974. On July 24, 1974, the Minnesota State Planning Agency, on behalf of the EQC contracted with the firm of Haworth and Anderson, Inc., for some fairly technical work directed primarily at the criteria for the requirement of environmental impact statements. More specifically, we were originally retained by the State Planning Agency to provide essentially three services.

First, we were to give recommendations on exhaustive definitions of the terms 'major governmental action' and 'major private action of more than local significance', which terms are currently essential in the triggering of MEPA's environmental impact statement requirement. Such recommendations were proffered in our first working report in September, 1974, which was entitled 'Report to the State of Minnesota - Definitional Recommendations'.[1]

Second, the firm was to undertake a study of a methodology for the establishment of criteria for determining whether or not a proposed action is environmentally significant. Providing criteria for environmental significance undoubtedly constitutes the single most problematic aspect of the implementation of environmental policy acts around the nation. A detailed methodology for their establishment was presented in our second working report in October, 1974, which was entitled 'Progress Report on Criteria for Environmental Significance - Methodological Recommendations'.[1]

The third work task was orginally designed to provide a brief overview study of and recommendations on the Minnesota EIS administrative process. This work task (as well as the first and second discussed above) was based on the assumption that the present EIS system stemming from MEPA, EQC rules and regulations, and working experience was essentially sound. Unfortunately, this optimistic view did not turn out to be realistic. As work progressed on the first two tasks, we discovered that it would be very difficult indeed to handle questions concerning "major actions" and "environmental significance" within the framework of the present system, which is itself beset with significant problems.

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[1] The primary results of this report have been updated, modified to reflect new working assumptions and critical evaluations, and included in the present document.

After numerous meetings and discussions among several parties involved with MEPA's implementation and quite well aware of the seriousness of the system's problems, it was concluded that an immediate and extensive investigation was needed, potentially leading to radical system alteration including legislative changes and/or changes in EQC rules and regulations. A simple overview statement on the system, including only a brief presentation of solutions without actually delving into the problems in great detail (as was orginally envisioned), simply did not seem adequate to address a problem-filled situation.

Consequently, the third work task was redesigned to consist of a comprehensive study of and recommendations on MEPA and its implementation. We had already completed a substantial part of the general backgrounding work necessary for this massive undertaking. Previous contract work with the states of California and Washington on the implementation of the California Environmental Quality Act of 1970 and the (Washington) State Environmental Policy Act of 1971 had given us a detailed familiarity with two of the nation's strongest MEPA-like systems. The work for the State of Washington had also led us to complete a detailed analysis of the National Environmental Policy Act of 1969 (NEPA) and of the systems in all the other states which had passed legislation modeled on NEPA. Further, and more directly to the point, the research necessary for the completion of the first two work tasks for the State of Minnesota had provided us with a strong backgrounding not only in the state's current system implementing MEPA but in a wide variety of laws, programs, and structures with which MEPA's implementation must be melded as well.

Still, the information and analysis that was needed for the completion of this problem-solving task was immense. In order to provide a broad-based input into the analytic and recommendatory processes, an Environmental Impact Statement System Work Committee was formed to provide a forum for a close look at detailed alternatives for MEPA's implementation. As the Committee's name suggests, the group's primary focus was the EIS process, which is clearly the most problematic aspect of the present MEPA system, but other major issues were broached as well. The membership of the Committee was designed to include representatives of all the potential groups of major actors in a MEPA system. The Committee consisted of representatives of: (1) the League of Minnesota Municipalities; (2) the Association of Minnesota Counties; (3) regional development commissions; (4) the Metropolitan Council; (5) the Department of Natural Resources; (6) the Pollution Control Agency; (7) the Department of Highways; (8) the Department of Health; (9) the State Planning Agency; (10) the Environmental Quality Council; (11) the Minnesota Public Interest Research Group; (12) the Sierra Club; (13) the Minnesota Land Use Committee; (14) the Minnesota Association of Commerce and Industry; and (15) Haworth and Anderson, Inc.

The Work Committee met weekly for five weeks for four hours each meeting. The sessions were frequently exhausting. Committee members were asked to critically analyze an immense number of detailed alternatives for implementation of various aspects of a MEPA system in the light of: (1) the goals and policies sought for by the organizations represented; (2) the personal environmental and administrative expertise of the Committee members; but primarily (3) what is judged to be best for the State of Minnesota as a total body politic. The discussion forum was not designed to provide a consensus opinion on any point. The

purpose was rather to get the alternatives, problems, and potential solutions identified, discussed, and analyzed from all the points of view represented. The meetings were intended to be head-banging sessions and they frequently were.

An outline of the Work Committee agenda is presented below. At each meeting a very detailed outline was given to Committee members breaking down the main topics to be discussed at the following meeting.

A. MEPA (or Something Else?)
B. System Orientation: Centralization or Decentralization
C. The Process Leading to the Requirement of Impact Statements
    1. Determining the conceptual criteria
        a. "major" action
        b. "significant" environmental effect
    2. Determination of actions to be examined
    3. Procedures for identifying actions requiring EISs
        a. form of submission
            (1) petitions
            (2) assessments
            (3) adequate written support
            (4) environmental clearance worksheets
            (5) matrices
        b. decision guide tools
            (1) checklists
            (2) absolute impact thresholds
            (3) impact threshold ranges
            (4) case precedent
            (5) scenarios
            (6) verbal statements
            (n) etc.
    4. Review of significance decisions
D. Who is Responsible for:
    1. Requiring EISs?
    2. Preparing EISs?
E. Environmental Impact Statements
    1. Draft EIS
    2. Review of and hearing on draft EIS
    3. Final EIS
    4. Final EIS disposition
F. Cost Allocation - Who Pays?
G. Form Requirements
H. Timing - Time Limits
I. Action Approval or Disapproval
J. Notice Requirements
K. Appeal Points in the Process (Statute of Limitations)
L. What Else Should Appear in an Environmental Policy Act?
    1. MEPA Monitor?
    2. Reporting on cost of implementation?
    3. Ties to the planning process?

The Work Committee meetings were invaluable to us in the present study. The lengthy discussions provided us with a wealth of information about the structures, processes, programs, capabilities, and idiosyncracies of the major groups affected by MEPA. They also served to apprise us of dangers, concerns, problems, and potential solutions in reorganizing the state's MEPA program. And finally, they made clear a wide variety of research tasks it would be necessary for us to undertake in the further course of the study. During the period of the Committee meetings and after they were finished, we met with many key people individually (including more than half of the Committee members) and in groups and undertook the paper research necessary for a study of this nature. While many contributed valuable information, analyses and suggestions, the uses of those contributions and the resulting recommendations contained herein are solely the responsibility of Haworth and Anderson, Inc.

III. PROBLEMS, CONCERNS, AND DANGERS RELATING TO MEPA'S IMPLEMENTATION

A. The Present System Implementing MEPA

One of the primary hard tools presented in MEPA to ensure that its goals and policies will be adequately implemented is the environmental impact statement (EIS). The existence of an EIS requirement demands the specification of a process leading to and handling the document. Since every other state which has passed a broad-based impact statement requirement into law has encountered significant problems in putting together an efficient and effective EIS system, it is not surprising that the overriding problem relating to MEPA's present implementation is the environmental impact statement process.

Minnesota's current EIS process works in the following way. The Environmental Quality Council (EQC) is the only body in the state that can require that an EIS be prepared. In the case of an action proposed by a private party or an agency of government which is not a political subdivision of Minnesota, an EIS is required when the EQC determines that it: (1) is a major action; (2) has the potential to result in significant environmental effects; and (3) is of more than local significance. In the case of an action proposed by an agency of Minnesota government, an EIS is required when the EQC determines that it: (1) is a major action; and (2) has the potential to result in significant environmental effects. Action proposals are brought before the Council for such a determination if: (1) it is an action belonging to one of the classes of actions which require mandatory assessments (see Minn. Reg. MEQC 25); (2) a petition with 500 signatures requesting environmental review of the action is presented to the EQC; (3) the action proposer voluntarily requests such determination (which may include the voluntary submission of an environmental assessment); or (4) the Council on its own initiative determines that an environmental assessment shall be prepared. In any such case, if there is some evidence of the need for environmental review, the EQC requires the preparation of an environmental assessment.

The assessment preparer (designated by the EQC) has 45 days in which to complete the document and submit it to the Council, which then has 45 days in which to determine whether or not an EIS is necessary. The assessment is required to include a recommendation to the Council on whether or not an EIS should be prepared, and if the Council does not act on the assessment in the 45-day period, the recommendation contained in the assessment is automatically accepted. As an unofficial operating procedure, the Council requires an assessment on every action brought to its attention by petition.[1]

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[1] What is supposed to happen according to law when a petition is submitted to the Council is very unclear. MEPA states: "Upon the filing with the Council of a petition of not less than 500 persons requesting an environmental impact statement on a particular action, the Council shall review the petition and, where there is material evidence of the need for an environmental review, require the preparation of an environmental impact statement in accordance with provisions of this section." [Minn. Stat. Section 116D.04,

If the EQC determines that an EIS is to be prepared, it designates an agency or person responsible for the preparation of the document. A draft EIS must be prepared within 120 days (though an extension may be granted), the draft is reviewed (including the holding of public hearings or meetings) over a period of at least 45 days, and the final EIS is prepared. The Council may opt to review the final EIS for adequacy, and if the document is found to be inadequate, the Council may remand it back to the preparing agency for revision. Completed EISs are to "precede final decisions on the proposed action and . . . accompany the proposal through an administrative review process."[1] [Minn. Stat. Section 116D.04, subdivision 4 (Supp. 1973)]

[2]The first meeting of the Environmental Quality Council operating under MEPA[2] was on August 14, 1973, though EIS procedures were not finally specified until the rules and regulations were filed with the Secretary of State and the Commissioner of Administration on April 4, 1974. Between that first

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subdivision 3 (Supp. 1973)] Some have interpreted this to mean that an EIS should be prepared in the case of every petition, the petition itself constituting "material evidence" of the need for "environmental review". Though we believe this to be a blatant misinterpretation, the issue may need judicial clarification. The problem is considerably compounded by the language of the EQC's rules and regulations implementing MEPA, which state that an environmental assessment shall be prepared when a petition is filed and "there is material evidence that the action is a major private action or more than local significance or a major governmental action and that the action has the potential for significant environmental effects, provided that the action is not exempt from an EIS under these Regulations." [Minn. Reg. MEQC 25(b)(3)] The Council has apparently tacitly interpreted the "material evidence" requirement referred to in the Rules and Regulations as satisfied by the presentation of a petition. But the Council (quite properly in our estimation) does not accept a petition as "material evidence of a need for an environmental review", which according to MEPA, would automatically require an impact statement. The whole issue is extremely confusing because of the language of the rules and regulations.

[1]Since no specific "administrative review process" is given in MEPA or the EQC's rules and regulations, we believe that this phrase should be assumed to refer to existing agency review processes. The relationship between the EIS process and "final decisions on the proposed action" is unfortunately muddy in the rules and regulations. A proposed new action is exempted from the EIS requirement if "[t]he last governmental permit has been issued by a public agency on the private action," but if an EIS is required on the action, "[t]he Final EIS shall precede final decisions on the proposed action." (CF. Minn. Reg. MEQC 26(c)(6)(aa) and MEQC 26(j)(4).) One shudders at the image of a local government hurrying through its approval processes in order to grant all final approvals in order to avoid doing an EIS while the EQC hurries through its decision making process before all final approvals are given making the action exempt.

[2]There was an Environmental Quality Council in Minnesota prior to MEPA, but the activities of that Council are irrelevant to our purposes here.

meeting and the meeting on November 12, 1974, a total of 81 proposed actions have been presented to the Council for a decision on whether or not an EIS was to be required. (A brief summary of each of these EQC cases is presented in Appendix A to this report.) Since the Council meets once a month, this averages out to slightly over 5 cases per monthly meeting. In fact, however, the figure is misleading. For one thing, cases usually come before the Council at least twice. And for another, for the first several months of the Council's existence under MEPA, very few cases were brought to its attention, and the number of cases appears to be rising steadily as private groups and individuals and public agencies become used to the system under which the Council operates. At the meeting of November 12, 1974, the EQC dealt with about 20 cases brought before it under the EIS process as well as several non-EIS-related issues. The workload continues to increase. To help make it possible to deal with such a large volume of business the Technical Representatives Committee (TRC) was established, consisting of representatives of the state agencies whose directors are members of the EQC. The TRC has been meeting weekly and functions as an advisory body to the Council.

This very brief overview of the present EIS process should be sufficient here for an identification of the primary problems relating to that process.

(1) The Environmental Quality Council has become so bogged down with the hearing of individual action proposals for an EIS determination that it has had increasingly little time to direct its attention to the matters which we believe were intended to be its primary foci: issues of statewide environmental policy, interagency coordination, administration of the critical areas program, and power plant siting. While the tight centralization of the major decision point in the EIS process may be good theoretically (though see point (3) below), the resulting workload is becoming unbearable and interfering with other work needs. Further, the Council is decreasingly able to give adequate attention to each case individually. The Council members are deserving of high praise for the diligence and conscientiousness with which they have undertaken this massive work task, but something must be done to re-orient the Council's work schedule immediately. And to whatever degree the Council is mis-oriented at the present time, so, too, are the Council staff and the TRC.

(2) The petition process works poorly. It results in the bringing of many action proposals before the Council which will clearly not require an EIS and which only serve to waste the Council's time. More importantly, it does not provide a good vehicle for citizen access to the process. Citizens frequently petition the EQC because of what they feel are legitimate concerns about the environmental consequences of proposed actions. They make their carefully prepared presentation to the TRC, which recommends action to the EQC. In many cases, the matter petitioned takes a fairly obvious decision, and because of the Council's work load it is necessary to dispose quickly of the simple cases. The result is that the petitioning citizens may only get ten minutes of the Council's time after a month or two of preparation for their case. (See point (1) above.) Further, the requirement of 500 signatures for a petition may make it extremely difficult for a single aggrieved individual (without organizational ties and without a lot of time on his hands) to present his grievance to the Council. Yet at the same time, an individual with strong organizational backing and/or a good deal of time

could get 500 signatures[1] on almost any matter he chose to petition, whether or not it had anything to do with the environment. And because of the time delay on a proposed action brought before the Council, an individual seeking to stop a project might be successful in his endeavor simply by petitioning, regardless of the disposition of the case. Finally, petitions often identify quite legitimate environmental concerns relating to proposed actions which will in fact affect the environment in a significant way, only to discover that those concerns (however legitimate) cannot be addressed by the Council under MEPA because they are only of local significance.

(3) The current system does very little to increase the environmental awareness of local units of government. One of the main reasons for the need for an EIS process is the lack of environmental awareness and environmental safeguards on the local level of government. Yet the present process, insofar as it affects locals at all, is set down on top of existing local processes as another state requirement. The EIS process integrates very poorly with present local decision-making processes. Actions of only local significance (though they may be of very great environmental significance) are not touched by MEPA except perhaps by being brought before the EQC for out-of-hand dismissal. The vast majority of local actions can safely ignore MEPA entirely, in spite of the statute's strong policy statements. The only time locals get involved with the process is when they are required to prepare an environmental assessment and/or an EIS or are brought before the EQC (e.g., in connection with a petition). In almost every case it is a matter of a massive state process interfering with local decision-making processes. Such a system is unlikely to inspire an environmental conscientiousness on the part of local government or an increase in environmental integrity in local decision making.

(4) Some private developers whose projects have been examined in detail by the EQC have responded with environmentally thoughtful proposals and proposal modifications, but the vast majority of private project proposers are completely unaffected by MEPA, and the Act as currently implemented is not spurring a widespread increase in environmental awareness among private developers. Further, those private projects which are caught for scrutiny by the environmental assessment and/or EIS processes are frequently subjected to wasteful delays by the EQC's operating procedures. In the fifteen months of Council operation under MEPA, only 81 actions (relating to both public and private actions) have come before it in any way under the EIS process. Of the 43 cases on which the EQC came to a decision as of the November 12, 1974 meeting, only 11 (26%) required EISs. (See Appendix A to this report.) The EIS is a fairly rare phenomenon in Minnesota, and the requirement affects very few actions. When an EIS is required, the EIS process calls for a delay on action implementation of some 300 days assuming that everything goes smoothly. It might take considerably longer. An action for which only an environmental assessment is prepared will be delayed between 90 and 135 days unless the assessment is inadequate (in which case there is further delay). For the most part private developers are not touched by MEPA, and

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[1] The requirement of 500 signatures places no geographical limits on the people who may sign the petition. A petition containing 500 signatures of people in Newark, New Jersey would be legitimate for presentation to the Council.

those that are are subject to significant delays. Delay in private development translates directly into increased project costs.

(5) MEPA is an environmental policy act, yet the conditions under which its primary implementing tool (the EIS) is triggered tend to weaken its ability to provide for the environmental monitoring that MEPA's policy statements appear to mandate. The Council has dealt with many action proposals which would have a significant environmental effect but which are essentially exempted from the EIS requirement because they are not major actions or because they are not of more than local significance. If the Act was intended to provide for environmental protection and enhancement, the type of action that endangers the environment and the level of government that should be most concerned about the effects should be irrelevant to a program of statewide environmental monitoring.

B. Dangers Facing System Change

It will be argued in Section IV of this report that the most fundamental immediate change that is needed in the MEPA program is the decentralization of the whole EIS process. The practicability of decentralization in Minnesota will depend on the details of the decentralized process. Decentralized EIS systems have been successfully put together in the states of California and Washington. Minnesota is in a good position to profit from their experiences by designing an EIS process in full cognizance of the problems and dangers that rose to the surface over the course of years in those two states. Many of the problems experienced in Washington and California would not be potential problems for Minnesota decentralization[1], but a good many others would present difficulties almost anywhere.

Based on our work in California and Washington and intensive study of the State of Minnesota, we have attempted to identify a wide range of significant dangers which decentralization of the EIS process in Minnesota should studiously address.[2] Our detailed recommendations on the EIS process in Section V of this report have been designed to avoid or (where that is not possible) at least minimize the potential problems identified here.

(1) Potential State Agency Problems and Concerns

There are a handful of dangers unique to individual state agencies. Of more crucial interest for present purposes are those potential problems relating to the EIS process which are clearly common to more than one state agency. A classification of relatively common potential problems is difficult to achieve because of the extreme variation in state agency structures and functions. Nonetheless, the following dangers can be identified as appropriate subjects for general concern among state agencies.

(a) No state agency has had the in-house experience of deciding whether or not an EIS is required on an action, since this function is currently centralized in the EQC. While the procedures of the EQC should provide a useful model in this respect, the criteria for requiring an EIS that are used by the

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[1]For example, the main problem experienced for three years in the State of Washington was that the State Environmental Policy Act of 1971 gave no authority to any governmental body to adopt rules and regulations governing the EIS process or to play any role in supervising that process. The Act was passed and state agencies and local governments were directed to comply with the EIS requirement without any direction on what it was all about. Minnesota does not need to fear the massive headache occasioned by this legislative inaction.

[2]Many of the potential difficulties discussed below are problematic whether or not decentralization occurs, though in most cases the dangers they constitute would be more pronounced under decentralization. Some are already surfacing as actual problems.

Council have not been written down and are not at all evident from the decisions it has made. In fact, the Council itself has indicated a need for a clearer understanding on its own part of the criteria to be used in deciding whether or not an EIS should be required. If this decision making is decentralized to state agencies, every agency will individually be faced with the same problem, and there will be a further danger of gross inconsistency among agencies as well.

(b) If experience is any indication, many state agencies affected by MEPA are likely to view themselves as special cases. Some may view their own programs and activities as decidedly significant in a variety of ways, but not in such a way as to require detailed environmental analysis under MEPA. Others may feel that a variety of in-house mechanisms are sufficient to ensure that their actions will be environmentally sound and that rigorous compliance with MEPA is therefore unnecessary in their case. While every effort should be made to make MEPA's implementation responsive to the important idiosyncracies of individual state agencies, it must be remembered, too, that the sweeping import of MEPA's policy declarations constitutes a considerably more comprehensive mandate than existed in previous state law.

(c) Most state agencies have had little or no experience in the actual preparation of an environmental impact statement. Many agencies are not currently staffed to prepare an EIS if one were required of them.

(d) It is all too likely that the individuals responsible for the review and/or the coordination of review of EISs for their agencies have never prepared an EIS and consequently have little knowledge of what should go into the document. Nor is it very clear what counts as an adequate EIS.

(e) Unless EIS review is carefully attended to and planned for, it is all too likely that this function will become a low priority item inadequately undertaken. Since state agencies have much of the top environmental expertise in Minnesota's governmental structure and since EIS review provides one of the primary forums for interagency evaluation of significant environmental effects, inadequate attention to EIS review by state agencies is a serious danger.

(f) It is extremely difficult for state agencies to know what staffing will be necessary to operate an in-house EIS program. Nor is it easy for them to locate the individuals with the right environmental expertise.

(g) State agencies cannot staff adequately to operate an EIS program without the money to do it. This requires both carefully tailored budget requests and a willingness on the part of the Legislature to grant reasonable requests.

(2) Potential Problems and Concerns of Regional Development Commissions

There is one overriding danger for decentralizing the EIS process with respect to regional development commissions. Most of the thirteen regional

bodies[1] established pursuant to the Regional Development Act of 1969 are still in the formative stages and have negligible or no staff capabilities. While a few (e.g., the Metropolitan Council and Region 3) are currently able to provide invaluable assistance to local governments, and while it is to be hoped that all regional development commissions (RDCs) will provide increasing assistance over the course of the next decade, it is impracticable at the present time to give RDCs in general any substantive role in a decentralized EIS process.

(3) Potential Problems and Concerns of Local Governments[2]

Our experience with local governments in California and Washington (both work experience and extensive interviewing) during the first couple of years of operation of their decentralized EIS processes suggests some serious dangers relating to local governments should the Minnesota EIS process be decentralized.[3] Such dangers are likely to be poignant, in fact, in view of the large number of small municipalities in the state.

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[1]The primary regional bodies in Minnesota at the present time are the twelve regional development commissions (RDCs) and the Metropolitan Council. Pursuant to the Regional Development Act of 1969, the Governor has divided the state up into thirteen development regions, providing the geographical jurisdictions for the twelve RDCs and the Metropolitan Council. While the Metro Council is unique in many respects and functions under legislation separate from that governing the RDCs, its technical jurisdiction is a "development region". Unless specifically noted otherwise in the text, the Metro Council will be considered in this report to be a regional development commission; but it should be noted that this grouping is a notational convenience here and is not intended to imply that there are not significant differences between the Metro Council and the RDCs proper.

[2]For the most part, the potential problems and concerns of political townships and special purpose governments (e.g., P.U.D.s, school districts) are the same as those of municipalities and counties, to which the present sub-section is directly addressed. The major differences with respect to all such governments reflect the distinction between small/rural (with little or no planning staff) and large/urban (with notable planning staff), rather than distinctions among types of jurisdictional status. The 1780 political townships in Minnesota present an unusual jurisdictional problem. Quite generally speaking, townships have little staff capabilitiy but considerable potential governmental authority as general purpose governments. Such authority in some cases overlaps geographically with similar authority vested in municipalities and counties. While this general potential difficulty is worth noting here, in terms of a decentralized EIS process the primary potential problems relating to townships should be roughly the same as those relating to municipalities and counties.

[3]It should be noted at the outset that a good many of the local government problems experienced in the states of California and Washington have been dealt with reasonably well over a period of years. In fact, these two states currently offer quite decent models of decentralized EIS programs. Some of the difficulties discussed below, however, do not readily lend themselves to outright solutions, and the point in these cases is to provide for mitigation as fully as possible.

In both California and Washington a basic feeling was apparent for a couple of years that the legislation was simply another law forced down the throats of local government by the state. It was felt that this was done with little or no consideration given to state/local coordinative administration or to the method of financing the additional burden which apparently fell on local government. It took two or three years for most local governments to see the EIS process as an integral part of local decision making, and many still see it as an unnecessary state requirement set down on top of local processes. This reluctance to implement the legislation on the local level frequently surfaced in attempts to avoid the work of formalizing a local EIS process and in the refusal ever to require an EIS on local government initiative.

In the early stages, local government concern was almost always expressed in California and Washington (especially the latter) over the inadequacy of state guidelines on how to operate an EIS process. Concern focused on such questions as: Under what specific conditions is an EIS to be required? How should an EIS be prepared? Who pays for it? And what legal clout does a favorable or unfavorable EIS have on the execution of a proposed action? Uncertainty was also often expressed with respect to which governmental agency is the "responsible agency" on a given action. Many questions were asked about the detail, style, and comprehensiveness expected in an EIS.

There was almost universal frustration with the additional "front-end period" for planning which most agencies looked upon as a 50- to 120-day delay in the execution of an action. There was also much confusion relating to how much data can be demanded of the project sponsor in the case of a private project.

Nearly all local governments indicated a disappointment with review responses from most other agencies, particularly state agencies. A number of them felt that it was the duty of other agencies to "fill in the voids" in their draft EISs. On the other hand, some agencies were reluctant to strongly critize another agency's EIS for fear of disrupting a friendly working relationship.

Most local governments were not clear on who should receive a copy of the draft EIS for review. Because of this uncertainty, they tended to inundate every possible agency. This in itself was, of course, a major reason for limited response in the form of EIS review.

There is one further set of potential problems worthy of special note. In October of this year the federal Department of Housing and Urban Development (HUD) published in the Federal Register its proposed regulations implementing section 104(h) of Title I of the Housing and Community Development Act of 1974 (Pub. L. 93-383), "specifying the policies and procedures for the use of applicants under Title I in carrying out of environmental review activities." The proposed regulations represent a dramatic change in the implementation by federal agencies of the National Environmental Policy Act of 1969 (NEPA). While NEPA appears to lodge full responsibility for the prepar-

ation of environmental impact statements in the federal agencies which are taking action on proposals made to them, the HUD regulations would shift the burden of responsibility for EIS preparation to local governments applying to HUD for funds pursuant to the legislation referred to above.[1] Though the HUD program would make special money available to local governments for compliance with the EIS requirement (if a proposed action required an EIS), local governments would be left with the burden of harnessing the expertise necessary to complete the EIS and fulfilling the substantive and procedural requirements of NEPA, the federal Council on Environmental Quality (CEQ) guidelines which HUD uses, and specific HUD requirements. We believe the federal EIS program delineated in the CEQ guidelines and the HUD regulations to be fairly confusing. Further, if the HUD regulations are adopted, many other federal agencies are likely to follow suit in requiring local governments to prepare federal EISs. Confusion will multiply dramatically if this occurs.

But aside from special problems created for local governments by having to fulfill NEPA requirements for HUD monies, the HUD regulations present noteworthy dangers for decentralizing the Minnesota EIS process. First, any substantial requirements placed by the Minnesota EIS process on projects for which a HUD (or any federal) impact statement is required will add immensely to local government confusion: local governments would have to fulfill two sets of requirements. And secondly, even if MEPA requirements are not added to federal requirements for projects requiring a federal impact statement, the local jurisdictions needing HUD monies[2] would have to familiarize themselves with two processes, one for the state EIS system and one (or more) for the federal EIS system.

(a) Small Municipalities and Rural Counties

The nature of small cities and towns and rural counties presents special difficulties to a decentralization of the EIS process. State legislation placing requirements on local governments frequently seem to assume that all basic tools of police power and land use controls available to a local government are in full operation, but the assumption is often erroneous. When a town or county has limited or no zoning, subdivision regulations or building codes, it is unrealistic to believe that the implementation of any substantial EIS process would be easily achieved. Extremely limited financing, small staffs, occasionally strong local development pressure, other state laws, all combined with a taxpayer revolt and an ever-present desire to continue life in the old

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[1] The Federal Highway Administration has already shifted the EIS burden to applicants, but for the most part, the impact of this move has been absorbed by state highway departments.

[2] It is difficult to project how many local jurisdictions would be affected by the HUD program. Very few would be affected in 1975 and most would never be affected. It should be added, further, that it is very likely that the HUD regulations will be challenged in court, and the issue of local jurisdictions doing HUD impact statements may not be finally settled for two or three years.

way, would make implementation of an EIS process a very low-priority item. A simple mandate from the state to comply with MEPA will not raise the revenue available to these governments. The lack of expertise to produce adequate EISs would be freely admitted in most cases.

There is another basic characteristic of small towns and rural counties which presents problems for decentralizing the EIS process. They are not accustomed to paperwork on a scale accepted by more complicated governments. Elected officials and administrative people are well known, and personal contacts and word-of-mouth communication seem to be the by-word. They tend to feel that a "windy" EIS may be necessary in a large city, but the pros and cons of a proposed action in their jurisdictions are easily made topics of common conversation. They are, therefore, unaccustomed to a lot of paperwork and would find substantial written work under MEPA to be a complete "system overload" to the normal routine.

It appears to be the case generally that the closer a small town or rural county is to an urban area, the more sophisticated (comparatively speaking) is the local governmental process. There is generally increasing pressure from more sophisticated developers, and peer group associations usually lead to greater governmental awareness. Many small towns and rural counties at some distance from any urban area can be expected simply to lack the political climate that is needed for the operation of a strong EIS program.

(b) Large Municipalities and Urban Counties

The circumstances in which large cities and urban counties find themselves have been brought about by a wide variety of socio-political forces not normally present in a sophisticated, structured manner in a small town/rural county atmosphere. Two of the forces of interest to us here are relatively recent arrivals on the scene. Both are usually associated with words like 'ecology' and 'environment'. On the one hand, there are numerous sincere persons and groups with an action-oriented desire to be sure that a project will have a minimal effect on the environment or that a project will not materialize because its adverse effects are substantial and cannot be effectively mitigated. On the other hand, there may be forces opposing an action, for any reason whatsoever, who will disguise themselves as environmentalists and use methods and techniques properly available for environmental protection in their efforts to delay and kill a proposed action. It is often difficult to distinguish the responsible environmentalist from others using that disguise. Generally speaking, both of these forces are present in numbers relative to the overall population and general intensity of development. Their presence and strength are also related to the actual presence of limited natural resources and the general level of local sophistication, including attained education, general community wealth and resources, and the availability of legal counsel. Putting together an EIS system which has adequate public safeguards to ensure environmental protection but which at the same time does not create a gold mine of non-environmental delay-and-kill tactics is a supremely difficult task which is anticipated to be of particular concern to large cities and urban counties.

The relative sophistication of governmental structures and processes among large cities and urban counties raises another more general point of sensitivity as well. Because of variations in jurisdictional environments, populations served, and historical evolutions of these jurisdictions, the structures, styles, and functioning of these governmental units vary a great deal from one another. Though such variation is by no means unique to large cities and urban counties, the phenomenon is more noticeably marked with increasing size and complexity of the governmental units in question. Specific intrajurisdictional MEPA requirements would be difficult to fit equally well with the existing governments of all large cities and urban counties.

Another potential problem is the entire matter of citizen involvement. This must be addressed in a small town situation, too, but it is easier, more natural and usually requires little structuring. In a populous area it is rarely spontaneous and usually ineffective. Considerable time and manpower must be spent on citizen involvement in a populated area. Currently environmental matters are at the heart of much of the clamor for citizen involvement and providing for citizen participation that is both fruitful and practicable is no easy matter.

Specific questions relating to citizen participation include: (a) How can citizen input be efficiently and effectively assimilated into the preparation and/or review stage of the EIS? (b) Can citizens volunteer positive information in addition to constructive negative reactions? (c) In the effort to promote meaningful involvement, should a public airing of a project be automatically required when an EIS has been prepared? (d) What constitutes sufficient public notification of EIS preparation or filing? And (e) how available, in what quantities and at what cost should EISs be?

(3) Potential Problems and Concerns of Private Developers

An environmental policy act presents developers with essentially three potential problems. The first and most readily identifiable is the felt necessity of frequently hiring a private consultant to fulfill their new environmental responsibilities. The result is an immediate substantial increase in project costs, ultimately necessitating an increase in prices unlikely to please the consumer. Consequently, the developers often feel that they are appearing in the role of the villain as they attempt to implement the state law--a law which is often described as "grass roots" and "citizen initiated".

In addition to the possibility of increasing the outright front-end cost to the developer, there has been considerable complaint around the nation about the time delay brought about by compliance with environmental policy acts. In private business time delay is usually directly correlatable with financial loss. For the most part, heavy financial loss effected by a time delay resulting from environmental policy act requirements could be minimized by working environmental considerations into the very early stages of project planning and by streamlining the governmental EIS process. It is obvious not

only that time delay must be minimized, but that developers must be better informed with respect to MEPA requirements. The danger is that a developer's first visit to a city hall may be for a building permit. Architectural design is done, contracts may be let, financial resources may be committed, etc., and now, for the first time, the developer becomes aware of MEPA.

Finally, developers frequently complain that, because of increased project costs, the entire EIS process is actually stifling development. However, the recent California and Washington experiences indicate that after an adjustment period, longer leads occur on projects and the consumer does survive bearing the extra costs passed on to him. Many developers there appear to be positioning themselves ahead of the controversy and making for themselves a favorable public image by offering some kind of environmental analysis as a part of their own planning processes. Nonetheless, the stifling of development is a danger that must be taken seriously. The danger is particularly poignant with respect to the small developer, who may be put out of business by any noticeable increase in front-end development costs. The potential stifling of development will be an actual problem to whatever extent MEPA requirements add new increments to existing processes.

IV. PRIMARY RECOMMENDATIONS ON THE IMPLEMENTION OF MEPA

The present section consists of an overview of our primary recommendations on the implementation of MEPA. It must be emphasized at the outset that what follows here is for the most part a summary of the detailed recommendations which comprise Sections V, VI, and VII of this report. The reading of the present section will serve to make clear only the outline of the program for the implementation of MEPA that we are recommending to the State of Minnesota.

While we heartily recommend that the present report be read straight through as it is written, every recommendation in the present section which is more fully developed at some other point in the report will contain a reference to the textual development. The reference will be given by section or sub-section immediately following the recommendation referenced. For example, 'V.F(1)' would refer to sub-section (1) of sub-section F of Section V; 'III' would refer to Section III; and 'Appendix B.C' would refer to sub-section C of Appendix B. References are provided as an aid to those who would like to follow up a particular point immediately.

A. Decentralization of the EIS Process

The key step in the reorientation strongly urged here is the complete decentralization of the EIS process. But it is important that the nature of the decentralization intended not be misconstrued. Decentralization is intended to include local governmental units and state agencies (and regional development commissions, to the degree they are able to provide input). The point is not to saddle local governments and state agencies with the whole burden of the EIS process now administered primarily by the EQC, but rather to ensure that local governments making decisions on actions of local significance will bring MEPA's policies to bear on those decisions, and that state agencies making decisions on actions of statewide concern will bring MEPA's policies to bear on those decisions. The primary goal of the decentralization recommended here is to provide a mechanism to ensure that, insofar as possible, the broad examination of environmental considerations mandated by MEPA is undertaken by decision makers in the natural course of the decision-making process. If this goal is to be fulfilled, it is evident that the decentralized process would have to differ in significant ways from the process currently operated by the EQC. Our primary recommendations[1] relating to EIS process decentralization are as follows.

(1) The Environmental Quality Council should adopt new rules and regulations providing for an orderly decentralization of the EIS process. Though some legislative amendments to MEPA would also be necessary, the brunt of decentralization could be handled through rules and regulations.

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[1]The following recommendations serve to outline and set the stage for the detailed recommendations in Sections V and VI. A procedural summary of the recommended EIS process constitutes sub-section A of Section V, and Appendices F and G provide two different summary perspectives of the process.

The primary aspect of the process which would need to be changed is the decision making on whether or not an environmental impact statement is to be required.[1]

(2) We recommend that all municipalities and counties with more than 25,000 population be required to adopt local ordinances implementing MEPA on the local level.[2] (Such ordinance adoption should be encouraged but left optional for political townships and for municipalities and counties with 25,000 population or less.) Local ordinance adoption should be required within 180 days of adoption of the EQC rules and regulations. The rules and regulations to be adopted by the EQC would set forth procedural and substantive requirements relating to the EIS process which would apply statewide, but there are several aspects of such a process which cannot be set forth adequately in statewide rules and regulations. Most notable is a breakdown of in-house responsibilities for compliance, which must be tailored to each governmental unit. Further, because of a variety of potential variations in local governmental structures and in the environments of local jurisdictions, it may well be that local governments will need to supplement or modify the EQC rules and regulations in order to put together an EIS system that fits well with local jurisdictions. Most important perhaps, until a program is actually governed by local ordinance, it will not be completely accepted as a local program. The EQC should provide a model ordinance(s) to aid local governments in this undertaking. We further recommend that a modest amount of money be made available to any local unit adopting an ordinance implementing MEPA on the local level. (Appendix B.D) Finally, in order to ensure that MEPA's implementation on the local level is both uniform and adequate, we strongly recommend that all local ordinances be required to be submitted to the EQC for certification. While no variation from the mandates of (amended) MEPA itself should be allowed, the EQC's certification power should include the authority to grant variances from the statewide guidelines. A certified ordinance

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[1]We believe that the decentralization of this decision making was probably the legislative intent in the passage of MEPA, which states: "The Minnesota environmental quality council shall, by January 1, 1974, prescribe by rule and regulation in conformity with provisions of Minnesota Statutes, Chapter 15, guidelines and regulations setting forth those instances in which environmental impact statements are required to be prepared for new and existing actions, including the time and manner in which such statements shall be prepared and acted upon, and to coordinate the processing of such statements among local, state and federal agencies. The council may require the preparation of an environmental impact statement for any action or project not referred to in its guidelines and regulations. Further, the council may require the revision of an environmental impact statement which is found to be inadequate." [Minn. Stat. Section 116D.04, subdivision 2 (Supp. 1973)] The Council opted to respond to this legislative mandate by establishing a process in which the Council itself made all such decisions, but the legislative directive is at least broad enough to encompass the decentralization of this decision making.

[2]This population level would require ordinances from 30 counties and 22 cities. We recommend that Ramsey and Hennepin Counties be exempted from the requirement, however, which would bring the number of counties to 28.

would essentially exempt a local government from compliance with the statewide rules and regulations, and certification should be withdrawable at any point at the discretion of the EQC.[1]

(3) We further recommend that all state agencies which ever have occasion to deal with public or private projects (see point (4) below) be required to adopt specific agency rules and regulations setting forth operating procedures for the implementation of the EIS process. Such rules and regulations should be required to be adopted within 120 days of the adoption of EQC rules and regulations of statewide application. State agency rules and regulations would be required to be certified by the EQC before they could be used in lieu of the EQC rules and regulations. The certification process would be the same as that described above for local government ordinances. No special monies should attach to the adoption of state agency rules and regulations. (But see Appendix B.A.)

(4) We recommend that the EIS process apply only to projects. More specifically, the EIS process should be triggered only in the case of: (1) the proposal by an agency of Minnesota government[2] of actions which themselves constitute manipulation of the environment (individually or severally); and (2) the proposal to an agency of Minnesota government of actions which themselves constitute manipulation of the environment (individually or severally) by a private group or individual or by an agency of government which is not a political subdivision of the State of Minnesota. Once the EIS process is triggered, it should be required to run its full course before any project approval is granted. We believe that actions which are not projects and which do not directly authorize projects are poorly and inappropriately handled by an EIS process and that a simpler tool is needed for such "non-project actions". (V.B and VI)

(5) The EIS process we are recommending requires a detailed listing of projects to be exempted from the environmental impact statement requirement of MEPA. A large number of projects can be identified which, it is relatively safe to assume, will never have the potential to result in significant environmental effects, as long as they are not sited in an area of peculiar environmental sensitivity. We estimate, based on our work in the State of Washington, that approximately 90% of all project proposals can be exempted in this way. The environmental sensitivity rider to the exemption

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[1]It is anticipated that the main point of controversy relating to the certification of local ordinances will be local proposals for exemptions for local application that are not contained in the statewide rules and regulations. (See point (5) below.) For this reason, local governments might find it advantageous to submit their proposed ordinances without exemptions first and to submit their proposal on exemptions as a separate document at a later date. In such a case, a local EIS process could be certified which used the exemptions applicable statewide while specific local exemptions were being prepared.

[2]The phrase 'an agency of Minnesota government' is intended to include state agencies, regional development commissions, counties, municipalities, political townships, special purpose governments, and any other agencies, departments, commissions, boards, or other units which are political subdivisions of the State of Minnesota.

system is extremely important. In environmentally sensitive areas a seemingly minor environmental effect might be extremely significant. The exemption system will not reach its full potential for administrative efficiency until environmentally sensitive areas are mapped statewide, but a definition of the term should be satisfactory as an interim measure. (Environmentally sensitive areas should, of course, be mapped whether or not it is needed for a MEPA exemption system.) Exemption classes should be specified in detail in the rules and regulations adopted by the Environmental Quality Council for statewide application. Each state agency or local government adopting agency rules and regulations or local ordinances for jurisdictional implementation of MEPA should be able to modify the statewide exemptions as appropriate, since there will probably be a variety of project types which clearly will not have a significant environmental effect for one or more jurisdictions but which cannot be exempted statewide. (V.C)

(6) With respect to those projects which are not exempted, a decision will be needed project-by-project on whether or not an EIS should be required. A "responsible agency" under MEPA must be designated for the making of this decision. We believe that for some kinds of projects some state agency should automatically assume the rule of responsible agency, but for the most part the local government (city, county, or political township) in whose jurisdiction the project is proposed should be making the determination of environmental significance as an integral part of its normal decision-making processes. We further recommend that in addition to the listing of projects for which a state agency is automatically the responsible agency, state agencies be empowered to request the role of responsible agency for a project from any local government(s) in whose jurisdiction the project is proposed. The responsible agency (whether a state agency or a local government) would be responsible for the significance decision and, when an EIS is required, for the preparation of the EIS. (V.D)

(7) The determination of whether or not an EIS is to be required is in many ways the key to the whole EIS process. It is not surprising that the Environmental Quality Council opted to keep control of this turning point for as long as it could. We recommend that a single criterion be used for EIS decisions: whether or not the project in question has the potential to result in significant environmental effects. We further recommend that the term 'environment' be defined to refer chiefly to the physical surroundings of man. We believe it to be important that the Environmental Quality Council issue detailed guidelines on what counts as a significant environmental effect, since the matter is a serious issue of statewide environmental policy. (If the Council does not provide strong guidance, significance criteria will be supplied piecemeal by an administrative appeals body and/or the courts.) If the significance decision is decentralized and the attempt is made to integrate such decisions into existing decision-making processes, the Environmental Assessment currently used by the Council would have to be replaced by a simpler tool for the gathering of information. We recommend that each jurisdiction keep a notebook recording its significance decisions that is available to the public. Notification of significance decisions made should be given to all agencies of Minnesota which could be expected to have some interest in

the projects to which they relate. Significance decisions should be appealable to a statewide appeals board (see point (9) below), and optional public notification of such decisions should trigger a statute of limitations on appeal. (V.E and Appendix D)

(8) We recommend that the current procedure of producing both a draft and a final EIS be retained, though we believe that the subjects that are required to be addressed in an impact statement should be changed substantially. (V.F(1)(a)) We believe that the cost of draft EIS preparation (and certian other minor costs) should be borne by the project sponsor. We also recommend a general standardization of EIS format. (V.F(1)(b)) Public notification of the availability of both draft and final EISs should be required, and notification of the availability of final EISs should trigger a statute of limitations on appeal of EIS adequacy or of any decision made or action taken under MEPA on the grounds of noncompliance with MEPA. (V.F)

(9) There is currently no administrative appeals body to handle appeals of decisions made and actions taken under MEPA, though some of the current functions of the EQC are quasi-judicial in nature. The only appellate mechanism currently available is appeal to the courts, which is very time-consuming and the cost of which precludes many aggrieved individuals from being able to challenge decisions and actions. We strongly recommend that the State of Minnesota establish an Environmental Management Appeals Board to hear challenges of actions taken and decisions made under MEPA. The Board should consist of three full-time citizen members[1] appointed by the Governor. All three members should be qualified by experience or training in matters pertaining to the environment and/or law. Though all decisions would be made by the full Board, individual Board members should be empowered to conduct hearings; the findings of fact stemming from such hearings would be presented to the full Board for decision. The Board should also be empowered to hire hearing examiners as the need arises. It would not hear any appeal of decisions on project approval or disapproval (e.g., permit issuance) or of any decision made or action taken by the Environmental Quality Council. (IV.B) The Board would hear appeals relating to exemption decisions, significance decisions, EIS adequacy, and all forms of procedural compliance with MEPA and applicable rules and regulations, guidelines, and/or ordinances adopted or issued under MEPA. (V.G) It would also (a) select a local government to fulfill the role of responsible agency with respect to a project for which the local governments involved are unable to choose a responsible agency by mutual agreement (V.D), and (b) decide on requests from responsible agencies for a time extension on the preparation of final EISs in the case of private projects (V.F(4)).[2] Any individual feeling aggrieved by a decision made or

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[1] It might be well to begin with a Board of one full-time member (with experience or training in matters pertaining to law) and two part-time members, with automatic expansion to three full-time members as the work load demands. (Appendix B.B)

[2] It may turn out after the Board gets some experience operating that it should be handling some additional issues as well (e.g., critical areas appeals), but initially we recommend that the Board be limited to what is set forth in the text.

an action taken under MEPA could challenge that decision or action before the Board, without the need to be represented by legal counsel. Court appeal of decisions made by the Board should be strictly limited. We believe that the establishment of the Appeals Board described here would have many advantages, including: (a) offering equal access to citizens equally aggrieved (including project proposers), since it would not be necessary to employ an attorney[1]; (b) much more rapid decision making on appeals (a matter of a month or two if similar experience in the State of Washington is any indication) than can occur with respect to court appeals (which frequently require a year or two); (c) the development of environmental expertise in those hearing appeals (which happens haphazardly, if at all, in the courts); and (d) a predicted washout at an administrative level of a high percentage of challenges that might otherwise go to court. (V.G)

(10) We recommend that the staff of the Environmental Quality Council publish a weekly newsletter providing information relating to the EIS process to governmental units in Minnesota and to any private group or individual who requests to be put on the mailing list. The "MEPA Monitor" would include a listing of all significance decisions requiring the preparation of an EIS, all draft EISs available for review, and all final EISs available for consumption. (The EQC staff would receive notification from all governmental units operating an EIS process.) The MEPA Monitor should also include a summary of the appeal decisions rendered by the Environmental Management Hearings Board and any MEPA-related court decisions. As time and information permit, the Monitor could also include a reporting of activities in other states under state environmental policy acts and federal activities under NEPA.[2]

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[1]We believe that this system would provide far fairer (and quicker) access than the petition process currently in effect.

[2]An independent study was recently completed for the EQC providing recommendations on an early notice system to implement the early notice requirement of MEPA (see Minn. Stat. Section 116D.04, subdivision 8). The report submitted to the Council contains a good summary of two notice mechanisms currently under consideration: "Chapter 344 of the Laws of 1974 directed the establishment of a new state publication to be called the 'Minnesota Register'. The concept was derived from the Federal Register, a daily publication of the federal government. It is to be published by the Department of Administration at such intervals as the commissioner deems appropriate. Distribution is to be through a subscription service with individual copies also available for purchase. To be included in the Register are: notices for hearings concerning rules or regulations; the full text of adopted or modified rules or regulations; the texts of executive orders issued by the governor; and such other material as the commissioner deems appropriate. Due to the ambiguities in the statutory language and certain technical difficulties in the statutorilly prescribed publication procedure, the Department of Administration has delayed action on the new publication until the 1975 legislature has had a chance to consider proposed changes in the legislation. If the Register is published on a weekly basis as is now envisioned, it would provide a useful vehicle for the early notice

(11) We recommend that the State Planning Agency staff who are working on the Minnesota Land Management Information System receive and library copies of all final EISs done in the state and that a simple system of recall be established to make these documents available to future EIS preparers and other individuals who may have an interest in impact statements done on the same types of projects or on projects undertaken in the same area. (V.f(7))

(12) The recently proposed rules and regulations of the federal Department of Housing and Urban Development, which would require local governments to prepare impact statements under NEPA in connection with applications for HUD money, cause problems the seriousness of which is difficult to determine at the present time. (III. B(3)) In order to avoid placing an unbearable burden on local governments in Minnesota, we recommend that any project for which an EIS is prepared under the National Environmental Policy Act be completely exempted from the EIS requirement of MEPA and from all procedural requirements of the MEPA-EIS process except one: when it is determined that a federal EIS is to be prepared, the agency that would be the responsible agency under MEPA would be required to notify Minnesota governmental units which could reasonably be expected to have an interest in the proposed project.[1] (V.C(3))

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system." It might be convenient to incorporate the MEPA Monitor as a part of the Minnesota Register and/or the vehicle used for early notice when it becomes clear what is to be contained in the publication(s) and to whom it will be sent, but in the present report, we will assume that the MEPA Monitor would be best handled as a weekly publication put out by the EQC staff.

[1]There has to come a time when state and federal governments are each willing to accept the procedures and programs established by the other. Since the State of Minnesota does not have jurisdiction over the federal government, the state's only option for avoiding immense confusion on the part of local governments facing an EIS under both NEPA and MEPA is for the State of Minnesota to essentially bow out in favor of federal procedures. We believe, however, that it should work just the other way. The primary responsibility for what occurs in a state is lodged in state government, not federal government. We strongly urge Minnesota's federal congressional representatives to raise this point with the federal Council on Environmental Quality and urge the Council to establish some kind of procedure whereby states with strong EIS programs would not have to comply with duplicative federal procedures.

B. The Environmental Quality Council

Subsection A of this section outlined a basic program for EIS system decentralization. If this type of decentralized program comes to fruition in Minnesota, there will be the need for changes both in function and structure of the Minnesota Environmental Quality Council. The EQC currently consists of twelve individuals, four citizens appointed by the Governor and who are also members of the Citizens' Advisory Committee (see below), seven representatives of various state agencies, and a representative of the Governor's office. The state agencies which are represented include the Department of Agriculture, the Energy Agency, the Department of Health, the Department of Highways, the Department of Natural Resources, the Pollution Control Agency, and the State Planning Agency. The state agencies are represented by their respective commissioners and the head of the State Planning Agency sits as a voting chairman of the Council.

Ostensibly, one of the primary objectives of the Council is to promote and ensure cooperation and coordination among agencies on matters significantly affecting the environment. To implement this objective, the EQC is to determine which environmental problems of interdepartmental concern it should deal with. The EQC has the authority to initiate studies and hold hearings on matters of statewide concern. The Council has also assigned itself the practical duties of determining when a proposed project or action has the potential to result in significant environmental effects and of requiring EISs. The problems associated with fulfilling such EIS-system responsibilities were discussed in sub-section A of Section III of this report. Additional EQC duties include administration of the Critical Areas planning program, power plant siting, the provision of state environmental quality standards under the 1973 Subdivided Land Act. and the operation of an early notice system required by MEPA (IV.A).

As mentioned previously, the Council meets once a month to conduct its business. Because of the increasingly heavy work load, the state agencies represented on the EQC have found it desirable to establish a Technical Representatives Committee (TRC). The TRC as a body has given advice and assistance to the EQC primarily through recommending action on the matters to come before the Council at its monthly meetings. The individual representatives ("tech reps") also provide advice and assistance to their agency directors on Council matters.

Another body which has been established to assist the EQC is the Citizens Advisory Committee (CAC). The legislation creating the EQC established the CAC as an eleven member citizen body advisory to the EQC with the basic objective of insuring citizen participation in the activities and decisions of the Council. All eleven members are appointed by the Governor with each of eight members representing one of the state's eight congressional districts and three members appointed at large. The chairman of the CAC and three other CAC members are members of the EQC.

One of the points of decentralizing the EIS process is to provide for the possibility of a reorientation of the EQC. We believe, further, that this functional reorientation strongly suggests the need for revising the

structure of the Council. First, we recommend that the EQC consist of fifteen voting members: eight citizen members and seven state agency commissioners or directors.[1] Each of the eight citizen members would be appointed by the Governor[2] and would represent one of the eight congressional districts in Minnesota. The seven state agencies whose directors or commissioners would be voting members of the Council are: the Department of Agriculture, the Energy Agency, the Department of Health, the Department of Highways, the Department of Natural Resources, the Pollution Control Agency, and a newly appointed agency, the Department of Economic Development.[3] We further recommend that the Director of the State Planning Agency be designated the non-voting chairman of the Council, and that the representative of the Office of the Governor be designated the Council's non-voting vice chairman. It would be the duty of these two individuals to facilitate discussion and preside over the EQC meetings.

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[1]We recommend that the present Citizens Advisory Committee be abolished concurrent with the expansion of the citizen membership on the EQC. It is felt that the CAC, though an intriguing concept, has not functioned as a truly effective means of assuring citizen input to the EQC. The addition of four more citizens to the actual policy body, the EQC, should directly strengthen the citizen input and go a long way toward eliminating the need for a body providing secondary input. Further, the overall system which we are recommending, including decentralization to the local governmental level and the creation of an Environmental Management Hearings Board, should provide greater access and input for the individual citizen of Minnesota than is now available. Finally, citizens can usually be most effective at the local level of government, and since most of the projects which have come before the EQC through the petition process (the most effective method for citizen input at present) have been projects of local significance only the decentralization approach should provide for proper local resolution of most issues.

[2]There are basically three ways to select citizen representatives for the EQC. First, all members could be selected at large by the Governor. Second, the members could be chosen to represent RDC areas or groups of RDC areas. Third, they could be selected according to population distribution, which is probably most equitably accomplished in the breakdown of congressional districts. The last method is recommended here because it is felt to be the best method for adequately representing the citizens of Minnesota.

[3]Economic development policy will surely have a strong influence on environmental quality in Minnesota. Conversely, environmental control measures certainly affect economic development potential. Consequently, if the Department of Economic Development becomes the agency in the State of Minnesota which promulgates economic development policy and does research into such policy, it should definitely become a part of the EQC. If the Department of Economic Development is not currently involved in developing economic policy, we strongly urge that it undertake this task as soon as possible in order to provide balanced input in the decision-making process of the EQC.

At the present time, the Environmental Quality Council supposedly has a separate staff with the EQC Coordinator directing the work of EQC staff reporting directly to the EQC. However, in actual operation, the EQC staff is essentially commingled with the Environmental Planning Division of the State Planning Agency. We recommend retention of a full-time EQC Coordinator to be in charge of all staff functions for the EQC, but we believe that all staff positions, including the Coordinator's position, should become positions in the State Planning Agency. This would merely serve to formalize a practice which is occurring at the present time anyway. This seems to be a relatively good route to follow, particularly if the Chairman of the EQC continues to be the Director of the State Planning Agency.

If the EIS process is decentralized, the functions of the EQC would automatically undergo considerable change. We believe that the EQC has been relatively effective as an environmental policy body and as a facilitator of interagency discussion of matters relating to environmental policy. However, both of these functions require more attention than they are currently receiving. Hopefully, decentralization would provide for the possibility of strengthening the EQC's role with respect to statewide environmental policy and interagency coordination. The primary ongoing functions which we recommend for the EQC can be summarized in five points[1] (though see Section VII in addition).

(1) The Council's primary focus should be on issues of statewide environmental policy, and its deliberations should result in the proposal of legislation and/or program changes to the Governor and the Legislature as deemed appropriate. Individual projects or actions should be raised for discussion insofar as they raise issues of environmental policy. (See point (4) below.)

(2) The EQC should direct its attention in a substantive way to facilitating interagency coordination, particularly among those agencies represented on the Council. Environmental problems of statewide significance require extensive interaction on the part of and input from all parties which have an interest in or are affected by those problems. Only through extensive cooperation and careful coordination can the proper interdisciplinary perspective be maintained with respect to significant problems.

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[1] In addition to the functions listed in what follows, the Council would also be responsible for: (1) construction of the early notice system; (2) the establishment of state environmental quality standards under the 1973 Subdivided Land Act; (3) adopting new rules and regulations providing for the decentralization of the EIS process; (4) drafting model ordinances for use by local governments implementing MEPA by ordinance; and (5) certifying local ordinances and state agency rules and regulations providing for jurisdictional implementation of the EIS process. (Also, see Section VII.) None of these responsibilities should require month-by-month supervision, however. One current Council function that is conspicuously missing from the list of ongoing functions is power plant siting. At present the Council sites power plants and the Energy Agency makes a determination of need for power plants. We recommend that the siting function be transferred to the Energy Agency. The power plant program would work much more smoothly if it were centralized in a single agency.

(3) The Council should devote itself to state agency program review. Programs ultimately resulting in projects and other actions significantly affecting the environment are quite frequently established which irreversibly commit state agencies to the actions programmed. Yet little or no analysis of the environmental effects of such actions may have been undertaken at the program implementation stage. An after-the-fact EIS is a poor tool to be used in such cases. (V.B) The EQC has taken a massive step in the right direction in addressing copper/nickel mining in Minnesota as a statewide program issue. A variety of other issues should be dealt with in the same way, anticipating the proposal of specific projects and other actions. To help implement this type of agency program review, we recommend that the EQC exercise authority to appoint interagency task forces as appropriate to provide advice and assistance to the Council. Such task forces should be composed of paid state agency staff employees representing the expertise necessary to research and formulate recommendations on specific program problems.

(4) The EQC should become involved with individual projects only under one of the following conditions: (a) if the proposed project serves to raise a significant issue of statewide environmental policy; (b) if the proposed project serves to raise a significant issue of interagency coordination between two or more state agencies[1]; (c) if the proposed project raises the need for program review; and (d) if the responsible agency under MEPA for the proposed project is a state agency and at least one Council member proposed the use of the reversal or modification powers granted to the EQC in Minn. Stat. Section 116D.04, subdivision 9.[2] In any case the Council should only deal with specific projects at the request of a Council member.

(5) The Council should continue to administer the Critical Areas program.

We have one further recommendation relating to EQC operation. Under its current operating procedures, the EQC appears to rely more or less heavily on the Technical Representatives Committee. Even though the TRC is not a legislatively recognized body, its meetings tend to take on an official tone and result in formal recommendations to the Council. For the most part the TRC meetings are devoted to the study of individual projects and other actions that come before the Council under the EIS system. Under decentralization, the primary role currently played by the TRC would be eliminated. The tech reps have clearly contributed valuably to the functioning of the EQC. They represent the working level at which the greatest strides have been taken in

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[1]This would include the resolution of conflict relating to which state agency is to be the responsible agency under MEPA in cases where two or more state agencies are involved as potential responsible agencies and they are unable to reach mutual agreement on the issue.

[2]We recommend that the authority given the Council in this subsection of law not be exercised as a matter of Council policy in cases of projects that are essentially of local significance. There are other mechanisms to deal with such projects on the local level (and through the Environmental Management Hearings Board), which is the level where responsibility for these projects should be lodged.

accomplishing the goal of interagency coordination and cooperation. Such working level cooperation and coordination between agencies should continue and grow, but we do not believe that the TRC is the best vehicle to provide for such cooperation and coordination. Consequently, we recommend the abolishment of the TRC.

There are essentially two mechanisms which should satisfactorily provide for interagency cooperation and coordination. First, as mentioned above, the EQC should be appointing interagency task forces consisting of expertise related specifically to specific issues. And second, we are recommending that a one-half time to full-time Environmental Coordinator position be established in each agency represented on the Council. (Appendix B.A) The specific duties of the individuals holding such positions would be to provide staff assistance to their agency director or commissioner on matters involving the EQC and to coordinate the environmental impact statement program for their agencies. In some instances, it is anticipated that this agency Environmental Coordinator would be the same individual who is now identified as the agency's tech rep. In any case, we suggest that the agency Environmental Coordinators meet as is needed to discuss matters of interagency work which must be undertaken in order to provide backgrounding to the Council members, but that they not meet to make unified recommendations to the Council. These Coordinators, as a group and as individuals, should also make themselves available to advise the citizen EQC members as may be needed or upon request.

C. An Environmental Planning Program

One of the chief weaknesses in an environmental policy program which uses as an implementing tool the environmental impact statement is the fact that the impact statement tends to be a review document. Quite often the EIS comes at a time in the development of the project when all of the basic planning has been completed and monies have already been allocated for its implementation; sometimes contracts have even been signed. Coming toward the end of project planning, it may or may not be considered seriously as an input into the decision on whether or not to go ahead with the project. Essentially, the impact statement process is an emergency measure that is needed to bolster a decision-making process which lacks the strategic measures to inculcate environmental considerations at an early point in the decision-making process. An impact statement process would not be needed if the planning process had adequate environmental protection mechanisms built into it. There is a clear need for a transition from the (tactical) "emergency" impact statement to a more strategic environmentally sensitive planning program. An environmental planning program should become part of the day-to-day decision-making process. This would strengthen immensely the overall capability of a governmental body to make all decisions based on sound environmental considerations.

The mechanism which we recommend for developing this transitional program is the optional modification of local and state agency planning programs. This modification would result in the adoption of an "environmental element" in the planning program of the jurisdictions opting to implement such a program, and the subsequent requirement that all planning implementation tools, such as zoning ordinances and subdivision controls, be in consonance with the adopted comprehensive plan, of which the environmental element would constitute a major part. It is anticipated that by adopting such an "environmental element" in a planning program, much information which is presently included in an EIS concerning a specific project site or alternative sites can be adequately covered in the planning process itself. This would not obviate the need for a project report of some type to enable the appropriate planning and decision-making officials to correlate a proposed project with a given site (or sites) for the identification of potential problems. But it should make that reporting process much shorter and simpler than the use of a document such as an EIS.

Before presenting our primary recommendations on an environmental planning program for Minnesota, a number of assumptions must be made clear. First, and foremost, we are assuming that the decentralized EIS process recommended herein will be implemented. (IV.A and V) Second, the planning program which we are recommending for local governments would be optional, but it must be assumed that those local units opting to implement the program are dedicated to putting together a strong planning program. The effort that is required to do an adequate job of environmental planning is considerable. And third, it is assumed that governmental agencies will continue to be confronted with numerous projects which will require some type of environmental review on a project-by-project basis, and that these agencies will be interested in finding an alternative to the massive and time-consuming EIS process.

An environmental planning program is much more easily conceived for and implemented by local governmental units than state agencies. Consequently, the recommended planning program is presented primarily in terms of local governmental unit implementation. (See Section VII.C(2) for a discussion of state agency implementation of an environmental planning program.) An outline of the program for local governments that is detailed in Section VII follows here.

(1) There are four basic procedural steps which local governmental units must undertake in the development of their environmental planning program. First, after a governmental unit has decided to undertake such an effort, we recommend that it be required to file a "letter of intent" to do so with the Environmental Quality Council. This letter should outline the steps which will be taken in the development of the program, specifically identify the elements which will be included in the comprehensive plan, and provide an indication that a statement of goals and policies will be developed including a methodology to integrate the environmentally sensitive comprehensive plan into the basic decision-making process. (VII.B(1)). Second, after EQC review and acceptance of the letter of intent, the jurisdiction must begin the work program, which will include data accumulation, data analysis and interpretation, and the integration of the plan's elements into the overall planning process. Third, once the comprehensive plan itself is completed and a planning process has been established, the local government must submit the program to the appropriate regional development commission for an A-95 type of review and comment processing. After the plan has been returned to the local government, it would be revised as necessary and officially adopted. Fourth, the adopted plan (with the regional's review comments attached) would be sent to the EQC for certification. If certified by the EQC, the governmental jurisdiction could immediately substitute the planning program for the EIS process as being the implementing tool for MEPA in that jurisdiction. The comprehensive planning process would not end with certification, but would have to be constantly updated and revised.

(2) In developing the environmental planning program, we recommend the use of two specific "tools" not currently part of most local government programs. These are (a) the environmentally sensitive comprehensive plan mentioned above, and (b) the "project report". If an environmental planning program is undertaken, the development of the environmentally sensitive comprehensive plan should be mandatory. This planning document should include the following elements: transportation element, community facilities element, environmental element, an inventory of current land and water uses, and the geographical identification of environmentally sensitive areas. The environmental element is the key element in the plan. We recommend that it include as a minimum eight mandatory sub-sections and three optional sub-sections. The required sub-sections are: topographical features, soils, geological substructure, hydrology, vegetative cover type, climatic factors, historic and archaeological features, and unique natural and scenic areas. The three optional sub-sections would include: water quality and pollution, air quality and pollution, and noise. (See Section VII. B(2)(a) for in-depth descriptions.)

The second major tool would be the "project report". It is apparent that one aspect of the environmental impact statement process which it seems desirable to retain in a much simpler form than the obtrusive EIS is the mechanism for relating the details of a proposed project which may significantly affect the environment to its proposed site location (or alternative locations). At the same time, it is very important to ascertain certain basic project facts which will be necessary for evaluating the project and the project's potential environmental effect. Briefly, we see the project report as very similar to the Environmental Clearance Worksheet proposed for use in the EIS prodess. (Appendix C.B) The main information to be included in the project report is a basic description of the project including its location and operating characteristics, and a specification of the project's relationship to the comprehensive plan and its implementing ordinances. If the planning process has been completed as recommended in Section VII, this information should suffice for environmentally sound evaluation of the project.

(3) In its day-to-day processing of project proposals the environmental planning program would draw upon the experience gained from the operation of the EIS process. In brief, we believe that there are five fundamental requirements for the establishment of an ongoing planning process which puts the tools mentioned above to optimal use and which adequately integrates the planning program with existing decision-making processes.

First, a system of exemptions is needed which would specify projects not subject to mandatory review relative to the local comprehensive plan. No project report would be required on exempted projects. The exemption system used for this purpose may be similar to or the same as the exemption system used in the EIS process. (V.C)

Second, careful state agency review should be required in the case of a project of statewide concern. We suggest the list of projects of statewide concern used in the EIS process for the purpose of triggering automatic state agency project review. (V.D) In the case of automatic state agency review, the project report prepared by the local unit of government would be sent to the state agencies involved with the project. In any other case in which a state agency has jurisdiction over or special interest in a project, it could request the project report from the local government in whose jurisdiction the project was proposed.

Third, in the case of every project which requires a variance from the local comprehensive plan or one of its implementing tools (e.g., zoning ordinance, subdivision regulations), public notice of the decision on the variance should be required to be given by the local governmental body. It is recommended that public notice be given in the same manner as is provided for public notice announcing the availability of final environmental impact statements. (V.F(5))

Fourth, we recommend that the Environmental Management Hearings Board be authorized to hear appeals on the decisions on variances (but only for those local governments which have implemented the planning program herein

described). The administrative appellate mechanism would come into play only when a variance is required from the adopted environmentally sensitive comprehensive plan or one of its implementing ordinances. If no variance is required for a project, appeals of local decisions should go directly to court.

Finally, we recommend that the zoning ordinances, subdivision regulations, and whatever other official controls are adopted by local governments to implement comprehensive plans prepared under this program be required to be in conformance with the plans they implement. All too often a good planning program is wasted because of inconsistencies between the completed comprehensive plan and the official controls which implement it.

D. Budget Summary for the Implementation of MEPA

Adequate implementation of an environmental policy act, particularly one which has as an implementing tool the environmental impact statement process, is certainly not without cost. As has become clear in the past few years, environmental protection and enhancement can be expensive. However, it has become equally clear that the lack of environmental protection measures simply delays to the future the costs of today's degradation. Someone at some point in time gets stuck with paying the price.

Even though there are numerous costs relating to environmental protection which cannot be quantified in monetary terms by available methodologies, it is possible to identify the monies needed for the implementation of a specific program. A general breakdown of the costs which can arise in an EIS program include the following: general administration; development of information for determining environmental significance; development of draft and final environmental impact statements; review of impact statements; and all costs associated with administrative or court appeals. In the development of the detailed budget estimates for implementing MEPA, presented in Appendix B to this report, we have attempted to set forth those costs which will directly affect those governmental agencies which we recommended be involved in the EIS process and which will not be covered via some process of cost recovery.[1] Such costs as general program administration, basic impact statement review, analysis of information to determine environmental significance, etc., are included in the estimated budgets.

In the budget summary presented below we have indicated only three areas where costs should be considered in addition to those incurred under the present MEPA system. These additional costs relate to: (1) additional and more extensive involvement of local governmental units in a decentralized MEPA program; (2) the direct involvement in an advisory role of the regional development commissions and the Metropolitan Council; and (3) an entirely new cost for establishing an administrative appellate mechanism. In the case of local governmental involvement, it is assumed that after once setting up an EIS process the day-to-day operation can be integrated into the normal planning and decision-making processes of the local unit of government. It should be the duty of local governments to have an environmentally sensitive planning and decision-making program, and the cost for operating a responsible program should be a general cost of good government. In actual operation, outside of the costs of impact statement preparation, an operating MEPA program should not be an overwhelming budget burden to local governments. In the case of the RDCs and the Metro Council, it has been recommended that they provide advisory services to local units of government and help coordinate EIS systems within their jurisdictions. This will be a new duty and may take some staff time away from other regional coordinative and assistance functions.

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[1] We have made the basic assumption that when an EIS is required, it should be considered a part of the cost of the project which has caused the need for the document. If the EIS cost is assumed to be part of the cost of the project, monies spent on the preparation of EISs relating to private projects should be recoverable with respect to the government agencies involved. The cost of EISs for most public projects should be absorbed as a matter of course as part of the cost of the project. In some cases this will not be possible. The Department of Natural Resources is the agency most likely to be preparing EISs not covered in project budgets. (Appendix B.A)

The Environmental Management Hearings Board will appear to be a straightforward cost increase. Specifically relating to the function of administrative appeal, it is. However, it should be pointed out that there are a number of cost savings which would most likely be realized. First, the number of appeals which might otherwise go to the courts should be cut substantially. Second, an administrative appeals board does not require an appellant to have legal representation. Consequently, numerous legal fees can be saved. Finally, in an administrative appellate process it usually takes much less time to get a decision than it does if an appeal must be made to the courts. Consequently, project delays can be substantially cut saving indeterminable amounts of carrying costs for private project proposers.

The cost estimates presented for the state agencies represent only our best estimates as to what their total administrative involvement in the decentralized program should run. It should be stressed that all of these costs would probably exist whether or not the EIS process is decentralized, although some of them may well have been hidden costs. That is to say, many of the costs may not currently be identified as being part of a MEPA implementation program and thus not reflected in a budget estimate relating to MEPA. We have attempted to identify all costs (again, with the exception of EIS preparation), and not leave any costs hidden for any agency which might become involved.

In developing the budget estimates, a number of assumptions had to be made. These assumptions are presented in detail in Appendix B, pages B-1 to B-3. In short summary, the more important assumptions are that: (1) the recommendations made in Section V of this report will be implemented; (2) all remaining EQC staff functions will be assumed by the State Planning Agency; (3) new rules and regulations governing decentralization of the EIS process will be adopted by July 1, 1975; (4) all direct costs for the preparation of draft EISs will be charged to the project for which the EIS is being prepared; and (5) the cost for the preparation of Environmental Notes will be minimal and absorbed as an administrative cost (VI). Further, it should be noted that the present EQC budget items involving critical areas and the Citizens Advisory Committee are not reflected in the budget summaries which follow here. Power plant siting costs are reflected in the suggested Energy Agency budget. The costs presented should be maximum amounts needed and may well be reduced by the absorption of some administrative costs by monies collected for the preparation of impact statements. It should be remembered that the budget estimates are just that, estimates, and should be adjusted as actual need becomes apparent.

Finally, before presenting a summary of the budget items which have been developed, a few comments should be made about the cost of impact statements. It is extraordinarily difficult, if not impossible, to project any given EIS cost (let alone an average cost) for impact statements which may be required for projects of statewide concern. Depending upon the type of project, the location, and the environmental complexity, a cost for an impact statement may range from $10,000 to $1,000,000. However, the cost of impact statement preparation for those projects which may be considered to be of pri-

marily local significance is somewhat more predictable. Our experience in the states of Washington and California have indicated that the cost for impact statements prepared by or for locally significant projects generally ranges from $1,500 to $10,000. Specifically, our experience in California with the preparation of numerous impact statements for cities and counties indicates an average EIS preparation cost range of $4,000 to $5,000 per statement. We hope that these figures will provide some rough parameters for figuring EIS costs in the State of Minnesota.

The estimated budgets for implementation of the MEPA program presented in this report are presented below in summary fashion for each governmental level which would be involved in that program. (Appendix B)

State Agencies

Agency	Man-Years (per year)	Fiscal 76	Fiscal 77	Biennium
Environmental Quality Council/ State Planning Agency	13.5 12.5	$291,048	$262,960	$554,008
Department of Natural Resources	14.0	$228,500	$228,500	$457,000
Pollution Control Agency	7.0	$119,063	$119,063	$238,126
Department of Agriculture	2.25	$ 40,469	$ 40,469	$ 80,938
Department of Health	2.0	$ 37,738	$ 37,738	$ 75,476
Energy Agency (including Power Plant Siting)	4.0	$ 70,775	$ 70,775	$141,550
Department of Economig Development	0.75	$ 14,256	$ 14,256	$ 28,512
Department of Highways	2.5	$ 42,313	$ 42,313	$ 84,626
Governor's Office	0.75	$ 14,256	$ 14,256	$ 28,512
TOTAL ALL AGENCIES:		$858,418	$830,330	$1,688,748
TOTAL NOT INCLUDING POWER PLANT SITING AND DEPARTMENT OF HIGHWAYS		$761,024	$732,936	$1,493,960

Environmental Management Hearings Board

Man-Years	Fiscal 76	Man-Years	Fiscal 77	Biennium
5.0	$133,550	6.0	$159,675	$293,225

Regional Development Commissions and Metro Council

Organization	Man-Years (per year)	Fiscal 76	Fiscal 77	Biennium
Regional Development Commissions	3.75[1] 6.25[2]	$ 59,943	$ 99,905	$159,848
Metropolitan Council	3.0	$ 50,000	$ 50,000	$100,000
TOTAL REGIONALS		$109,943	$149,905	$259,848

NOTES:

[1]This assumes 1.25 man-years per RDC allocated for Fiscal Year 1975-76. A total of 3 RDCs would be funded. (Appendix B, C)

[2]This assumes 1.25 man-years per RDC allocated for Fiscal Year 1976-77. A total of 5 RDCs, including the three above, would be funded. Only direct staff salary and employee benefits are funded for the RDCs. (Appendix B, C)

Local Governments

It is recommended that the Land Use Planning Grant Program for local governments (a proposed legislative measure to be under consideration for funding in 1975) provides a total of $400,000 for allocation to local governments which implement a MEPA system by local ordinance adoption. The details of this program and the criteria to be used in providing funding to local governments are presented on pages B-19 and B-20 of Appendix B.

Budget Summary, MEPA Implementation, all Governmental Units

Governmental Agency	Fiscal 76	Fiscal 77	Biennium
State Agencies[1]	$762,024	$732,936	$1,493,960
EMHB[2]	$133,550	$159,675	$ 293,225
Regionals	$109,943	$149,905	$ 259,848
Locals[3]	$200,000	$200,000	$ 400,000
TOTAL ALL GOVERNMENTAL UNITS	$1,204,517	$1,242,516	$2,447,033

NOTES:

[1]The total here does not include power plant siting and the Department of Highways budget for MEPA implementation.

[2]EMHB: Environmental Management Hearings Board.

[3]The allocation of $200,000 per year is totally arbitrary. There is no way to know at this time who will be applying for how much money at what point in time. It is expected that all monies will be utilized within the biennium budget period, however.

V. THE EIS PROCESS

A. Procedural Summary and Flow Chart

As argued in the previous section, the fundamental change that is needed immediately with respect to MEPA is the decentralization of the EIS process. There are a great many dangers associated with decentralization, as pointed out in Section III of this report. Among the most serious is potential confusion on the part of state agencies and local governments on just exactly what is being decentralized to whom. Insufficient direction from the state has been a serious problem in other states which have put together decentralized EIS systems. The present section is devoted to a very detailed discussion of the EIS process which we recommend to the State of Minnesota.

Decentralization demands a variety of changes from the EIS process currently in effect and it creates the opportunity for other beneficial changes. Further, there are several substantial modifications of the EIS process which we would strongly recommend whether the process were decentralized or not. The result of these three considerations is a recommended EIS process which varies significantly from the process now in operation. The primary point of the system recommended here is the melding of the EIS process with existing decision making processes, which the EIS process currently in effect does not accomplish.

The following is a step-by-step skeleton summary of the procedures which we recommend for procedural compliance with MEPA in the case of every project proposed by an agency of Minnesota government or proposed for approval to an agency of Minnesota government. (The question of governmental actions which are not projects and which do not directly authorize projects is taken up in sub-section B of the present section and in Section VI of this report.) The flow chart on page 42 portrays graphically the verbal summary that follows.

Procedural Summary

(1) Before the first step in the physical implementation of a project proposed by an agency of Minnesota government, and before any approval by an agency of Minnesota government of a private project or a project proposed by a governmental agency that is not a political subdivision of the State of Minnesota, the Minnesota public official responsible for project implementation or project approval must determine whether or not the project in question is exempted from the environmental impact statement requirement of MEPA.

(2) If the project is not exempted, the agency designated "the responsible agency" under MEPA must assess the project to determine whether or not it has the potential to result in significant environmental effects. (If it does not have such potential, a Negative Declaration must be filed and inter-agency notification given as appropriate. Public notification triggering a statute of limitations on appeal is optional.)

(3) If the project has the potential to result in significant environmental effects, a Positive Declaration is to be filed and inter-agency notification given as appropriate. (Public notification triggering a statute of limitations on appeal is optional.)

(4) After filing and giving notification of filing of a Positive Declaration, a draft environmental impact statement must be prepared.

(5) Upon completion of the draft environmental impact statement, it must be circulated for review and its availability must be widely publicized.

(6) At the end of the period for review of the draft environmental impact statement, the responsible agency must prepare a final environmental impact statement.

(7) Upon completion of the final environmental impact statement, a public notice is to be given of its availability, triggering a statute of limitations on appeal, and the statement is to accompany the project proposal through the existing agency review processes.

(8) Using the information contained in the environmental impact statement and balancing the environmental effects of the proposed project with all other considerations relating to that project, public agencies required to approve or disapprove the action in question will make their decisions.

(9) The project proposer, any public agency, and/or any private citizen in the area to be affected by the proposed project may appeal the decisions made and/or the actions taken under the EIS process on grounds of noncompliance with MEPA. Appeals must be made to the Environmental Management Hearings Board within sixty days of public notification of the availability of the final EIS.[1]

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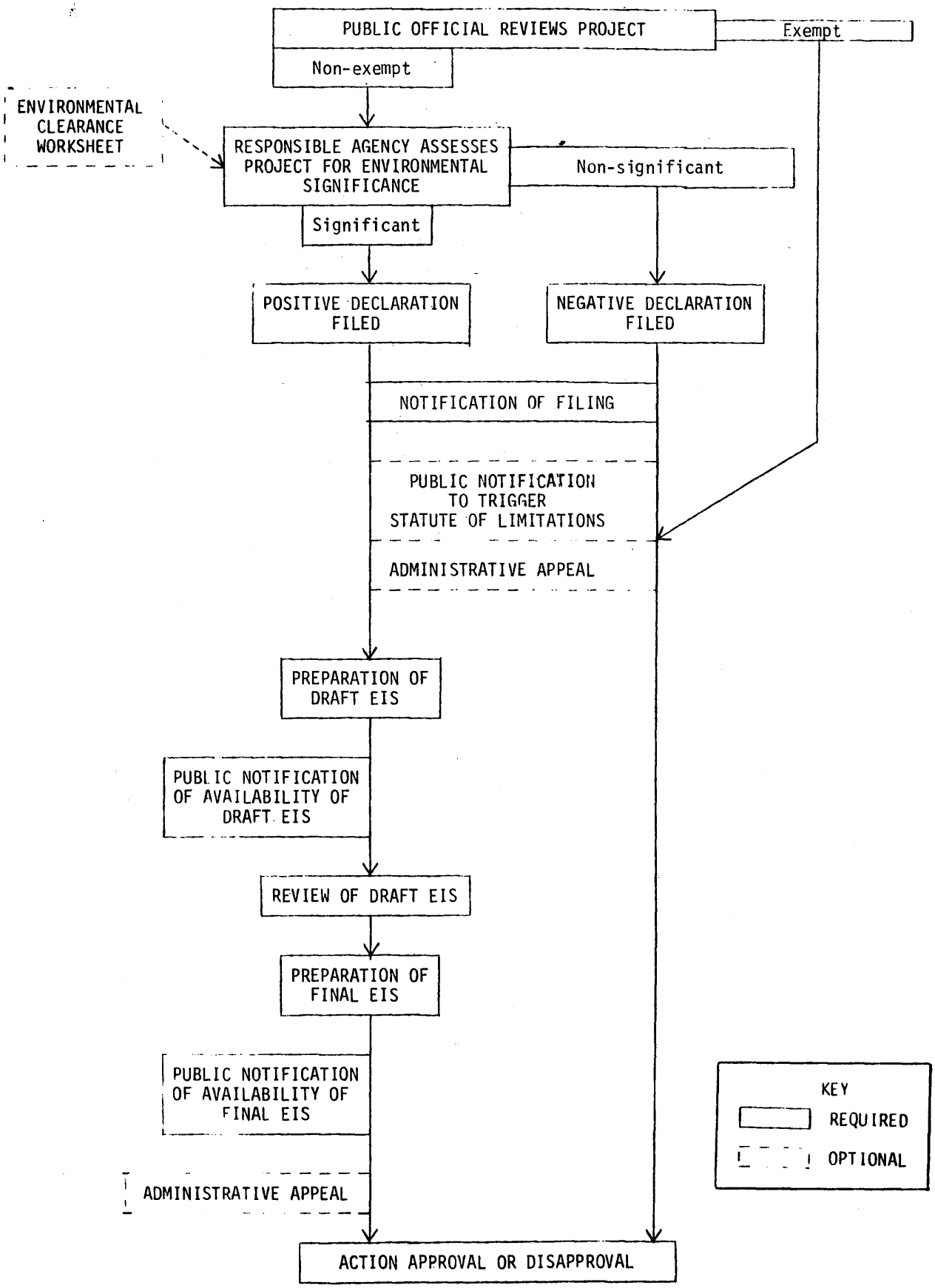
[1]See Appendices F and G to the present report for different summary perspectives on the process to be described in detail in the present section. Appendix F presents a detailed example of processing a project proposal through the EIS system recommended here. Appendix G offers three examples of implementation of the recommended system on the local government level.

THE EIS PROCESS



B. Triggering the EIS Process

There are a great many different kinds of governmental activities which might be subject to the EIS process, including: government-proposed projects; governmental approval pertaining to applications submitted by private parties including authorizations for land use and land use changes; the adoption of budgets; the adoption of rules and regulations and local ordinances and resolutions; legislative proposals; the establishment of special purpose governments and rates and tariffs; the adoption of plans and programs; sales, leases and rentals of public property; and leases, rentals and purchases of property for public use or control.

In terms of an EIS process all such activities break down nicely into two fairly distinguishable classes: (1) those which themselves constitute manipulation of the environment (like construction, demolition, and the clearing of land) or governmental approval of private manipulation of the environment; and (2) those which do not. For purposes of discussion here we will speak of the activities in the first class as "projects" or "governmental approval pertaining to private projects" and activities in the second class as "non-project actions".

Ever since the passage of the National Environmental Policy Act in 1969, non-project actions have been a thorn in the side of those attempting to put together and work with an EIS process, both under NEPA and under several state environmental policy acts. The ideal of processing non-project actions under an EIS system is a good one, but the sum total of five years of experience in trying to do it is a widespread frustration. On the one hand, while the EIS process can be designed to fit well with the existing processes relating to projects, it does not dovetail well with the existing processes relating to non-project actions (e.g., the legislative process). And on the other hand, when an EIS is required on a non-project action, the agency responsible for EIS preparation is rarely able to produce a document with any substance to it. The reason for this simple fact is obvious: projects constitute manipulation of a usually well-defined site[1] and their environmental effects are specifically identifiable; but non-project actions generally affect relatively broad geographic areas, and if they affect the environment, they do so indirectly. The environmental effects of non-project actions are rarely identifiable in the specific detail attainable in the case of projects. EISs prepared on non-project actions are almost always vague projections of the general effects of the action proposal, and they are rarely useful as public disclosure documents or in decision making.

There is another interesting feature of non-project actions that is well worth noting. Any kind of action which affects the environment at all is,

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[1]There are some projects for which the site is not very well defined (e.g., cloud seeding). In addition, there are project proposals for which the site alternatives may be included in the early stages of project approval (e.g., highway siting). Further, it could be argued that many non-project actions affect a definite, bounded "site" (e.g., municipal ordinances). For all these reasons, we suggest that site-specificity should not be seen as a defining characteristic of projects.

somewhere along the line, going to have to affect the environment directly. At some point it will have to result in something which actually constitutes manipulation of the environment, or in other words, it will have to result in a project. A couple of examples might be helpful here. The Department of Highways includes in its budget proposal for the next biennium X million dollars for new highway construction. Now it is obvious that this budget item would result in a significant effect on the environment and that some environmental monitoring is needed. But there is no way that anything interesting can be said about the environmental effects of X million dollars worth of new highway construction unless it is clear where new highway is going to be built, etc.; that is, until it is clear what specific highway projects are in the offing. Further, if each such highway project is monitored for its environmental effects, adequate attention will have been given to the whole X million dollar budget figure piecemeal. As a second example, consider the proposed adoption of a county zoning ordinance. The kind of thing that can be said about the environmental effects of the adoption of a zoning ordinance is fairly obvious. For example, if a forested area is zoned for industrial use, it may be assumed that it is intended that most of the trees will go. Of course, it cannot be determined just what the area will look like after industrial construction since no specific project has been proposed. And then, too, a rezone may be granted. There is very little of interest that an EIS could add to the proposal of the ordinance itself. What will be of interest is the environmental impact of specific projects proposed for the land as zoned and specific proposals for rezones for specific uses. In brief, if specific project proposals undergo examination through the EIS process, non-project actions should receive an environmental scrutiny in the end that it is impossible to provide at the time of their proposal.

One further point is worth making here. Requiring environmental impact statements on non-project actions tends to be a negative incentive to undertaking such actions. Most notably, local governments contemplating the construction and adoption of comprehensive plans will be discouraged from such planning if they know they will have to do an impact statement on the plan as well as the plan itself. General programs for phased development would be similarly discouraged. If an impact statement process is necessary because of inadequate environmental planning in the first place, the last thing such a process should accomplish is the discouragement of planning.

To sum up the discussion to this point, applying the impact statement process to non-project actions: (1) is extraordinarily difficult to achieve as a neat melding with existing non-project action processes (and in some cases, it simply cannot be done); (2) results in EISs which only very rarely contribute substantive information useful in evaluating the action; (3) results in redundant coverage (at best) of the environmental impact of the proposed action, since that impact is covered (more thoroughly) with respect to the projects proposed to implement the action; and (4) tends to discourage general planning and the programming of phased development.

For all these reasons, we strongly recommend to the State of Minnesota that the state EIS process be applied only in the case of projects. More

specifically, we recommend that the EIS process (to be described) be triggered only in the case of: (1) the proposal of projects (individually or severally) by an agency of Minnesota government; and (2) the proposal of projects (individually or severally) for approval to an agency of Minnesota government by a private group or individual or by an agency of government which is not a political subdivision of Minnesota. 'Approval' should be defined as "the decision by a public body which commits that body to a definite course of action with respect to a proposal on which it is required to act." In connection with private projects and projects proposed by an agency of government which is not a political subdivision of Minnesota, approval occurs upon the earliest commitment to issue or the issuance by the public body of a discretionary contract, grant, subsidy, loan or other form of financial assistance, lease, sale[1], permit, license, certificate, or other entitlement for use of the project. Approval would specifically include authorizations for land use and land use changes (e.g., rezones and subdivision approval). We recommend that the EIS be required to run its full course before the beginning of the physical implementation of a project proposed by an agency of Minnesota government or before any approval[2] of a private project or a project proposed by an agency of government which is not a political subdivision of Minnesota.

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[1]Such things as leases and sales sometimes do and sometimes do not constitute authorization for specific uses of the property in question. When they do not, they can be exempted from the EIS requirement (see sub-section C of this section), but they should be included in the triggering of the EIS process initially.

[2]It is important that the EIS process be required to run its course only before project approvals, as opposed to final decisions on proposed projects. Minn. Stat. Section 116D.04, subdivision 1 (Supp. 1973) might be said to be ambiguous on this point, but Minn. Stat. Section 116D.04, subdivision 4 (Supp. 1973) currently reads as follows with respect to actions on which an EIS is required: "The final detailed environmental impact statement and the comments received thereon shall precede final decisions on the proposed action and shall accompany the proposal through an administrative review process." The upshot of this requirement is that the EIS process must run its course before project disapproval as well as before project approval. The State of Washington has a similar clause in its environmental policy act, and experience has shown it to be a serious mistake. There are many proposed projects which will not be approved regardless of analysis of their environmental consequences. Some are simply poorly designed and thought out. Others do not fit well with a local comprehensive plan. Others do not meet permit requirements. There are hundreds of reasons for project disapproval unrelated to the EIS process. To require that the EIS process run its course before either approval or disapproval results in the horrendous phenomenon of having to require an EIS (if the project is significant environmentally) before a project proposal can be disapproved, even though the EIS will be irrelevant to the decision made. Notification of impending disapproval to a private project proposer whose project requires an EIS is more than tricky legally. The problem is more than academic. Responsible agencies in the State of Washington feel themselves caught in a serious squeeze on this issue. It might be argued that an EIS should be written on projects which appear to be unapprovable, since they may identify beneficial

It might be suggested that restricting the EIS process to projects is getting the cart before the horse. For example, if the Department of Highways asks for X million dollars in their budget proposal for new highway construction and no heed is paid to the environmental impact of such construction, and if it is later found that no individual project expending those funds is environmentally acceptable, then the Legislature will have allocated X million dollars of unexpended funds--a detailed environmental analysis at the time of the budget request could have prevented tying up usable funds. The response, of course, is that restricting the applicability of the EIS process to projects need not mean that that is the only point where environmental considerations should be taken into account. Those who are in the position of approving programs or budgets or legislation would be forced into the position of anticipating the effect of the EIS process on the individual projects coming under those programs, budgets, or legislation, to whatever degree and in whatever way they could. This would mean more by way of coordination and less by way of formal EIS system.

The point is not that environmental analysis (detailed, where possible) should not be undertaken with respect to non-project actions, but rather that the EIS process is not the right kind of tool to use for non-project actions. A simpler, more flexible tool is needed here. Our recommendation for the handling of non-project actions constitutes Section VI of the present report.

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impacts of the project which would help its case. But one may rest assured that a project proposer will be careful to present such beneficial environmental effects whether or not there is an EIS process.

C. Exemptions

(1) A Comprehensive Set of Exemptions Applicable Statewide

A variety of actions (including projects) are currently effectively exempted from the EIS requirement of MEPA. (See Minn. Reg. MEQC 21, subsection (b), and MEQC 26, subsection (c).) Much more importantly, through November 12, 1974, only 81 cases had been brought before the EQC under the EIS process and almost every other project proposed in the state during the period of the EQC's operation went completely untouched by MEPA's strong policy declarations. We believe this very tight focus to have been a practical administrative necessity under the strongly centralized EIS program operated under MEPA to date, but, as argued previously, we do not believe that such selective attention fully implements the potentialities of MEPA.

Ideally, every project should receive some environmental analysis as an input into the decision making process relating to it. But practically speaking, it would be impossible administratively to examine every project on which some governmental action is necessary. Further, a great many projects can be identified by class which will predictably have no significant environmental effects unless they are proposed to occur in a particularly sensitive environment. The administrative management of a decentralized EIS process demands the immediate exclusion of all such projects from any case by case environmental analysis under MEPA. We estimate from our experiences in the State of Washington that roughly 90% of all project proposals can be exempted from environmental analysis without serious risk of unevaluated environmental damage.

We strongly recommend that the EQC adopt rules and regulations providing a comprehensive set of exemptions to the EIS requirement of MEPA that are applicable statewide. The exemptions eventually proposed for adoption should be submitted to the scrutiny of all interested public bodies and private citizens before and during the processes which lead to the adoption of rules and regulations. Recognizing fully the need for broad, in-depth, detailed discussion, we recommend the following exemption system as a starting point for the EQC:

> Any project which belongs to any of the following classes of projects is exempted from the detailed statement requirement of Minn. Stat. Section 116D.04, subdivision 1; Provided, That no action belonging to any of classes 4 through 12 is so exempted if it is to occur in an environmentally sensitive area[1]:

Class 1: Emergency Projects. Projects undertaken as immediately necessary to prevent or mitigate the effects of an emergency as proclaimed by the Governor and/or the State Legislature and/or the Environmental Quality Council and/or locally elected (city or county) officials.[2]

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[1] A discussion of the "environmentally sensitive area" rider follows below.

[2] See sub-section (3) below for procedural requirements in the case of emergency exemptions.

Class 2: Actions for Which an EIS Is Prepared under NEPA. Actions for which an environmental impact statement is prepared pursuant to the National Environmental Policy Act of 1969.[1]

Class 3: Substantially Completed Projects. Projects

(a) which are completed before January 1, 1974;

(b) which are substantially completed or implemented such that an EIS would not be able to influence remaining implementation or construction to minimize adverse environmental consequences;

(c) the physical manipulation of the sites of which is commenced before January 1, 1974; or

(d) for which the proposer has received all necessary governmental approvals before January 1, 1974, and commences construction or implementation before January 1, 1975.

Class 4: Existing Facilities. The operation, repair, maintenance or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that previously existing, including but not limited to:

(a) Interior or exterior alterations involving such things as interior partitions, plumbing, and electrical conveyances.

(b) Alterations involving existing facilities of both investor and publicly owned utilities used to convey or distribute electric power, natural gas, sewage, etc.

(c) Resurfacing or maintenance of existing highways or streets (within already established rights-of-way), sidewalks, pathways, gutters, shoulders, bicycle and pedestrian trails, and similar facilities, provided that in the case of highways and streets such resurfacing will not result in the addition of a new lane or the removal of as much as 50% of existing vegetation.

(d) Restoration or rehabilitation of deteriorated or damaged structures, facilities or mechanical equipment to meet current standards of public health and safety, unless it is determined that the damage was substantial.

(e) Additions to existing structures provided that such additions will not result in either an increase of more than 50% of the floor area of the structure before the addition or alteration, or 2500 square feet, whichever is less.

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[1] See sub-section (3) below for procedural requirements in the case of projects for which an EIS is prepared under NEPA.

(f) Addition of safety or health protection devices for use during construction of or in conjunction with existing structures, facilities or mechanical equipment, or topographical features (including navigational devices).

(g) New copy on existing on- and off-premise signs.

(h) Maintenance of existing landscaping, native growth and water supply reservoirs (excluding the use of poisons).

(i) Maintenance of fish screens, fish ladders, wildlife habitat areas, artificial wildlife waterway devices, streamflows, springs and waterholes, and stream channels (clearing of debris) to protect fish and wildlife resources.

(j) Fish stocking.

(k) Demolition and removal of buildings and related structures except where they are of historical, archaeological or architectural consequence as officially designated by federal, state or local governmental action.

(l) Roofing.

(m) Exterior painting.

(n) Window modification.

(o) Replacement or construction of guard rails.

(p) Installation, maintenance, or alterations of air conditioning and heating systems.

Class 5: Construction and Modification of Small Structures. Construction and location of single, new facilities or structures and installation of new equipment and facilities, including but not limited to:

(a) Individual single-family residences.

(b) Motels, apartments, and duplexes designed for not more than four dwelling units.

(c) Stores, offices, and restaurants if designed for an occupant load of one hundred persons or less.

(d) Utility extensions as follows:

(i) Water service mains of five hundred feet or less and one and one-half inch diameter or less.

(ii) Sewer lines of five hundred feet or less and six inch diameter or less.

(iii) Electrical service lines of five hundred feet or less and two hundred forty volts or less.

(iv) Gas service mains of five hundred feet or less and one inch diameter or less.

(v) Telephone service lines of five hundred feet or less.

(e) Accessory (appurtenant) structures including garages, carports, patios, swimming pools and fences.

(f) Barns or similar agricultural structures, excluding feedlots.

(g) Grading or filling of seven hundred fifty cubic yards or less.

(h) Local bus stops and shelters, transit signs and traffic control devices.

Class 6: Minor Alterations to Land. Minor public or private alterations in the condition of land, water and/or vegetation, including but not limited to:

(a) New gardening or landscaping.

(b) Minor alterations in land, water and vegetation on existing officially designated wildlife management areas of fish production facilities which result in improvement of habitat for fish and wildlife resources or greater fish production.

(c) Minor temporary uses of land having negligible or no permanent effects on the environment, including such things as carnivals and sales of Christmas trees.

(d) Variances based on special circumstances applicable to subject property such as size, slope, topography, location or surroundings and not resulting in any change in land use or density.

(e) Filling of earth into previously excavated land with materials compatible with the natural features of the site.

Class 7: Alterations in Land Use Limitations. Minor alterations in land use limitations including but not limited to:

(a) Minor lot line adjustments, side yard and set back variances not resulting in the creation of any new parcel or in any change in land use or density.

(b) Issuance of minor encroachment permits.

Class 8: Information Collection. Basic data collection, training programs, research, experimental management and resource evaluation activities which

do not result in an extensive or permanent disturbance to an environmental resource. These may be for strictly information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted, or funded, provided that the study does not constitute a substantial commitment to any further course of action.

Class 9: Inspections and Enforcement. Inspection activities to check for the performance, quality, health or safety of an operation and enforcement actions taken to obtain conformance with local and state law.

Class 10: Accessory Structures. Construction or placement of minor structures accessory to (appurtenant to) existing commercial, industrial, or institutional facilities, including accessory signs which are not regulated by any agency of the State of Minnesota, traffic signals, lighting structures, and governmentally installed directional signs.

Class 11: Changes in Projects. Variations of proposed projects such that the implementation of said variations will not significantly alter the environmental impact of the project as originally presented.

Class 12: Sales, Leases or Rentals of Property. Sales, leases, or rentals of government property and rentals, leases or purchases of property for government use, provided that such transactions do not constitute authorization for any specific use of said property.

The "environmentally sensitive area" rider to the above exemption system is extremely important. It is unfortunate that this provision is needed since it adds a second, possibly complex step to the exemption process. But without such a qualification, it would be difficult to justify the exemption of any class of actions except classes 1, 2, and 3 since there is always the possibility that a minute change in an area of delicate environmental balance will have momentous impact on the environment in question.

We recommend that 'environmentally sensitive area' be defined as any area which:

> (a) contains threats to the environment arising from earth slides or other geologic hazards, avalanches, or flooding from a flood of a frequency expected to recur on the average of once every one hundred years or a flood magnitude which has a one percent chance of occurring in any given year;
>
> (b) contains any special natural values such as a marshland or other wetland or habitation place of substantial concentrations of flora or fauna or of rare or endangered species of flora or fauna;
>
> (c) is being given special attention because of a problem of critically low or declining resource supply or quality; or
>
> (d) contains elements having significant aesthetic, recreational, historic, prehistoric, or archaeological value.

It is important to recognize that having to check every apparently exemptable action against a definition of 'environmentally sensitive area' before exempting it is an awkward procedure at best. Any definition of this key term will be imprecise in terms of geographic coverage until a study is undertaken to map out the geographic areas to which the definition refers[1] We strongly recommend that such study be undertaken throughout the state. In view of the planning support role intended for the state's regional development commissions, we believe that this task should (ideally) be given to the RDCs and recommend that those RDCs currently equipped or to be equipped in the near future to undertake such mapping be delegated the responsibility. Several of the newer RDCs cannot be expected to gear up quickly for the mapping of environmentally sensitive areas, however, and in these cases the responsibility should be given to the cities and counties of the regions with such (hopefully increasing) assistance as can be provided by the RDCs. The geographic identification of environmentally sensitive areas is of importance not only for facilitating the exemption process, but more significantly, it should be given high priority in terms of long-range planning. MEPA is a comprehensive environmental management statute, and the geographic identification of environmentally sensitive areas will serve to isolate those areas deserving of special environmental attention in terms of land use planning.

A primary requirement of the success of an exemption system is obviously its modification over time. It is almost inconceivable that a set of exemption classes established to launch an exemption system will successfully capture all and only those types of actions which, it is safe to say, will never have a significant environmental effect. Some of the actions exempted by the initial system may turn out to affect the environment significantly and may thus bring about the need for the deletion of an exemption class or the refinement of the terminology of a class delineation. Further, there will undoubtedly be a variety of insignificant action types which do not really fit into any of the classes as initially presented, bringing about the need for additional exemption classes or the refinement of the terminology of class delineations. Watching the system in operation and monitoring the actual environmental effects of actions undertaken will provide considerable information on the likelihood of specific action types having significant environmental effects which is not presently available. For all these reasons it is extremely important for the success of the exemption system that the exemption classes be fairly easily amendable.

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[1] Indeed, the State of California apparently felt so strongly about this issue that written into the California Guidelines for implementation of the California Environmental Quality Act is the following exemption rider: "Class-[es] 3, 4, 5, and [10] are qualified by considerations of where the project is to be located--a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, these classes are considered to apply in all instances, EXCEPT where the project may impact on an environmental resource, or hazard of critical concern as may be hereafter designated, precisely mapped, and officially adopted pursuant to the law." (Emphasis added) We feel that a definition will suffice as an interim measure pending subsequent geographic designations.

(2) Exemptions Applicable to Specific Agencies and Local Governments

While a great many individual projects may be exempted statewide, thereby avoiding the necessity for environmental evaluation of many projects clearly environmentally non-significant, we strongly recommend a second kind of exemption system as well.

The main problem to be encountered in attempting to construct exemptions applicable statewide is that there are a great many projects which are almost exemptable, but not quite. It may be, for example, that only a few projects of a given project type by one or two state agencies are likely to be of environmental significance, while all other projects of that type are clearly without such significance. It is tempting, in such cases, to exempt the entire class of projects statewide, yet it cannot be done in good environmental conscience. More directly to the point, the problem here is one aspect of an overriding problem encountered throughout the present study: how can a MEPA system be constructed which will provide a streamlined, consistent, and rigorous implementation of MEPA and which will, at the same time, be responsive to the extreme variation in state agency and local governmental structure, sophistication, and jurisdictional environment? In short, it will undoubtedly be the case that many kinds of actions can quite appropriately be exempted for a given state agency or local jurisdiction which cannot be exempted statewide.

In sub-section A of Section IV a certification process was recommended whereby ordinances implementing MEPA on the local (city and county) level, and any rules and regulations relating to MEPA to be adopted by state agencies, would be certified by the EQC. It is anticipated that the most controversial aspect of the certification of local ordinances and state agency regulations will be the exemptions proposed for adoption. For this reason, public bodies seeking certification of proposed systems might find it advantageous to propose exemptions separate from the rest of their ordinances and guidelines. Public bodies proposing no exemptions additional to those adopted by the EQC and public bodies whose exemption proposals remain uncertified, would, of course, still be able to use the exemptions adopted by the EQC, which would be applicable to all jurisdictions in the State of Minnesota.

(3) The Exemption Process

The exemption process is most easily explained with respect to private projects.[1] As some point in the planning process for almost every private project, the project proposer will make contact with some public agency for some kind of project approval. The public official handling the project proposal in question would check the list of statewide exemptions (and the list of state agency or local government exemptions, if appropriate) to see if the

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[1]The process to be described applies to projects proposed by public agencies as well. It is not quite so clearcut, however, for the reason that in the case of many public actions, it is not so obvious who is in a position to approve the proposed project. But for public projects, at least the agency proposing the project must decide on its exemptability in order to be sure that the project in question does not require an environmental impact statement.

project is exempt from the environmental impact statement requirement of MEPA. If the project belongs to one of the exemption classes, the public official must determine whether or not the project will be located in an environmentally sensitive area. If not, then the project is automatically exempted and need receive no further consideration under MEPA. Each public official in a position to grant approval to a given project should decide on that project's exemptability. Exemption decisions should be relatively unproblematic.

It is recommended that every decision that a project is exempt from further consideration under MEPA be stated in writing in order to provide a public record. The recording should be made as simple as possible, in most cases as a brief addition to forms already used for projects by the exempting agency. If no forms are currently in use, a brief project description would be needed as well.[1] We do not believe that a written record of exemptions should be required statewide, however, because of the massive immediate overhaul in existing forms that this would result in urging. Such recording should be strongly recommended to state agencies and local governments, to be built into existing forms when such forms are revised for other reasons or reprinted.

Special procedural rules are appropriate in the case of projects that are necessary in the case of emergencies (exemption class 1 above). The current Rules and Regulations of the Minnesota Environmental Quality Council (Minn. Reg. MEQC 26, subdivision (c)(5)) provides for procedures to be followed in the case of emergency actions with the potential for significant environmental effects. With some relatively minor modifications, the current procedural requirement can be adjusted to fit the decentralized system recommended here. The revised emergency procedure would read as follows:

> When an emergency as proclaimed by the Governor and/or the State Legislature and/or the EQC and/or locally elected (city or county) officials makes it necessary to undertake or approve a project that has the potential to result in significant environmental effects, the responsible agency shall immediately notify the Chairman of the EQC. As soon as practicable, but not more[2] than 30 days thereafter, the responsible agency shall notify the EQC of the environmental consequences of the project.

As pointed out in Section IV of this report, we believe that, for the sake of avoiding redundancy and eliminating confusion, projects for which an EIS is prepared under NEPA should be exempted from the EIS requirement of MEPA. The only MEPA procedural requirement which we recommend in such cases is that whatever Minnesota agency would be the responsible agency under MEPA be required to notify the EQC, the regional development commission in whose jurisdiction

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[1] See page C-1 of Appendix C to this report for a recommendation on the terminology of the recording of exemptions.

[2] There is an interesting error in the current rules and regulations which read: " . . . the proposer shall, as soon as practicable, but not less than 30 days thereafter . . ." (emphasis added)

the project is proposed to occur, and all other Minnesota agencies (including local governments) which could reasonably be expected to have an interest in the proposed project. Such notification should take place immediately upon the determination that an EIS will be prepared.

We recommend that all exemption declarations be made appealable to the Environmental Management Hearings Board[1], though no project declared exempt due to an emergency should be delayed because of appeal. In any case, public officials should be held liable for abuse of the exemption system.

It must be stated clearly, finally, that the fact that a given project proposal is not exempt does not mean that it must have an environmental impact statement prepared on its behalf. If a project is not exempt it must be evaluated for a determination as to whether or not it has the potential to result in significant environmental effects. There will be many projects which do not have the potential to significantly affect the environment but which cannot be exempted because other projects of the same kind do occasionally affect the environment in a significant way.

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[1]For further detail on the Environmental Management Hearings Board and the appeal of exemption claims, see sub-section A of Section IV and sub-section G of the present section.

D. The Responsible Agency

(1) Designation of the Responsible Agency

The EIS process currently in effect in Minnesota centralizes all authority for deciding whether or not an EIS is required (the "significance decision") in the Environmental Quality Council. If an EIS is required in a given case, the EQC selects a governmental agency to be responsible for the preparation of the document. As stated and argued for in sub-section A of Section IV of this report, we strongly recommend that the responsibility for significance decisions be decentralized to state agencies and local governments, along with the responsibility for EIS preparation. If significance decisions are decentralized, a new mechanism must be provided for designating the responsible agency under the EIS process.

In the case of any public project proposed by an agency of Minnesota government[1], we strongly recommend that the proposing agency be designated the responsible agency under MEPA. The proposing agency would thus be responsible for: (a) making the significance decision on the project; (b) preparing the environmental impact statement on the project if it is determined that an EIS is required; and (c) satisfying the procedural requirements of the EIS process. We believe it to be important that the proposing agency be the responsible agency under MEPA. While choosing a different agency might help to ensure objectivity in decision making, it will inevitably lead to duplication of governmental effort, especially when an EIS is required. The proposing agency will already have a great deal of information on file, in notes, or in the heads of agency personnel with respect to the project in question, and if a different agency is designated the responsible agency under MEPA, it will have to learn everything about the project that the proposing agency already knows. Further, the learning process will add considerably to the time required for the EIS process to run its course. The question of objectivity is not to be taken lightly, but we believe that there are other, better mechanisms available to ensure it. (See especially sub-sections E and G of the present section.)

In the case of multi-jurisdictional public projects (i.e., projects proposed by more than a single agency of Minnesota government), we recommend that (a) one of the proposing agencies be chosen by mutual agreement to act as the responsible agency, or (b) in the event that mutual agreement cannot be reached as in (a), the Environmental Management Hearings Board[2] select one of the pro-

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[1]The phrase 'an agency of Minnesota government' is intended to include state agencies, regional development commissions, counties, municipalities, political townships, special purpose governments, and any other agencies, departments, commissions, boards, or other units which are political subdivisions of the State of Minnesota.

[2]See sub-section G of the present section and sub-section A of Section IV of this report for discussions of the Environmental Management Hearings Board.

posing agencies to act in this capacity.[1] This does not mean that the agency selected as the responsible agency would be left with the entire workload with respect to the project. (See sub-section (2) below.) But we do believe it to be important that a single agency be given exclusive legal responsibility for the requirements of the EIS process. (This is not always feasible, however--see sub-section (3) below.)

In the case of any private project proposed for approval to an agency of Minnesota government by a private party or by an agency of government which is not a political subdivision of the State of Minnesota, the agency of Minnesota government with the responsibility for approving the project should be designated the responsible agency under MEPA. If more than a single agency of Minnesota government is in such a position of responsibility with respect to a private project or a project proposed by a governmental agency that is not a political subdivision of the State of Minnesota, we recommend that some state agency be the responsible agency under MEPA for all projects listed below. If only one state agency has approval authority over one of the projects listed, it would automatically be the responsible agency. If more than a single state agency has such authority, we recommend that (a) one of the agencies with approval responsibility be chosen by mutual agreement among the involved state agencies to act as the responsible agency, or (b) in the event that mutual agreement cannot be reached as in (a), the Environmental Quality Council select one of the involved agencies to act in this capacity.[1,2] In addition, on any private project or project proposed by a governmental agency that is not a political subdivision of the State of Minnesota which requires the approval of a state agency, the state agency involved could request of the other governmental agencies involved (see below) that it assume the role of responsible agency for that project. The project for which some state agency should automatically assume the role of responsible agency (to be called "projects of statewide concern") are:

(a) construction of electric generating plants at a single site designed for, or capable of, operation at a capacity of 200 or more megawatts (electrical);

(b) construction of electric transmission lines and associated facilities designed for, or capable of, operation at a nominal voltage of 200 kilovolts AC or more, or operation at a nominal voltage of $\pm$ 200 kilovolts DC or more, and are 50 miles or more in length;

(c) construction of a new oil refinery, or an expansion of an existing refinery that shall increase capacity by 10,000 barrels per day or more;

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[1]The general rule for the selection of the responsible agency under these circumstances should be that the responsible agency is the agency with the most comprehensive responsibility for the project as a whole. Since this consideration will not always be decisive, other factors including the promptness of attention to the project in question, staff capabilities, and agency overloads may play an important role.

[2]See pages F-2 to F-4 of Appendix F to this report for an example of this selection process at work.

(d) construction of a new metallic mineral processing or metal extraction facility, including, but not limited to, smelting and hydrometallurgical operations;

(e) construction of a new airport that is within the key system, pursuant to Minnesota Statutes, Section 360.305, subdivision 3;

(f) construction of a new paper and pulp processing mill;

(g) construction of an underground storage facility for gases and liquids that requires a permit, pursuant to Minnesota Statutes, Section 84.57;

(h) main roadway grading construction of a four-or-more lane, divided highway with at least partial control of access of ten route miles or more in length and carrying 10,000 vehicles ADT (Average Daily Traffic);

(i) construction of a pipeline greater than eight inches in diameter or 50 miles in length used for the transportation of crude petroleum or petroleum fuels or oil or derivatives thereof, or for the transportation of synthetic or natural gas under pressure;

(j) any new or additional impoundment of water creating a water surface in excesses of 200 acres; and

(k) a project that will eliminate or significantly alter a wetland of Type 3, 4, or 5 (as defined in U.S. Department of Interior, Fish and Wildlife Service, Circular 39, "Wetlands of the U.S., 1956") of five or more acres in the seven-county metropolitan area, or of 50 or more acres outside the seven-county metropolitan area, either singly or in a complex of two or more wetlands.

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[1]Except for point (i) these project types are taken verbatim from the list of categories of actions which currently require an environmental assessment as set forth in the Rules and Regulations of the Minnesota Environmental Quality Council, Minn. Reg. MEQC 25(b)(2). The categories listed there which are not listed here appear to us, with two exceptions, to relate to projects which could more appropriately be monitored on the local government level than by a state agency. The two exceptions are the two categories which deal with timber cutting (Minn. Reg. MEQC 26(b)(2)(uu) and (vv)). While we believe that these two types of projects may well be of statewide concern, there is currently no Minnesota governmental approval authority over the cutting of timber on non-state lands. We do not recommend that the EIS process be designed to apply to private projects for which no approval of an agency of Minnesota government is required. An EIS process is awkward at best if it does not attach to existing approval processes, and the process should not be used as a quasi-permit procedure to catch odd project proposals for which there is currently no approval required. If it is felt that the state should exercise regulatory control over the cutting of timber on non-state lands a permit program should be established giving DNR permit authority. We recommend that parallel action be taken in the case of any other type of project over which the state wants regulatory control.

If a private project or a project proposed by a governmental agency that is not a political subdivision of Minnesota is not among those listed above, and if no state agency with approval authority over the project requests the role of responsible agency, then we recommend that (a) one of the agencies of Minnesota government (excluding state agencies) with approval authority over the project be chosen by mutual agreement to act as the responsible agency, or (b) in the event that mutual agreement cannot be reached as in (a), the Environmental Management Hearings Board select one of the involved agencies (excluding state agencies) to act in this capacity.[1]

In the case of private projects and projects proposed by a governmental agency that is not a political subdivision of Minnesota, we strongly recommend that a special purpose government never be designated the responsible agency unless it is the only agency with approval authority over a given project. We believe that the general responsibility for development activities that are not of statewide concern falls to the counties, municipalities, and political townships (the general purpose governmental agencies) in whose jurisdictions such activities are proposed. Quite generally speaking, special purpose governments have been established for purposes of a less comprehensive nature.

The overall import of the fairly technical recommendation on the designation of the responsible agency that is offered here is that the governmental agency with the most comprehensive responsibility over a project as a whole should be the responsible agency under MEPA. Such designation is one of the most important steps in integrating the environmental analysis mandated by MEPA into the existing decision making processes. One of the greatest benefits to be derived from the EIS process (including the preparation of EISs when they are required) is the learning experience of those charged with the environmental analysis. The governmental agency which most clearly needs to learn about the environmental effects of a proposed project is the agency with the most comprehensive approval authority over that project.

(2) Carrying Out the Practical Responsibilities

Carrying out the practical responsibilities delegated to the responsible agency should be left completely to in-house specification. Whether the official(s) legally responsible for the decisions and actions of the responsible agency chooses to do all the detailed work with respect to a specific project himself or charges his staff with some or all of it will probably depend upon the existing structural delegation of in-house functions. Some agencies already have a person or persons charged with the responsibility to evaluate environmental concerns and/or propose projects or action on private projects for final agency disposition. Such an environmental expert, with the technical expertise of the agency at his disposal, would be best qualified to assume the position of "practical" responsible official for EIS duties for his agency. The delegation of in-house responsibilities is one of the primary things that cannot usefully be spelled out in rules and regulations adopted by the EQC for statewide application. The subject should be addressed in detail

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[1] See footnote 1, page 57.

in individual state agency rules and regulations and in city and county ordinances implementing the EIS process jurisdictionally. It is strongly recommended that for local public projects the responsibilities under the EIS process be delegated to the proposing local agency or department and that a systematic breakdown of responsibilities be specified for local private projects according to the details of the local governmental structures and functions.

Under some circumstances, particularly when an environmental impact statement is required, the responsible agency should not be limited in the carrying out of its duties to the resources of the agency itself. In the case of multi-jurisdictional public projects (i.e., projects proposed by more than a single state agency, city, county, township, and/or special purpose government) or private projects requiring approval from more than one state agency, city, county, and/or township, each involved agency should contribute something to the environmental monitoring required by MEPA. Minimally, each such agency should be required to provide a contact person to work with the responsible agency. More to the point, every agency involved with a given action should make available to the responsible agency whatever special environmental expertise it has available for evaluation of the action's environmental impact.

If an environmental impact statement is required on a project, the responsible agency should be clearly empowered to contract out the preparation of some or all of the preparation of the EIS to another governmental unit or to a private firm. It must be made clear, however, that if this option is exercised, the responsible agency must work sufficiently closely with the contractee to be able to vouch for the accuracy and completeness of the statement or parts of the statement completed under contract. The environmental impact statement should irrevocably be the legal responsibility of the responsible agency, regardless of the source of the information it contains.

Finally, in the case of a private project requiring governmental approval, the responsible agency should be clearly empowered to request from the private project proposer whatever information is at his disposal that might be useful in the making of the decision on the project's environmental significance or in the preparation of an environmental impact statement. The responsible agency should not be allowed to require that the private project proposer undertake substantial new research to aid in the determination of significance or the preparation of an EIS. Private project proposers should be allowed to submit to the responsible agency whatever information relating to the project they choose to submit. (See sub-section V.B for further detail on the preparation of impact statements in the case of private projects.) We emphasize again that the determination of significance and the preparation of an environmental impact statement (if required) should be the responsibility of the responsible agency. That agency must be in a position to vouch for whatever information is produced in response to the mandates of the EIS process, no matter how the information was acquired.

(3) Multiple Responsible Agencies

While the above designation of responsible agency is intended to ensure that there will be one and only one legally responsible agency under MEPA for

every project, thereby providing clear direction and eliminating redundancy in the environmental analysis required by the EIS process, in some special cases a single responsible agency will not be adequate.

A project proposal may change considerably between the time it is originally presented and the time it is implemented, any such change might result in significant changes in the environmental effects of the action in question. Similarly, the environment to be affected by a given project might change in such a way as to significantly change the impact of the project. In either case, a significance decision made at one point in an action's processing might be rendered invalid at a later point in the process, and an environmental impact statement prepared at one time might be rendered inaccurate later. A new analysis is needed, and the EIS process must begin again with the designation of a responsible agency.

To put the matter more technically: if a project is a public project, or if it is a private project which has already been processed by a responsible agency under the EIS process and which requires subsequent approval by a public agency; and if, since its original processing, there has occurred either a change in the environmental conditions to be affected by the project proposed or a change in the project proposal itself, either or both of which will result in an environmental impact significantly different from that projected by the original responsible agency; then a new environmental analysis of the same project proposal must be undertaken. In this case, the responsible agency for the new analysis is to be designated in the same way as the original responsible agency, though the agency so designated might be different from the original responsible agency. If an environmental impact statement was previously prepared, as much of it may be used as is still an accurate statement of the project and its environmental impact.[1] Again, what is needed is not redundant environmental analysis, but rather a supplement to the original analysis reflective of the environmentally significant changes.

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[1]The new EIS should be allowed to consist of a supplement to the previous EIS, if appropriate.

E. The Significance Decision

The fact that a given project proposal is not specifically exempted from the environmental impact statement requirement of Minn. Stat. Section 116D.04, subdivision 1, does not mean that an environmental impact statement is automatically required. However, in every case of a non-exempt project proposal, some attention to the projected environmental effects of the project is necessary for the purpose of determining whether or not the project satisfies the condition(s) under which an EIS is required. The Environmental Quality Council has introduced the tool called an Environmental Assessment for the purpose of providing the information necessary for the making of the determination of whether or not to require an impact statement. But under decentralization, a great many more projects will receive some kind of project-by-project analysis than are currently submitted to such examination and the Environmental Assessment is too much to require in every case. It is essential for the working of a decentralized system that the determination of whether or not to require an EIS be integrated with existing local and state agency decision-making processes.

(1) A Single Criterion for the Requirement of an EIS

MEPA currently requires that

> [w]here there is potential for significant environmental effects resulting from any major governmental action or from any major private action of more than local significance, such action shall be preceded by a detailed statement prepared by the responsible agency or, where no governmental permit is required, by the responsible person . . . [Minn. Stat. Section 116D.04, subdivision 1]

The conditions under which an impact statement is to be required are spelled out clearly in the EQC's rules and regulations implementing the EIS process. An EIS is currently required on a private action if: (a) the action is a major private action; (b) the action is of more than local significance; and (c) the action has the potential for significant environmental effects. An EIS is currently required on a governmental action if: (a) the action is a major governmental action; and (b) the action has the potential for significant environmental effects. (See Minn. Reg. MEQC 26(b)(1).)

It was argued in sub-section B of this section that the EIS process should only be triggered in the case of projects. The term 'major project' could be defined in many ways to provide one of the criteria for the requirement of an impact statement. For example (ignoring for the moment the difference of treatment in MEPA of governmental and private actions), major action status could be determined by the cost of implementation or by the quantity of land directly (and/or indirectly) affected by the number of people directly (and/or indirectly) affected or by the project type or by the degree of environmental effect or by some combination of these and other possible standards. To define 'major project' in terms of the degree (or significance) or environmental effect is a particularly intriguing notion. There is every

reason to argue that any project which significantly affects the environment should be considered a major project under the terms of a law which is expressly billed as an Environmental Policy Act. The clear danger in defining 'major project' completely independently of environmental effects is that there is no reason to expect that a good many projects that happen to be classed as minor will not significantly affect the environment unless (a) it can be shown that the term 'major project' thus defined just happens to pick out roughly the class of projects which significantly affect the environment (i.e., there is a rough extensional equivalence), or (b) most projects are classed as major projects. Providing a relatively selective definition of 'major project' independent of environmental effects cannot provide for the systematic protection and enhancement of the environment that MEPA mandates--it would in fact turn MEPA into a Major Project Policy Act.

The experience of the EQC over the past year shows that the danger of conceiving of the definition of 'major project' as independent of the environmental effects of a project is a genuine problem. Occasionally the Council has dealt with a project which it believed had the potential to result in significant environmental effects, but on which the Council members did not require an EIS because the project was not "major". There is something peculiarly absurd about an Environmental Quality Council determining in its operation under an Environmental Policy Act that a project is likely to result in significant environmental effects and then dismissing the case because the project is not a "major" project. We strongly recommend that the major or minor status of a proposed project not be used as a criterion for the requirement of an impact statement under MEPA.[1]

A parallel argument could be developed with respect to the current "of more than local significance" criterion used in the case of private projects, though this criterion has more to recommend it. It is difficult to understand, though, why the Legislature would want to provide for careful environmental monitoring of all (major) governmental projects with the potential for significant environmental effects but of only those (major) private projects with the potential for significant environmental effects that are of more than local significance. The environmental effects will be the same whether a project is proposed by a unit of government or by a private party. The Council's experience with respect to this issue has been frustrating, too. Many times a project is brought before the EQC which clearly has the potential to result in significant environmental effects but which must be dismissed because the project is not of more than local significance. We believe that the status of the governmental units (whether local or state) most clearly affected by a project with the potential to result in significant environmental effects should be irrelevant to whether or not an EIS should be prepared. We strongly recommend, particularly on the assumption that an EIS process will be decentralized, that the "of more than local significance" cri-

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[1]The same result could be obtained by defining 'major project' to mean "any project which does not have the potential to result in significant environmental effects", but this definitional move is useless. The system would be much cleaner if the major or minor status of a proposed project simply be dropped as a criterion for the requirement of an EIS.

terion currently used in determining whether or not an EIS is to be required on a private project be dropped.

This would leave the State of Minnesota with a single criterion for the requirement of an impact statement: whether or not the project in question has the potential to result in significant environmental effects.

(2) What Counts as a Significant Environmental Effect?

The significance decision is a turning point in the EIS process, since a decision that a project has the potential for a significant environmental effect triggers the preparation of an environmental impact statement. While this key decision must be based on factual information, it is essentially a judgment on the part of the responsible agency, an estimate as to whether or not the identified impacts of the project in question are significant. For this reason, it is extremely important that the EQC rules and regulations governing decentralization include some guidance on what counts as a significant environmental effect. In fact, the point should be put more strongly: it is critical to the uniform application of MEPA that such guidance be provided. Even more importantly, the norms which guide significance decisions will determine to a large extent the place of environmental protection among other governmental responsibilities. In other words, guidance on significance decisions is a policy matter of the highest order.

Determining the significance of a project's environmental effects is a two-step process: (a) the environmental effects of a project must be identified; and (b) a judgment must be made on whether or not those effects are significant. Each step raises a question that must be answered: (a) what effects of an action are environmental effects?; and (b) what environmental effects count as significant? The answer to the first question can be supplied with relative ease, but the answer to the second, clearly the more crucial of the two, is extremely difficult to provide.

There are many dictionary definitions of the term 'environment', and combining all such definitions makes it extremely difficult to find anything that is not a part of the environment. However comprehensive the intended scope of MEPA, we believe that it was not intended to monitor every kind of effect of every kind of project. We recommend that the term 'environment' in MEPA be defined in the EQC rules and regulations to refer primarily to the physical surroundings of man.[1] More specifically, we recommend the fol-

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[1]We seriously doubt that the provision of such a definition would require specific legislative action. In fact, we believe that this was roughly the intent of the Legislature in passing MEPA. There is considerable support for this interpretation in the present language of MEPA. For example, in Minn. Stat. Section 116D.02 the Legislature recognizes "the profound impact of man's activity on the interrelations of all components of the natural environment, particularly the profound influences of population growth, high density urbanization, industrial expansion, resources exploitation, and new and expanding technological advances . . ." [Emphasis added] The statute here recognizes such things as population growth, urbanization, and industrial expansion as factors which affect the environment rather than as aspects of the environment itself. Thus, it appears to be implied that factors such as economic develop-

lowing definition:

> 'Environment': (1) the physical surroundings of man, both natural and man-made, including land (for example, topography, geomorphology, geology, and soils), water (for example, hydrology, water quality and pollution), air (for example, regional climate, air quality and pollution), non-human biota (flora and fauna), and physical structures (for example, buildings and transportation facilities); (2) human beings as physical entities, including their transportation and relocation; and (3) factors of special human significance, including noise, aesthetics, historic sites, and recreational opportunities.[1]

Every set of guidelines for a MEPA-like law (including state laws and NEPA itself) includes a series of considerations to be used as guides for the making of significance decisions. Such considerations can be of some value, and we recommend the adoption in the rules and regulations of a set of considerations very similar to those to be found elsewhere. The main difference is that we feel that the considerations offered below serve better than most to break down the environment into the categories which are included under the term 'environment' as we are recommending it to be defined under MEPA.

(a) Would the project result in any substantial changes in topography or ground surface features?

(b) Would the project result in any major changes in geological substructure or instability conditions, or would geological instability result in questionable solidity of the proposed construction?

(c) Would the projectresult in any notable disruptions, displacements or over-covering of the soils, or grossly interfere with soil-forming processes; or would soil conditions result in questionably solidity of the proposed construction?

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ment must be considered under MEPA to the extent that they influence the natural environment. But it does not appear that projects must have environmental impact statements prepared on their behalf merely because they influence such things as economic development. This interpretation is supported by Minn. Stat. Section 116D.04, subdivision 1, which requires that environmental impact statements must address "[a]ny direct or indirect adverse environmental, economic, and employment effects that cannot be avoided should the proposal be implemented." [Emphasis added] There is here a clear separation of environmental from economic and employment effects.

[1] To be excluded from this definition are psychological, economic, social, and political factors not specifically included. This is not to say that such factors should not be dealt with in an EIS. An EIS would be required on projects with the potential for significant environmental effects (where 'environment' is defined as above). When an EIS is required, it should be required that the document include some analysis of certain non-"environmental" aspects of the project, in order to facilitate the balancing process leading to decision making. See sub-section F of this section for specific recommendations.

(d) Would the project require a large portion of the local or regional water supply or alter or displace any surface or ground water or substantially affect natural drainage characteristics?

(e) Would the project result in any noticeable worsening of the surface or ground water quality or in a substantial emission or discharge of water pollutants?

(f) Would the project result in any large amounts of waste heat or water vapor or interfere with the ability of sunlight to reach the earth's surface?

(g) Would the project cause ambient air quality to become noticeably worse or result in a substantial emission or discharge of air pollutants?

(h) Would the project produce objectionable noise levels?

(i) Would the project result in extensive destruction or displacement of plant life or gross intrusion into vegetation communities?

(j) Would the project cause displacement or death of large numbers of animals (including man)?

(k) Would the action affect any rare or endangered species of plants or animals?

(l) Would the project bring about radical changes in the present land use patterns?

(m) Would the project cause the relocation or affect the movement of any sizable numbers of the human population?

(n) Would the project seriously affect existing transportation systems or add to major traffic congestion problems?

(o) Would the project require noticeable extension or expansion of any utilities or public services?

(p) Would the project disturb, destroy, or interfere with historic, prehistoric, archaeological, or recreational sites?

(q) Would the project have any substantial aesthetic effect?

(r) Would the project require the commitment of large amounts of irreplaceable resources or the use of substantial amounts of energy?

We believe that the eighteen considerations offered above respond fairly well to the question: what effects of a project are environmental effects? But it must be noted that they do not respond at all well to the question: what environmental effects count as significant? It is simply not helpful to say that a significant effect is a substantial change or a major change or a notable disruption, etc. What is really needed is a translation of the language of judgment (significance) into the language of fact (the production of x pounds of particulates per day).

Unfortunately, any direct translation is out of the question, due to the complex variation in environmental conditions impacted and man's relation to those conditions. A given environmental impact under one set of circumstances might have much more serious secondary effects than the same impact under a different set of circumstances.

The EQC is presently operating without clearcut criteria for what counts as a significant environmental effect. It is determining the significance of impact on a case by case basis, attempting to establish adequate precedent to judge future cases. Defining significant environmental effect through consolidated case precedent would be an efficacious approach if the issues could be controlled. But recent activities by the Council indicate clearly that it has very little if any control over the kinds of decisions it must make. Further, those issues that do appear before the Council are clouded by public and political pressures due to the controversiality of the projects involved. What is needed is a method for establishing significance criteria in a relatively short time, with the flexibility of case precedent, and without the emotional involvement currently experienced. We believe that we have constructed a methodology which fulfills these needs and which would provide useful guidance on environmental significance to potential decision makers. We strongly recommend a scenario method of providing significance criteria.

The scenario technique is actually a controlled method of case precedent setting. Instead of assessing real life cases, the EQC would judge the environmental significance of hypothetical cases and situations. Using contrived examples, the circumstances can be manipulated in such a way that specific issues and problems can be identified and their significance assessed. This can be done without the wasteful and confusing influence of controversiality. Rational, well thought out decisions can be made in perhaps twenty percent of the time currently spent making determinations of significance on real cases. The necessary precedent could be established relatively quickly and future cases would be far easier to handle.

We envision a case book put out as guidelines by the EQC, perhaps a looseleaf type notebook that can be expanded and modified as new scenarios reflecting policy changes, updated information, or new trends in development activities are added. As cases are brought before responsible agencies in the State of Minnesota, comparisons could be made between them and similar cases in the scenario notebook. Based on that comparison, the potential environmental significance of the project could be determined. The potential for discussion would still exist but its scope would be limited to a manageable level.

In order to produce a process for establishing significance criteria, the characteristics that influence environmental significance must be assessed. There are essentially three factors that determine the significance of environmental impacts: (a) the nature of the project's impacts; (b) the size or magnitude of the project's impacts; and (c) the location or site characteristics where the project will take place. Two complementary organizational approaches to the construction of a scenario notebook should be developed to ensure that all three factors are covered.

The primary organizational framework should cover the site factors through the provision of short location descriptions. These descriptions, perhaps a paragraph or two long but no more than a half page of text, set the stage for the case proposals that follow. Only a few location descriptions should be needed, perhaps six to ten, that generalize the environments of the state but also provide an adequate representation of specifics. Caution must be exercised to avoid becoming too specific in both the location descriptions and the hypothetical cases that follow. Too much detail and excessive text would make this technique very difficult to apply usefully.

Appendix D to this report contains a scenario test set in which four location descriptions present general environmental situations. These four locations include: (a) an environmentally sensitive natural location; (b) a rural/agricultural area; (c) a suburban environment; and (d) an urban location. There was no attempt to evaluate the importance to the state of environmental types. The location descriptions found in Appendix D are only intended to demonstrate the use of this method. By providing a fictitious map along with the location text, the detail of spatial organization can be provided without excessive verbiage. The location descriptions that appear in Appendix D are narrowed in scope to meet the needs of the scenario test set. Most of the descriptive text deals with the area's water resources. In the actual location descriptions that should become part of the scenario notebook for significance criteria, the other environmental conditions should be described briefly in the text as well.

The secondary organizational framework should deal with various kinds of environmental impacts. This is quite different from organization by type of project although projects must be introduced to produce impacts. A project oriented framework might be easier to handle administratively than the proposed impact-centered approach. Comparison to similar identified project types would be quite a simple matter. Identification and comparison to similar types of environmental impacts would be slightly more difficult since this would be one step further in the environmental evaluation process than potential project proposals. But since it is the significance of <u>environmental impacts</u> that is to be determined, an impact oriented approach is really the only adequate approach to significance criteria.

Further, there are two important administrative advantages to offset the initial administrative inconvenience. First, since a wide variety of different project types can produce similar environmental impacts, fewer scenarios would be needed to cover all bases. Initial time and money expenditures would be substantially reduced. Second, project proposers will gradually begin to think in terms of the potential impacts of their proposals since they will be forced to identify the environmental effects for the review process. This should encourage a trend toward environmentally sound planning and aid in the establishment of a general environmental consciousness in developers, government bodies, and citizens alike.

We have developed a preliminary environmental impact framework consisting of eight categories of physical impacts. This list should be ex-

panded as necessary to ensure that all potential environmental effects are included. The preliminary impact framework developed by the consultant includes: (a) impacts on the atmosphere; (b) impacts on water systems; (c) impacts on the land; (d) impacts resulting from excessive noise; (e) impacts resulting from the production and disposal of solid waste; (f) the removal and consumption of major irretrievable resources; (g) impacts on vegetation; (h) impacts on wildlife; (i) impacts on physical structures (e.g., building and transportation facilities); (j) impacts on people as physical entities (e.g., population growth and relocation of human beings); (k) impacts on recreational, historic, prehistoric, and archaeological features; and (l) aesthetic impacts.[1]

For each type of impact, a series of hypothetical project proposals is to be prepared reflecting a variety of impact magnitudes. These project proposals would be constructed using the location descriptions already prepared as a frame of reference. Each scenario should be no more than two short paragraphs, possibly one-third of a page of text. They should avoid detailed descriptions, which would be quite restrictive in terms of future comparison possibilities. Perhaps as few as three or four, or as many as ten or more, scenarios will be needed for each kind of impact, depending on the complexity of the impacts and the need for detailed guidance in the decision making involved.

The process of developing the necessary set of scenarios and the prefatory location descriptions would begin to establish detailed state policy regarding the preservation of Minnesota environments. As the scenarios are completed, the larger policy task of determining significance on them must begin. This procedure necessitates a case-by-case judgment on several hundred scenarios by the EQC. This is the critical point in the process, of course, since actual significance thresholds will begin to emerge. The environmental policy established at that time would stand as guidelines for future significance decisions.[2]

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[1] A detailed expansion of points (a) through (h) will be found in our second report to the State of Minnesota, pages 30-34.

[2] A scenario test set was produced in connection with this study during the last week in August and the first week in September of 1974. It consisted of three location descriptions and four action proposals for each location. This test set was evaluated informally by members of the State Planning Agency staff during the second week in September. During that second week and extending into the third week of September, using the critical comments of the staff members, the test set was expanded and modified. The new scenario test set included four location descriptions with eight cases for each location. Scenario test set two was presented to a special meeting of the Technical Representatives Committee on September 20, 1974, for evaluation of the technique and actual determinations of significance on the hypothetically proposed cases. The tech reps attempted to judge significance on 32 proposed actions in less than four hours. They addressed all 32 cases and were able to reach majority decisions on all but one. The advantages of the technique became obvious, since

We urge that guidance on significance decisions be recognized for the high-level policy matter that it is. Under the decentralized program recommended here, if the EQC does not provide strong guidelines on what counts as a significant environmental effect, the significance threshold will be established case-by-case by the Environmental Management Hearings Board and the courts. We believe that Minn. Stat. Section 116D.04, subdivision 2, constitutes a specific directive to the Council to provide such guidance:

> The Minnesota environmental quality council shall . . . prescribe by rule and regulation in conformity with provisions of Minnesota Statutes, Chapter 15, guidelines and regulations setting forth those instances in which environmental impact statements are required to be prepared for new and existing actions . . .

We have one further recommendation to make with respect to significance thresholds. No matter what kind of guidelines are provided for significance decisions, they can at best be only a good guide. The application of a good normative guide to specific cases cannot be provided a priori. The significance decision remains a substantive decision requiring judgmental integrity of the responsible agency. Because of this need for interpretation, we recommend that each governmental jurisdiction in a position to be a responsible agency under MEPA begin keeping a notebook of actual case decisions it makes. For each project proposal determined to be a project with the potential to result in significant environmental effects, a brief summary should be prepared including a description of the environmental setting, a description of the action proposed, a recording of the significance decision, and the reason(s) why the project was determined to have the potential to result in significant environmental effects.[1] In terms of the future stability of the notebook it would also be worthwhile to record the kind of environment to be affected (see below). A selection of projects determined not to have the potential to result in significant environmental effects should also be summarized in the notebook. A non-significant project should be included if (a) there is some reason to have expected it to have a significant effect but it would not, or (b) its effects are roughly similar to the effects of a project declared to have a significant effect but there are relevant differences. In other words, any proposal determined non-significant which would illuminate significance decision rationale should be included. The reasons for decisions should be as specific as possible to avoid setting the wrong precedent.

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at the present rate of significance decision making by the EQC, it would take six or seven months (assuming one six-hour meeting each month) to make the same number of decisions on real cases. What is more, the TRC began referring back to previous decisions while judging significance on projects in the later stages of the meeting. The use of case precedents as significance guidelines is clearly fruitful. For further detail on this methodology, see our second report to the State of Minnesota. The second scenario test set is included in Appendix D to the present report.

[1] See sub-section (3) below for a discussion of a simple form that could be used for recording the case summaries. Also see Appendix C to this report.

As the number of decisions summarized in the notebook grows over time, how the notebook is structured will become increasingly important. A notebook with one hundred decisions summarized in it would be very difficult to use if the summaries were listed randomly or chronologically. Since the primary reason for the anticipated variation in significance threshold levels is the differences in the environmental contexts for action proposals, we recommend that the summaries be grouped according to some simple environmental typology. For example, summaries should be grouped together which relate to actions affecting shorelines or which relate to rural/agricultural land or which relate to an urban environment. The initial selection of categories is not too important since there will not be a large number of decision summaries in the notebook. But increasing attention should be paid to summary groupings over time to ensure that the notebook does not mislead in setting forth the increasingly refined environmental significance standards in actual use by the governmental unit.

We believe that there are at least four advantages in preparing a notebook along these lines: (1) having to record reasons for decisions in writing helps to assure that those reasons will be clearly conceived; (2) as time passes and the details of previous decisions become muddy, the notebook would help to ensure consistency in decision making through its use for quick recall of precedents; (3) it would provide a record for policy makers for periodic review of the significance threshold levels actually being established in decision making; and (4) it would provide a record for use by private applicants. It is our understanding that some developers in other states are now preparing environmental impact statements as a matter of course for development proposals, probably partially in order to avoid delays later in the process in the event that an EIS is required and partially because banks (and other financing institutions) are now very hesitant to provide financing on projects that might cause environmental problems before those problems are thoroughly examined and laid to rest. Providing increasing clarification on what will and what will not require an environmental impact statement would be a genuine service to private applicants.[1]

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[1] It should be noted in passing that one thing that should surely not be taken as showing conclusively that a proposed project has the potential to result in significant environmental effects is the existence of 500 signatures on a petition. We have heard it argued that a petition should automatically require the preparation of an environmental impact statement. There are few claims with which we disagree more thoroughly. The significance decision should be a judgmental decision on the part of governmental agencies, not a field day for anyone with the organizational backing to come up with 500 signatures. Granting the petition process such power as is contemplated here would leave the EIS process wide open to anyone who wanted to abuse it. What is needed is not providing the petition process with absolute power, but rather an appellate mechanism providing ready access to those who feel aggrieved by decisions made and actions taken. (See sub-section G of this section.)

(3) Significance Decision Procedures

No specific formal organization of information preparatory to determining a project's environmental significance should be required by law. While statistical and non-statistical matrices[1], formal environmental assessments (written texts), checklists and simple data sheets may be of considerable help in some cases, none of these will be the appropriate tool for the handling of the informational requirements of every project. In addition, individuals will vary considerably with respect to the organizational technique they can work with most effectively.[2]

It is strongly recommended that the responsible agency undertake an early systematic study of the environmental effects of any project not categorically exempt in order to make a timely determination of the significance of that project's environmental impact. In all cases of private projects, the responsible agency should be permitted to require from the private project proposer such factual information about the project in question and the environment of the project's site as is reasonably accessible to the sponsor without extensive research. At his option the private project proposer would be allowed to supply any data in addition to that required by the responsible agency that he desires. In no case should the responsible agency make its determination of significance based solely on an environmental analysis submitted by a private project proposer (or an analysis prepared for a private project proposer by a consultant). Since the legal responsibility for a significance decision is the responsible agency's and it will be solely liable for a bad decision, it must be in a position to vouch for the information on which that decision is based.

A brief written statement should be required to be issued by the responsible agency, for every non-exempt project, stating its significance decision.

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[1]The use of matrices, particularly statistical matrices, for the making of significance decisions is a tricky business. See the example of a matrix used inappropriately for this purpose in Appendix F to this report. We believe that the best use of matrices in the EIS process, insofar as they have a good use, is the review of impact statements. (See Appendix E to this report.)

[2]For several reasons, however, we would like to call attention to a specific form for obtaining and/or recording the information relating to a project that is to be used in the making of the significance decision. The Environmental Clearance Worksheet which constitutes pages C-6 to C-12 of Appendix C to this report has been carefully constructed to make clear the range of information which we think is needed for the making of a conscientious significance decision. Further, we suspect that it would be of actual use to responsible agencies in a great many cases. It should be made clear, however, that the Worksheet may request considerably more information than would be needed for significance decisions in many cases. (See, for example, the information offered as adequate support for the significance decision in the case of the example project processed through the EIS system in Appendix F to this report, Page F-29.)

It should be required, additionally, to provide sufficient written support for this declaration of significance or non-significance to make possible effective review of its decision.[1,2] Since there is considerable danger of

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[1]See Appendix C to this report, Pages C-2 to C-12.

[2]Requiring written support for a written statement of the significance decision brings to a focus one of the key difficulties in implementing MEPA, and the issue must be squarely faced. The danger, and it is a danger, is that requiring such written documentation will result in massive paper-pushing sufficient to destroy the efficiency of governmental processes.

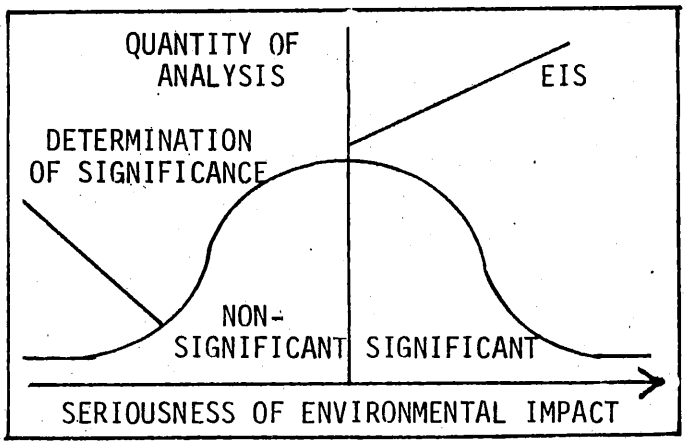
This danger must be weighed against the dangers inherent in not requiring such written documentation. (1) There is a strong tendency to make significance decisions based upon a general, intuitive feeling about the environmental impact of actions, probably with the thought that those decisions could be supported through detailed analysis if challenged. The tendency is predictably present regardless of the eagerness of agencies and officials to comply with MEPA. Yet it is quite clearly of central import to MEPA that specific environmental considerations be worked into government decision making at the earliest possible moment and that the careful environmental study be undertaken before rather than after the fact. There can be little question that significance decisions will be better made generally if support for those decisions is required in black and white. (2) MEPA constitutes a strong policy statement to the effect that environmental disclosure is a worthwhile goal. Without requiring written support for the significance decision, it is difficult to devise an effective means of disclosing the environmental information (relative to a given project) on which the significance decision was based. Further, without an effective means for systematic disclosure, effective review of the decision appears unattainable. (3) MEPA requires environmental impact statements under certain conditions but requires no other written document. One potential result of the EIS requirement is to make the significance decision an all-or-nothing plateau jump in terms of documented environmental analysis. If this were the intent of the law, it would put a premium on the environmental study on which the all-important significance decision is based. But MEPA is recognized by all to be a sweeping environmental statute mandating environmental study wherever feasible. What seems appropriate in response to this comprehensive legislation is environmental analysis geared to the seriousness of the environmental impact of a given project, rather than a complete analysis if the effect is above the significance line and no analysis if the effect is below that line. The EQC rules and regulations implementing MEPA acknowledge the need for some written analysis for some types of actions which may not be significant. The Environmental Assessment introduced in the rules and regulations to document and aid in the making of significance decisions is too much to ask for analysis of every non-exempt project under decentralization, but we concur with the idea of written support that it represents.

There is, unfortunately, no easy compromise. Truly effective implementation of MEPA seems to dictate the requiring of written support for significance decisions, and any such requirement will obviously increase the paper-work undertaken by governmental bodies. The best available solution appears to be to require written support for significance decisions and to make crystal clear that only the information on which the decision was actually based need be recorded.

unnecessary paper-work resulting from this requirement, it must be made extremely clear by the EQC just what kind of information will be adequate to support a significance decision.

The amount of requisite support should be expected to vary dramatically. Consider four exemplary cases: (1) a project which quite clearly has no significant environmental effect; (2) a project which is almost (though not quite) of significant environmental effect; (3) a project the environmental effect of which is just barely significant; and (4) a project of enormous and obvious environmental significance. In case (1) a project description should itself suffice to show that the project will have no effect at all on several aspects of the environment. Those minor environmental effects that it will have should be adequately describable in a brief summary. The whole supporting documentation for the significance decision should constitute a single page. In case (2) it may be assumed that the environmental effects of the project in question are noticeable and somewhat complicated. Considerable research is necessary simply for the purpose of becoming clear on what those effects are. The supporting documentation in this case might be a 10- or 15-page analysis, a kind of mini-impact statement. Supporting documentation of the same nature would be needed for case (3). Case (3) has been included as a separate example, however, in anticipation of the objection that what we are recommending would result in the necessity of producing two more or less detailed environmental analyses for a single project, since in this case an EIS would be required as well as documentation for the significance decision. It should be noted, though, that whatever information is presented in support of the significance decision should be usable in the preparation of the EIS. Whatever work has been done in the beginning will be saved in the end. A significance decision in case (4) should be extremely easy to document. Since any single significant impact on the environment will serve to support a declaration of significant impact, the responsible agency need only note the most easily accessible of the noteworthy environmental effects of the project in question. (See pages F-25 to F-29 of Appendix F to this report.)

The end-result of requiring written support for significance decisions, coupled with the EIS requirement of Minn. Stat. Section 116D.04, subdivision 1, should be as follows: there will be a fairly direct correlation between the significance (or, to avoid confusion, the seriousness) of a project's environmental effects and the amount of written information about and analysis of those effects. While the significance decision remains important, it is not all-important.



The written statement recording the significance decision and the written support for the decision, which together would constitute a "Negative Declaration" or a "Positive Declaration" depending on the decision, should be filed

with other pertinent information relating to the project in the files of the responsible agency. A single standardized two-page form can be used to advantage for the written recording of the significance decision itself, to be called a "declaration of significance" or a "declaration of non-significance" as the case may be. (See pages C-4 to C-5 of Appendix C to this report.) We recommend that the responsible agency for a given project be required to mail a copy of the two-page declaration of significance/non-significance relating to that project to all public agencies in Minnesota which could reasonably be expected to have jurisdiction over or some other interest in the proposed project. Copies of declarations of significance/non-significance should in any case always be sent to the Environmental Quality Council and the regional development commission in whose jurisdiction the project is proposed.[1] Copies of declarations of significance and of those declarations of non-significance which help to illuminate the rationale used in significance decision making should be included in the jurisdictional significance decision notebook described previously. Notice of all declarations of significance should be published by the EQC staff in the MEPA Monitor described in sub-section A of Section IV.

We recommend that public notification of significance decisions be made optional to the proposer of a given project. The advantage to the project proposer (public or private) in giving notification would be the triggering of a sixty-day statute of limitations on appeal of the significance decision and the procedures leading up to the decision.[2] We believe it is important to provide for cutting off appeal at this point in the process. A project may require a great many governmental approvals which could stretch over a period of years. The significance decision should be made before the first approval is given. If there is not some delimitation on appeal of that decision, a developer could find his project challenged on the grounds of non-compliance with MEPA some two years after the decision was initially made. If the appeal were upheld, the EIS process would have to begin again with a new significance decision and the two years of project development might be lost. In the case of a private project, if the proposer opts to give public notice triggering the statute of limitations, the responsible agency should be responsible for the giving of the notice and the cost should be billed to the project proposer. Because of the optionality of this notice procedure and the availability of a statute of limitations to cut off appeal, it is essential that project proposers be made clearly aware of the possibility of exercising the notice option. We recommend the public notification triggering the statute include: (a) a newspaper announcement publicizing the decision made and the statute of limitations brought into effect; (b) notice of the

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[1] Upon notification of any significance decision made by a state agency, the EQC staff should notify the State Planning Agency staff working on the Critical Areas program. Any project identified as of statewide concern has some potential for coverage under the Critical Areas Act and its implementing rules and regulations. In the case of projects for which local governments are the responsible agencies under MEPA, regional development commissions should notify the Critical Areas staff of any significance decision relating to a project which they feel is a candidate for designation under the Critical Areas program.

[2] See sub-section G of this section and pages C-17 to C-19 of Appendix C to this report for discussions of appeal of the significance decision.

triggering of the statute to the EQC, the regional development commission in whose jurisdiction the project is proposed, and any other Minnesota agency which may reasonably be expected to have jurisdiction over or other interest in the proposed project; and (c) notice of the triggering of the statute to all owners of property abutting the property which is the site of the proposed project. In the case of[1,2] (b) and (c), sending a copy of the newspaper announcement should suffice.

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[1]See pages C-13 to C-16 of Appendix C to this report for further discussion on public notification for significance decisions and elsewhere in the EIS process.

[2]We are not recommending any time period within which significance decisions should be required to be made. The current rules and regulations specify a 45-day decision period for the Council after an Environmental Assessment has been prepared. Under decentralization, significance decisions should almost always be made in less time than 45 days, though a shorter time period cannot be required. Requiring that the decision be made within 45 days might have the disadvantage of encouraging public officials to take the whole period for a decision that could be made much more quickly. Further, under the system proposed here it would be difficult to identify a meaningful day from which to date such a period. On the whole, we believe it would be better to provide no such time period.

F. Environmental Impact Statements

We recommend that an EIS be required on every proposed project which has the potential to result in significant environmental effects. The implication of an impact statement requirement, of course, is that a quick overview of the effects of such a project is not sufficient to satisfy the policies espoused in MEPA. Careful, in-depth, detailed analysis must be undertaken, for the purpose of providing as clear a picture as possible of what a given action will do to the environment. One danger associated with an EIS requirement is that environmental impact statements might (and often have) become lengthy, technical volumes, written for experts in environmental sciences and of very little use to decision makers and interested citizens.

One of the central problems in EIS preparation is how to produce a document which is at the same time: (1) a clear and simple presentation of an action's environmental effects, easily understood by decision makers and the layman without technical expertise; and (2) an in-depth statement adequately treating an action's environmental impact in sufficient detail to provide a clear picture of the actual complex effect. Sub-section (1) of this sub-section provides an EIS format which responds to this dual need.

A second problem centers on the difficulty of providing convenient avenues for any individual or group to contribute to the preparation of EISs while ensuring at the same time that the job gets done in a timely fashion. The current practice of providing a draft EIS for comment and review and, subsequently, a final EIS taking into consideration the review comments on the draft appears to respond very well to this problem. For this reason, the current practice is highly recommended. What follows will assume the production of both a draft and a final EIS.

As argued for in sub-section D of this section, we strongly recommend that the responsibility for EIS preparation be lodged in the agency previously designated the responsible agency for the purpose of making the significance decision. One of the most useful aspects of the EIS process is the learning experience of those who put together and analyze the information needed, and the responsible agency, which is the primary decision maker on the project in question, is the actor in the process which most clearly needs to learn about the project for its subsequent decision making. This does not mean, of course, that the responsible agency must single-handedly undertake the whole burden of the detailed analysis necessary for an EIS. Interagency cooperation should be encouraged as much as possible. All agencies with jurisdiction by law over a project should see themselves as under obligation to provide substantial input into EIS preparation at the request of the responsible agency. Local governments responsible for EIS preparation can expect increasing assistance from regional development commissions and should not hesitate to request technical aid from state agencies. Much or all of the detailed analysis could be hired out to private firms. Some of the information needed will be available from the project proposer in the case of private projects. There are a variety of possibilities for accomplishing the work necessary in EIS preparation. But no matter what combination is chosen in a given case, it should be made clear that the designated responsible agency is exclusively responsible for the document itself. If substantial work on the EIS is done by some agency, group, or individual other than the responsible agency, the responsible agency must maintain close supervision over the work done in order that it may vouch for the accuracy and completeness of the contents of the EIS.

The primary cost of the preparation and public notification of the availability of EISs should be borne by the project proposer as a part of project costs. In the case of a project proposed by a public agency, the proposing agency would bear all costs. In the case of a private project, the responsible agency should be empowered to bill to the project proposer the costs incurred for: (1) the preparation and printing of the draft EIS; (2) the publication of notice of the availability of the draft EIS for review; (3) the printing of the final EIS; and (4) the publication of notice of the availability of the final EIS. In no case should a private project proposer be financially liable for any new research or substantial revision of the draft EIS deemed desirable by the responsible agency because of adverse comments on the draft statement received through the review process. Nor should the private action proposer be financially liable for reworking of the final statement necessitated by an appeal finding of EIS inadequacy. When an EIS is required on a private project, who actually prepares the statement (whether the responsible agency itself, a private firm, or some other public body), the costs noted above and the timing of the preparation should all be negotiated between the project proposer, the responsible agency, and any other parties involved. This negotiation session would result in a type of developer's conference between the project proposer and the other main actors in the process, a derivative of the system which may well be a desirable result.

It should be noted here, since the question will surely arise, that we do not recommend any time period within which an EIS would have to be completed. It would be desirable, of course, if all EISs could be completed within a given period of time (e.g., 120 days), but, because of the vast variation in projects and their impacts, a strict time limitation is impossible. An arbitrary time period could be set, but the possibility of unspecifiable extensions would have to be made available, which makes the setting of a time period somewhat ludicrous. It might be argued that a time period (even if it is endlessly extendable) would place some intangible pressure on the responsible agency to complete the EIS in a timely way, but on the other side of the same coin is the danger that the responsible agency would use the full time period to complete an EIS even if it could be done more quickly. On the whole, we recommend no time limitation. If a private project proposer feels aggrieved by unnecessary time delays on preparation of the EIS relating to his project, he should sue for damages. As mentioned in the previous paragraph, the timing of EIS preparation in the case of private projects should be set during an early conference with the private project proposer.

The primary purpose of the present sub-section is to provide for a simple and clear presentation of what is almost always a complex subject matter. EISs will be good or bad depending on the accuracy of the environmental analysis and the clarity of presentation of the results of the analysis rather than on the length of the document or the sophistication of the technical verbiage or the aesthetic beauty of the product. No one wants to prepare or read an impact statement of 500 pages when it could have been done adequately in 100 pages. For that matter, no one wants to read an impact statement of 80 pages when it could have been done adequately in 20 pages. The length of the documents prepared in response to what follows here should be expected to vary dramatically, depending on the project to be researched. This point should be kept clearly in mind through the discussions that follow.

One further introductory comment is necessary before turning to recommendations on the preparation, review, and disposition of EISs. Environmental impact statements are intended to be fairly widely distributed. They are frequently copied and recopied. We strongly recommend that EISs be initially prepared with reproduction in mind. They should be done entirely in black and white and should contain no oversized pages or foldouts. Experience has shown that this point is of greater importance than it appears to be.

(1) Draft EISs

(a) Recommended Subject Matter

MEPA currently requires that the following subjects be addressed in an EIS:

> 1. The environmental impact of the proposed action, including any pollution, impairment, or destruction of the air, water, land, or other natural resources located within the state;
> 2. Any direct or indirect adverse environmental, economic, and employment effects that cannot be avoided should the proposal be implemented;
> 3. Alternatives to the proposed action;
> 4. The relationship between local short term uses of the environment and the maintenance and enhancement of long term productivity, including the environmental impact of predictable increased future development of an area because of the existence of a proposal, if approved;
> 5. Any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented;
> 6. The impact on state government of any federal controls associated with proposed actions; and
> 7. The multistate responsibilities associated with proposed actions. [See Minn. Stat. Section 116D.04, subdivision 1.]

The EQC rules and regulations require that draft EISs additionally include: (1) a description of the proposed action and its environmental setting and (2) a list of organizations and persons consulted in the preparation of the document. [See Minn. Reg. MEQC 31.] While a description of the proposed project and its environmental setting is clearly necessary for a detailed analysis of the environmental effects of the project in question[1], we believe that the vagueness of the term 'consulted' renders the second EQC addition relatively unhelpful. We recommend that this requirement be dropped and replaced by the requirement of a listing of governmental approvals necessary on

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[1]Though it is not necessary for an analysis of a project's environmental effects, we recommend the inclusion in the project description section of a brief discussion of the purpose of the project as an aid in providing a balanced view of the proposal.

the project and an initial listing of recipients of the draft statement. Any individual, group, or agency receiving the document would have an opportunity to input into the EIS, and fruitful consultation in the preparation of the draft should be credited in the text as appropriate. Unfruitful consultation is not worth noting in the EIS and may be highly misleading.

The inclusion of a listing of governmental approvals necessary on the project should also go a long way toward eliminating whatever need exists for the sixth and seventh points required by MEPA itself. The listing would serve to identify both federal controls associated with the proposed project and controls exercised by other states.[1] We recommend that the sixth and seventh points as currently required by MEPA be eliminated.

The first five points for discussion given in MEPA are essentially the same as those required by the National Environmental Policy Act (NEPA) and virtually every state environmental policy act modeled on NEPA. Although few agencies in the State of Minnesota have undergone the experience of preparing impact statements in response to these five points, there have been a great many such experiences around the nation. The result of that experience quite generally has been considerable displeasure with the legislative conceptualization of what an EIS should look like.

What has become one of the most important parts of an EIS around the nation is not specifically mentioned among the points listed in MEPA for discussion: the detailing of measures that could be taken to mitigate identified adverse effects of the project.[2] It is very often the case that some of the most serious adverse impacts could be substantially reduced or even eliminated if appropriate actions were taken during project implementation. In many cases, environmentally sensitive project sponsors build such measures into their project plans. But in many other cases, for a variety of reasons, they do not. It should be taken as one of the responsibilities of the responsible agency to detail all such mitigating measures in the EIS, whether they are proposed for implementation or not. At present, if mitigating measures are discussed in environmental impact statements at all, they are usually found buried in the discussion of alternatives to the project. But the importance to decision makers of such a discussion mandates that it be provided as a separate section of the EIS.[3]

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[1]This listing would not, however, make clear the relationship of the project to the plans, programs, and policies of the jurisdictions affected by the project. We feel that it is particularly important that an EIS address the project's relationship to the plans, programs, and policies of affected local governments.

[2]Mitigating measures are mentioned in Minn. Reg. MEQC 31 in an explanation of the second point for discussion that is required in MEPA.

[3]We further recommend that project approvals (e.g., permit issuance) be allowed to incorporate mitigating measures identified in an EIS as conditions on project approval. Many project approvals under present law may already be made conditionally, and this conditionality may include mitigating measures to

If an EIS identifies the impacts of a project and the measures that could be taken to mitigate the adverse effects, there should be no need for another section identifying the effects (whether adverse or beneficial or both) that cannot be avoided should the proposal be implemented. All of the effects that cannot be eliminated through mitigating measures will be unavoidable. We recommend the excision of the language directing special attention to unavoidable effects in the second point of the requirements of MEPA. The point here is not merely theoretical. Those who have prepared impact statements according to the standard formula espoused in MEPA and those who have reviewed such statements will appreciate the repetitious uselessness of a section devoted to identification of unavoidable effects.

EIS preparers and reviewers will also appreciate similar problems relating to the fourth and fifth requirements of MEPA. Practically speaking, the identification of the commitments of resources which the project represents is undertaken as a matter of course in the EIS sections presenting a project description and an analysis of the project's impacts. The potential irreversibility and irretrievability of those resource commitments are usually obvious. The part of an EIS written according to the standard formula which deals with irreversible and irretrievable commitments of resources is almost always a repetition of material presented previously. Further, it is a requirement that is frequently confusing to EIS preparers.

Every environmentaly policy act modeled on NEPA requires discussion of "the relationship between local short term uses of the environment and the maintenance and enhancement of long term productivity." Such EIS discussions almost always tend to be either a series of guesses (an estimation of alternative futures traded off for the project), outright repetition of material discussed elsewhere (a combination of the project description section and the section on alternatives to the project), or uninterestingly obvious (a statement of some of the things inconsistent with the project which could not be done if the project were implemented). It is almost always a confusing matter to EIS preparers to devise something to put into this discussion and the results are almost never worth the mental anguish it took to devise it. MEPA is clearer than most environmental policy acts on what should be included here, adding to the standard phraseology that the discussion should include "the environmental impact of predictable increased future development of an area because of the existence of a proposal, if approved." While the environmental impact of future development brought about by the project will usually be quite nebulous, the identification of growth inducements provided by the project is often fairly clearcut. Though growth inducements might properly be considered indirect impacts of the project to be dealt with in the discussion on project impacts, we believe that it is an important subject in an EIS deserving of special attention.

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alleviate adverse environmental effects. We recommend that mitigating measures used as conditions on project approvals be made explicit in writing at the time of project approval and that approval may be withdrawn at any time if required mitigating measures are not instituted as agreed, at the discretion of the approving agency. The identification of measures that could be taken to mitigate adverse impacts of a project will be a useless academic exercise unless there is a mechanism to enforce the implementation of the measures proposed.

As mentioned previously, we fully concur with the legislative implication (in the second point for EIS discussion) that environmental matters are to be distinguished from economic matters.[1] We further agree that economic considerations should be dealt with in an environmental impact statement. We would urge, however, that the treatment of a project's economic impact include the beneficial effects as well as the adverse effects, in order that decision makers and the general public reading the document will be presented with a balanced picture of the project. Including a discussion of economic impacts in an EIS, however, brings with it the danger that the EIS reader will be flooded with a barrage of economic detail (usually already available in the form of an economic feasibility analysis). It must be made clear that what is needed in an environmental impact statement is a summary analysis of the economic impact of the project.

Based on the preceding commentary on the points for discussion in an EIS that are currently required in Minnesota, we recommend that EISs under MEPA address the following subjects:

1. Description and purpose of the project
2. Permits and other approvals required on the project
3. Existing conditions
4. Project impact (environmental and economic)
5. Measures to mitigate adverse impacts
6. Growth inducements resulting from the project
7. Relationship to plans, programs, and policies of affected jurisdictions
8. Alternatives to the project
9. Recipients of the draft EIS

(b) Recommended Format

The preparation of a draft EIS is frequently seen as essentially a two-step process; (1) the raw data must be gathered relating to the project's impact on each aspect of the environment; and (2) the raw data must be analyzed. The difficulty with this process is that the analysis required is of a fairly technical nature, and the resulting document will almost surely be complex and filled with technical terminology. While the detailed analysis is a necessary part of the EIS process, a third step should be added for the purpose of providing a document of geniune use to decision makers and other interested parties whose time and expertise are limited: (3) the results of the analysis should be drawn together in non-technical language for a coherent overview of the environmental impact of the project.

The notion of an impact summary is the key concept in the solution to the problem of providing an EIS format which is both a simple and clear pre-

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[1] We do not believe it to be useful, however, to single out employment effects as MEPA does. Such special treatment suggests the exclusion of other demographic considerations. Our recommended definition of the term 'environment' (see sub-section E of this section) would include a variety of demographic characteristics in addition to employment.

sentation and an in-depth analysis. If the written product resulting from each of the three steps in the process mentioned above is kept structurally separate in the draft EIS from the product resulting from the other two steps, the completed draft EIS should have a flexibility of use which most EISs currently lack and which will make the document of genuine value in decision making.

In a nutshell, we recommend that the technical analyses currently found running throughout the body of EISs be relegated to the position of an appendix to the document and that their place in the body be taken by a common-language summary of the analyses. The raw data that was originally gathered should be kept on file in the responsible agency as technical appendices to the EIS. The summary alone (the body of the EIS) could be sent to those without the technical capabilities or interest to follow the detailed analyses. When the body is sent without the appendix, notification of the availability of the appendix should be included.) Those with the technical capabilities for performing or checking environmental analysis could be sent the summary together with an appendix containing the analyses. Those with even deeper interest could check the technical appendices on file as well. The advantage of this general EIS format should be obvious: all three steps described above should be taken in EIS preparation in any case, and by coordinating the document's structure with the steps in its preparation, any interested party, regardless of his technical capabilities, will be able to find out what he wants to know about the project without sifting through a lot of information he is not interested in.

The technical environmental analysis, which would constitute the EIS appendix, would in many respects remain the most important aspect of EIS preparation. The original data is relatively useless if no one knows what it means. The summary will be inadequate if based on a poor or unclear analysis. It is strongly recommended that environmental analysis be undertaken by breaking down the environment into numerous environmental categories (see below) and treating each as a separate subject for discussion. (The detailed treatment of economic effects would also be relegated to the appendix.) In this way, every aspect of the environment will receive due consideration or else it will be obvious to both preparer and reviewer that something has been ignored or inadequately treated. Each section should include a detailed discussion of existing conditions relative to the category in question, the anticipated impact of the project on those conditions, and any measures that could be taken to mitigate the adverse impacts identified.

The body of the EIS would include sections addressing all nine subjects recommended on page 82, provided that the sections on existing conditions, project impact, and mitigating measures would consist of summaries of the material included in the EIS appendix.

The detailed draft EIS format recommendation below has been designed to increase substantially the readability of EISs without significantly increasing the time and effort required for their preparation.

Recommended Format for Draft Environmental Impact Statements

I. Body of the EIS (impact summary)

A. Description and purpose of the project
B. Permits and other approvals required on the project
C. Existing conditions (summary)
D. Project impact (summary)
E. Measures to mitigate adverse impacts (summary)
F. Growth inducements resulting from the project
G. Relationship to plans, programs, and policies of affected jurisdictions
H. Alternatives to the project
I. Recipients of the draft EIS

II. Appendix to the EIS (categorical impact analysis)

A. Topography
B. Geology and soils
C. Hydrology
D. Water quality
E. Regional climate
F. Air quality
G. Noise pollution
H. Flora
I. Fauna
J. Land use
K. Demographic characteristics
L. Transportation and traffic congestion
M. Utilities and public services
N. Economic characteristics
O. Historic, prehistoric, and archaeological features
P. Aesthetics

III. Technical appendices to the EIS (original data, research, and reports on file with the responsible official)

(c) Recommended Scope of Coverage and Contents

The nature of the contents and the scope of coverage of a draft EIS will be best explained by a brief description of what each section of the above EIS format is expected to include. It should be clearly noted that all of the points mentioned in what follows will not be appropriate concerns for every EIS. We re-emphasize that the length and complexity of EISs prepared in accordance with the recommendations offered here should be expected to vary dramatically.

Body of the EIS (Impact Summary)

The primary purpose of the body of an EIS is to summarize the effects of the proposed project. It is also intended to show the inter-relatedness of the various environmental elements and what effect the proposed project

will have on the total ecological interrelationships existing in and around the project areas. The process of categorical impact analysis (EIS appendix) lends itself very well to establishing the information base to develop this summary. If another process of environmental analysis is used, it should provide data in sufficient detail and form to discuss the total interactions and relationships of the categories outlined in the EIS appendix section of the format given above. The body of the EIS should provide a basic understanding of the project and its total effect on and relationship to the environment of the project area. Discussion should cover the interrelatedness of the project, the existing environmental conditions, the anticipated impacts and any mitigating measures which might reduce or eliminate adverse impacts. This should be done in a general summary type style, but with sufficient detail to provide a comprehensive understanding of the project and its impacts. The bulk of the technical information and statistical data used to develop these assessments and evaluations relating to the proposed project should be consolidated in the appendix to the EIS. The key emphasis here is on the uniqueness of the various categories of environmental concern, the composite interactions of those categories, and the cumulative environmental consequences that can be expected from implementing the proposed project within the dynamics of those categorical interactions. The discussion in this section should tie together the variety of environmental concerns into a comprehensive, understandable package, summarizing the conclusions and findings of the specific categorical impact analyses.

Description and Purpose of the Project

The first section of an environmental impact statement should consist of a comprehensive description of the proposed project. It should include the project name and sponsor, the principals involved (owner, developer, engineer, architect, etc.), the location (regional and local), and a general descriptive statement of the project's physical, social, economic, and environmental characteristics and objectives. A discussion of the principal engineering proposals should be given special prominence. Attention should be given to grading requirements, drainage, access to and within the project area, densities, landscaping, amenities or special features, and building heights, types and sizes. Official file or case numbers assigned to the project by any jurisdictions or agencies must also be included for reference. The precise location and boundaries of the project must be shown on a detailed map. If a USGS Topographical Map is <u>not</u> used, the map used must delineate topographical contours at meaningful intervals, and reference must be made, by name, to which USGS Topographical Map would cover the same location. A legal description of the project lands should also be provided. Also to be included in this initial discussion is a description of the phases anticipated throughout the life of the project (planning, acquisition, construction, development, and operational phases) and the estimated time span for each phase. Finally, a brief history of the project and/or project area is appropriate here, including pertinent dates and previous decisions with respect to the project.

Permits and Other Approvals Required on the Project

This section need contain no complex verbiage. It should consist of a simple listing of permits and other approvals required on the project including local, state, and federal.

Existing Conditions

In order to present a summary analysis of the project impacts, it is first necessary to present a general picture of the existing environment. It should be remembered that this is a summary of the categorical impact analysis and should, therefore, contain much less detail than is to be provided on existing conditions in the EIS appendix. Only that information necessary to understand the full implications of the impact presented in the next section should be given here. Technical language should be avoided insofar as possible since this part of the impact statement (the EIS proper) is intended to be reviewed by persons with a wide variety of backgrounds. The objectives of this section are to be brief, non-technical, easily understood, and to provide the necessary background for understanding the project impacts.

Project Impact

The various impacts identified in the categorical impact analysis should be summarized and tied together in this section. The complex nature of the project impacts should be addressed as well as the categorical impacts resulting from the appendix analyses. The cumulative, total effect of the project on the existing environment should be made clear. Again it should be kept in mind that this is an impact summary geared to individuals without sufficient time or technical expertise to read the categorical impact analysis or the individual reports and data sources found in the technical appendix. This section should be brief, comprehensive, and to the point.

Measures to Mitigate Adverse Impacts

A summary of any measures proposed by the project sponsor to mitigate adverse impacts should be provided here. A detailed, technical analysis is not necessary, since it is provided in the categorical impact analysis. Each measure should be simply described and the range of impacts that it will reduce should be explained. An attempt should be made to present this discussion on a general, non-technical level while providing an adequate description. Where appropriate, mitigating measures not proposed by the project sponsor but deemed necessary for the protection of the environment must be provided, along with a rough estimate of the cost of their implementation. The importance to decision makers of the presentation of mitigating measures is often incalculable. In fact, it is felt by many that the identification of measures which could be introduced to minimize adverse impacts is one of the most useful parts of an EIS.

Growth Inducements Resulting from the Project

This section should describe any immediate or long-term inducements of population growth and/or expansion of development brought about by the proposed project. ("Population growth" includes three dimensions: the distribution of the population, the rate of population growth, and the size of that population.) Is the project adjacent to existing urbanization or does it re-

present the opening up of new, remote areas? Will it facilitate or induce growth? Are additional facilities and services required to accommodate development? If so, have they been planned and programmed for implementation within a time frame compatible with the project? How do the densities proposed compare with the surrounding area? How do they compare with development on land of similar natural character? Included in this discussion should be aspects of the project which would remove obstacles to population growth. An example is the case where the project is the expansion of a waste water treatment plant or some development that requires that expansion with the result that a greater development capacity is created. Increases in the population may further tax existing community service facilitites (such as schools, transportation facilities, etc.) so consideration must be given to these impacts. Also to be discussed is the possibility that a project may indirectly encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. An important element that must be considered in this section is time. The dynamics represented by growth-inducements are such that time plays a very influential role. What may be inducing today may only be facilitating next week and may not even be a consideration next year. In preparing and evaluating the growth-inducement section of an EIS one must be constantly aware of the project phases, the local and regional plans and programs, affected value systems, and changing goals, objectives, and values of the local and regional area.

Relationship to Plans, Programs, and Policies

This section should describe how the project fits in with the adopted policies, standards, general plans, and, if applicable, the zoning of all involved jurisdictions. Are there any trail systems, greenbelts, scenic highways, open space concepts, design standards, etc., existing or proposed for the area? Federal, state, and regional agencies should be discussed, if applicable, in addition to the county, special district, and city policies, programs and plans. Does the project represent a significant advance toward the implementation of these policies, plans and programs? Does the project conflict with other plans or does analysis and evaluation suggest that some modification of the project (or of the existing/proposed plans, policies, programs) is needed? If applicable, any public controversy or comment regarding the proposed project should be included here.

Alternatives to the Project

There are four kinds of alternatives to consider relative to specific projects: (1) major alternative project designs; (2) different projects on the same site; (3) different sites for the same project; and (4) no project at all. This section should include an identification of all feasible alternatives to the proposed project, especially those which might avoid some or all of the adverse environmental effects resulting from the project as proposed. It must be emphasized that the presentation of alternatives to the proposed project should not be made dependent on the willingness of the project proposer to undertake such alternatives or on the feasibility of immediate implementation of possible alternatives. Existing zoning regulations and local comprehensive plans are likely to play a big role in this section. It should also be emphasized that alternatives to the project might not be mutually exclusive; for example, it may turn out that the best course of action environmentally is to have no project on the proposed site for a while,

to sanction construction of the given project (including a major change in design) on a new site. Every feasible alternative should be evaluated for its environmental effect. While project alternatives will consist, for the most part, of gross project concepts and in-depth environmental analysis cannot be expected, care should be exercised to provide as much detail on anticipated environmental effects of alternatives as possible.

Recipients of the Draft Statement

A list should be provided here of all the agencies, groups, and individuals to whom copies of the draft environmental impact statement are being sent.

Appendix to the EIS (Categorical Impact Analysis)

The appendix to the EIS should include the detailed analysis of the raw environmental data. The technique of categorical impact analysis (breaking down the environment into categories for analysis) is strongly recommended, since it provides for a clear, straightforward presentation and a solid foundation for the summary. Each of the environmental categories listed in the EIS format above should be treated in the following systematic way: (1) an evaluation of existing categorical conditions; (2) an analysis of expected project impact; and (3) a presentation of measures that could be taken to mitigate adverse impacts. A brief description of the subject to be analyzed under each categorical heading follows here.

Topography

This section should address the physical surface features of the project area and the affected peripheral area as it presently exists as well as the expected change if the project were completed. Values to show general project elevations should include at least the highest point and lowest depression. The difference in elevation between highest and lowest points (total relief) should accompany elevation figures. A description of slope characteristics should include common or normal gradients in the project area as well as critical (unstable) and steep slopes. Attention should be paid to past man-made slope adjustments, especially if instability problems resulted. Dominant or unique landforms should be described and possibly photographs included. This may be especially important if the proposed project will substantially alter major landforms. Where it is obvious that the project will impede or accelerate the activity of dominant land sculpturing agents, a complete description of these agents and expected project effects should be given. This might include accelerated erosion, mass movement (landslides, mudslides, soil creep) and weathering, or impeded stream flow or wave action. Man as a surface sculpturing agent should also be included here. Such features as open pit mines, landfills, road cuts or tailing deposits should be discussed.

Geology and Soils

A discussion of bedrock conditions and soil overburden should include data pertinent to the project type. The composition of bedrock units should

be described as well as their depth under the surface and their stability with respect to construction and operation of the project. Special geologic considerations should include: ore deposits; fossil fuel deposits (coal, oil, natural gas); sand, gravel or rock deposits used for construction; and any other extractable resources. Where it is deemed necessary, active faulting zones or recent volcanism should be indicated. Relevant soil conditions should be reviewed including their classification under an acceptable soil classification system. This discussion should address soil composition and particle size, and how these relate to permeability (pore space size), compactability and fertility. Where surface stability problems may occur as a result of the proposed project such conditions should be explained in detail.

Hydrology

The hydrologic cycle provides a continuous supply of fresh clean water for man and his environment. Special care must be taken to ensure that abundant supplies of fresh water will be available in the future. To assess the impact of any given project on the water cycle it is necessary to examine running surface water, ponded surface water, ground water and domestic water supply. Stream networks and drainage basin characteristics should be described. Basin size, precipitation catch capacities, channel density and bottom characteristics as well as stream flow rates and variations should be included. In association with running water, all ponded surface waters should be discussed, including all major ponds, lakes, reservoirs and oceanic exposures. Details of size, shape, volume, and inflow-outflow systems should be included. Evaluation of the ground water system should show the height of the water table, the porosity and water holding properties of aquifers, subterranian water movements and ground water recharge source areas. Since domestic water supply can be drawn from either ground or surface water systems and can be an important element in most projects, it must be a major element of this section. The discussion should center on water requirements, water supply and any conflicts therein. It is not necessary to discuss water quality here, since it will be developed in the following section.

Water Quality

In light of the water systems analyzed in the hydrology section, the water quality in each system should be evaluated. Present and projected concentration levels should consider organic materials, inorganic chemical pollutants, bacterial and viral counts, and dissolved salt or mineral content. It should also include water temperature and dissolved oxygen concentration as well as visual and odiferous aesthetic quality. A discussion of contaminant sources for each water system should include types of pollutants, concentrations and dispersion patterns. In the area of special problems such things as septic tank drainfields or agricultural pollution (pesticides, manure, etc.) might be considered. Also under this heading, a discussion of potentially hazardous compounds or products, such as radioactive waste or chemical weapon manufacture waste, might be necessary. This would likely fall under the heading of "accidents" and all preventive or abatement measures should be outlined in detail under the section on mitigating measures.

Regional Climate

The regional atmospheric conditions may affect the proposed project to a greater extent than the project affects the atmosphere. It is important to stress here that this section deals strictly with atmospheric conditions, weather and climate, while air quality and pollution will be discussed in the following section. It should be noted, however, that this section should develop a working structure for later discussions on air quality. Basic climate considerations should be discussed for the region surrounding the project in general and if necessary for the internal project site (such would be the case if specific micro-climatic conditions are significant). Extreme maximum and minimum temperatures should be given as well as mean values, diurnal and seasonal variations. The amount and types of precipitation should include rain, snow, fog, ice, their intensity, duration and seasonal occurrence. The regional humidity levels may be important and the seasonal variations, maximum, and minimum levels should be presented. One element that will be important later but should be developed here is air flow or wind. Wind speed, direction, duration and seasonal changes should be identified. Atmospheric stability should be concerned with periods and intensity of unstable conditions as well as periods of extended temperature inversions.

Air Quality

This section will deal exclusively with air quality and pollution. References should be made, however, to the information and data developed in the regional climate section as it pertains to influencing air quality conditions. Cross-references should be included throughout the impact statement in order to facilitate its review and evaluation. The basic air quality and pollution considerations should be discussed, with attention given to the total airshed affected, the circulation system operating within that airshed, the influences affecting the circulation system (i.e., climate, topography, etc.) and the general function of the airshed and circulation system. Air contaminants and contaminant sources (those originating both on-site and external to the project) should be discussed in detail. The air quality conditions plus the pollution contaminants should not only be listed and described, but a thorough evaluation should be done as to the effect these contaminants have on the environment. The nature, amount (volume), production rate, dispersion rate, chemical reactive properties, cumulative properties, and effects on living organisms (plant and animal) must be discussed. The relationship of the air quality and pollution elements to established health standards or parameters should be discussed. Also the aesthetic qualities and any special, unique, or local problems should be included. A definitive statement should be made as to the project's ultimate effect on the air quality of the area. Particularly significant are those cases where the air quality will be degraded to levels beyond the ambient air quality standards established by federal, state and local jurisdictions. Included here should be a statement of state policy as to whether current air quality levels will be maintained or air degradation of non-polluted areas will be allowed to reach standards set by the National Environmental Protection Agency.

Noise Pollution

This section should cover in detail the projected and/or actual noise levels that will be generated from implementation of the proposed project, as well as those levels that will be imposed on the project from existing and/or proposed conditions. Evaluation of the noise impacts should be done keeping in mind the various land uses involved. Existing conditions plus the altered conditions during construction and at the completion of the project must be described. As noted, the impacts of both the noise generated by the project and the noise conditions imposed on the project need to be discussed. Mitigating measures that reduce or eliminate the adverse noise impacts must be included. These measures should include those that have been incorporated into the design and implementation of the project; those that could be proposed as possible mitigating efforts but were not pursued for some reason (include the reason); and those that may become mitigating measures based on technological developments and/or improvements, or on changes in specific plans or policies relating to the project area.

Flora

Of primary importance in this section on flora is the role played by the plant life within and around the project area. A long list of plants with their genus and species names would be totally useless if no correlation is provided between the existence of particular plants and their ecological role. In any place at any specific time there is a natural (eco-) system functioning. The plant life plays a significant role in that system and will also indicate other aspects of the total system such as geology, soil types, climatic conditions, possible wildlife types, etc. It is therefore extremely important that along with identification of the flora, adequate analysis and evaluation of the functions of the flora be done. What plants are present? Which are native and which are exotic? Do they provide wildlife habitat and forage? Which, if any, are providing a soil retention role? Are certain climatic conditions indicated by the variety (or lack of variety) of plant life present? Could climatic conditions be altered if significant areas of vegetation were altered or removed? Does the vegetation assist in the quality of the airshed or in the functions of a groundwater recharge area? It is impossible to list here all the questions that need to be answered for every possible project in all possible locations. Each project and location will have its own unique set of questions that need answers. What is important is that a thorough understanding of the functions of the vegetative communities be presented, and that the analysis and evaluation of proposed changes reflect the consequences of altering those functions.

Fauna

Analogous to the previous section on flora, the importance of this section is to gain thorough understanding of the role wildlife plays in the natural operation of the environment and to analyze that role in the light of requirements imposed by the implementation of a project within that environment in order to evaluate and predict changes and consequences of pro-

posed alterations. It will be necessary to discuss not only the types of wildlife present, but also the various habitats and conditions that influence wildlife behavior, unique, rare, endangered species, special problems, migration and breeding habits of that wildlife identified in the project area. "Laundry lists" of animals should be discouraged and attention given to the wildlife role played within the functioning eco-system of the area. Many of the main questions asked regarding flora are applicable to fauna also.

Land Use

The analysis in this section must consider both existing and proposed land uses on the project site and for the surrounding area. The types of land uses, densities involved, and proposed general/specific area plans should be included in the discussion. The objective of this section is to describe the nature of man's activities in the project area, the compatibility of those activities with existing and proposed land uses, and the interrelationships of the various land uses in the project area.

Demographic Characteristics

Central to the issue of environmental impact statements is the compatibility of man with nature. For this reason, in analyzing and evaluating a project, some data concerning the numbers, location, migration patterns, and growth trends of man should be developed. The purpose of this section is to assemble the information available with a view to gaining an understanding of the demographic processes operating in the project area. This understanding should assist in evaluating the interrelationships between the environment and the key variables in man's habitat selections. A discussion of population characteristics such as age, sex, family size, income levels, and location should be included to give a picture of the population involved with and around the project. Employment patterns, migration trends and growth rates or patterns should also be noted. Housing types needed, preferred, and/or proposed should be discussed as well as the general desirability of the local environment. Emphasis should be placed on those elements that influence the migration of people from one area to another or that influence particular choices of activity in specific localities.

Transportation and Traffic Congestion

Most projects alter existing transportation systems to some degree. The amount of change is dependent upon the specific project type and should be reflected in this section. Logically, the construction of a new shopping center will modify traffic to a greater extent than would construction of a new fish hatchery. Since transportation is the process of moving from an origin to a destination, extensive areas outside the project site may need to be considered. Special attention should be paid if implementation of the project will act as a traffic generator by increasing the number of trips to, from, or through the site, by changing the time of peak traffic flows, or by altering transportation routes or modes. Other subjects that may need special attention might be creating or adding to existing traffic congestion problems

or necessitating the placement of additional traffic control systems. Predictions of traffic generation and flow should be based upon the most recent data available and should consider maximum and average conditions. Transportation and traffic lend themselves readily to quantitative presentation. All relevant data should be included in table or graphic form if possible. Any special problems that may result from the project should be discussed according to their magnitude.

Utilities and Public Services

Most projects that involve human use or occupation of the site will have some impact on utilities and public services. A "laundry list" of services and utilities is not desired, and it is left to the judgment of the responsible agency to include in this discussion all utilities and public services that may be impacted by the project. The manner in which project impacts usually occur on public services and utilities is in the area of consuming a portion of planned service or utility capacity or by requiring the extension of a service or utility that is already operating at the designed capacity. For example, a development may require sewage treatment for 5,000 people. The present sewage treatment facility is designed to accommodate 200,000 people, but is presently serving only 170,000 people. Therefore, the project will not require expansion of the facility but will consume about 17% of the reserve capacity. If, however, the facility is already operating at capacity, the added requirements of the project would necessitate a 2.5% expansion of the facility. There are numerous other ways in which a project can affect public services or utilities. Completion of a project may mean the expansion of a utility service area (a secondary growth-inducing impact) or require the relocation of some facilities (i.e., power and telephone transmission lines, sewage and water mains, gas lines, etc.). There are a host of other impact possibilities and each project will present a unique set of circumstances.

Economic Characteristics

There are two interlocking aspects of this section analyzing economic impacts: economic considerations of the project itself; and the general economic climate of the immediate surrounding area. They are to some extent separable entities but should be considered as they relate to one another. Of particular importance are the growth inducements that may be provided by implementing the project. A full economic analysis of the project and its surrounding area can become an immense discussion far exceeding the needs of an EIS. Extra care, therefore, must be taken to concentrate on those areas that are particularly significant, deleting irrelevant data. Often, an economic feasibility or impact study is prepared for the project along with the environmental impact statement. It might be advantageous to use such a study as the primary reference for this section and cite it as such. It may also be beneficial to include this study, either in summary or as a whole, in the technical appendix to the EIS on file with the responsible agency along with the other technical reports and raw data used for the various sections of the impact statement. Perhaps one of the most difficult, and surely one of the most important, elements of this section is the project's growth-inducing characteristics. There is a strong link between economics and growth, and if not given adequate consideration in the planning stages, uncontrollable growth could be an unpredicted result of a project.

Historic, Prehistoric, and Archaeological Features

This section should describe those historic, archaeological and paleontological resources that exist in the project area, and what specific impacts the project will have on those resources. Special emphasis should be placed upon uniqueness or rarity, the value of preservation for the community or state, and the facilities and techniques available to accomplish preservation, storage, or utilization of the resources involved.

Aesthetics

Aesthetic considerations should be discussed here with a view to providing the greatest possible objectivity. This will allow for clarity in the technical analysis and evaluation of the other impact categories, while also providing for specific recognition of the total concept of aesthetics as it relates to the project and the surrounding area. Aesthetics is normally considered a subjective topic, and objectivity consistent with the informational nature of the EIS is very difficult to attain. Each impact category has its own element of aesthetic consideration, and each is subject to diverse evaluation and judgment. It is, therefore, necessary to deal in general terms and broad, descriptive concepts that allow for this diversity when discussing aesthetics. Discussions should center around those elements or characteristics that describe aesthetic concepts but that do not ascribe a value to those concepts. For example, a project may have an impact on the relative sizes of buildings in the project area. The point should be made that there will be created a proportional change in the sizes of buildings, with those of the proposed project becoming quite noticeable within the surrounding area. No effort should be made to tack on a value statement to this, as that will manifest itself in the evaluations of and decisions on the EIS and project as a whole.

(2) Notification of Availability of Draft EISs

It is extremely important that every effort be made to notify public agencies and the general public of the availability of a draft EIS immediately upon its release to review agencies. It is at this point in the process that public participation can be most valuable: a detailed description of the proposed project and what it will do to the environment can now be put in the public's hands for careful evaluation and response. Placing the draft statement in the hands of the public should provide the opportunity for careful, thoughtful, systematic evaluation of the proposed project before any governmental action approving the project in question has been taken. A copy of the body of and/or the appendix to the draft EIS should be made available to any individual for the actual cost of reproduction.

In order to ensure that public notification of the availability of draft EISs is undertaken adequately, two notification procedures should be required of the responsible agency. Both notices should be given at the same time as or after the delivery or mailing of the draft EIS to draft review agencies.

Public notification should be given by: (a) the publication of notice of the availability of the draft EIS for review in a newspaper of general circulation in the county, city, or general area where the property which is the site of the project is located; and (b) the mailing of notice to all owners of property abutting the property which is the site of the proposed project. The second requirement should be satisfiable by the mailing of copies of the newspaper notification. The opportunity should be provided to combine these notifications with other public notices (e.g., hearing notices) given for the same project. The information provided in public notices on the availability of draft EISs should include:

(1) Project sponsor, location and description;
(2) Responsible agency and contact person;
(3) Location and statement of the availability of the draft EIS for review (office, address, and phone number);
(4) Approximate cost of the draft EIS for individuals desiring personal copies;
(5) Where review comments on the draft EIS should be sent (name and address); and
(6) Final date for the receipt of comments usable in the preparation of the final EIS.

There is one further notification procedure which we recommend. The Environmental Quality Council will receive a copy of every draft EIS. EQC staff should include notification of the availability of the statement in its next issue of the MEPA Monitor. There may be individuals, groups, and governmental agencies interested in the project in question which would not be reached by the two-pronged public notification described above and which would not automatically receive a copy of the draft EIS but which would be reached by the MEPA Monitor. (See subsection E of this section.)

Any other means by which the public which is to be affected by or which is interested in the proposed project can be notified of the availability of a draft environmental impact statement are strongly encouraged.[1]

(3) Review of Draft EISs

The review of draft EISs is one of the most important parts of the EIS process. This point in the process provides one of the primary foci for interdepartmental, interdisciplinary input into the evaluation of a project's environmental impacts. It also provides one of the most crucial avenues for citizen participation. In other states, regrettably, the review of draft EISs by governmental agencies has tended to slip to a fairly low priority in terms of agency expenditure of manpower. The EIS process will not reach its full potential in Minnesota unless governmental agencies budget for and actively participate in the review of draft EISs. EIS review is frequently a difficult undertaking. Reviewers are often unsure of what they should expect to find

[1] See Appendix C to this report for a summary of public notification in the EIS process.

in an EIS. We believe that sub-section (1) above may go a long way in assisting reviewers on this matter, especially if the format recommendation comes into widespread use. Because of a variety of idiosyncracies of EIS reviewers, it is extremely difficult to provide hard tools for EIS review that are equally valuable to all reviewers. Appendix E to this report contains a detailed discussion of several specific tools that can be made available for use by individual reviewers.

One of the greatest potential values in reviewing impact statements is the opportunity to bring the results of the review to the attention of the public, the agency responsible for EIS preparation, and other public decision makers. While there may be a variety of ways in which review comments can be widely shared (e.g., in public hearings) the EIS process itself provides for a systematic and effective public airing. Written comments submitted on the draft EIS during the period designated for review by the responsible official will be reproduced in the final EIS, and the responsible official will respond to such comments as appropriate. It is strongly recommended that all EIS reviewers use this avenue of expression of review comments.

There are several things to be kept in mind in preparing review comments. First, it must be remembered that an EIS is intended to be an informational document, in contrast to a statement supporting or attacking the project in question. For this reason, review comments supporting or attacking the project on the basis of the information contained in the impact statement are inappropriate. Other avenues of argument for or against the project are provided by law. Review comments on the EIS should be directed to the accuracy and completeness of the presentation of pertinent information.

Second, it will be of no help whatever to comment simply that a whole EIS or any particular part of an EIS is "bad" or "poorly done". If a given subject is not treated at all, has it simply been overlooked or is there reason to think it is inappropriate in relation to the EIS being reviewed? If it is felt that a given subject is treated inadequately what specifically is wrong with the treatment? Are there grounds for thinking that the data is inaccurate or misrepresented? Is there reason to think that coverage of the subject is insufficient, that additional matters should be addressed or that the subject should be treated in greater depth?

Most importantly, it should be remembered that the submission of review comments is intended to be a participatory process. Reviewers should not view themselves as in opposition to EIS preparers, scurrying to find fault with the document before them. Reviewers can be of substantial help in the production of an EIS by offering constructive criticism and, if possible, pertinent information and source references. There is no reason to divide into warring camps on the issue of the presentation of information. Further, it should be emphasized that complimentary review comments on aspects of an EIS that are particularly well handled are not at all out of place. If responsible agencies are apprised of what constitutes noteworthy coverage of given subjects, they are likely to deal with similar subjects in much the same way in preparing subsequent statements. A general upgrading of the quality of EISs is likely to be the long-term result.

We recommend that copies of draft EISs (the body and/or the appendix as appropriate) be sent for review to the EQC, the regional development commission in whose jurisdiction the project is proposed to take place, and to: (1) all agencies with jurisdiction by law over the project; (2) all other public agencies with special expertise with respect to the impacts involved; (3) all appropriate federal, state, and local agencies which are authorized to develop and enforce environmental standards; (4) all other public agencies which might be expected to have an interest in the proposed project (including any agency which requests a copy); and (5) all environmental or public interest groups or organizations in the area to be affected by the project. Copies should also be available for public inspection at the office which houses the responsible agency and sent to the public library if one exists in the immediate area of the project. In the case of private projects, copies should be given to the project sponsor. Individuals or groups not covered in the listing above should be able to purchase their own copies for the cost of reproduction. Comments should be actively solicited from members of and groups representing the public at large.

Experience has shown that responsible agencies are frequently unclear on where draft EISs should be sent for review. On the one hand, statements are frequently circulated in great number (and at considerable expense) to every agency which might conceivably be "supposed" to receive a copy--most such statements end up gathering dust on shelves. On the other hand, the groups and individuals which are often most vitally interested in proposed projects (like local citizen and environmental interest groups) are frequently unaware of the existence and availability of draft statements. For the purpose of making draft EISs most useful at the smallest cost, the list of recipients of a draft EIS for review should be carefully constructed. While each case is unique and no general formula for distribution can be provided, the following rules of thumb should be kept in mind. Draft EISs need not be circulated to every agency in the state with some type of environmental expertise (a rather large number), but only to those which might be reasonably assumed to have an expertise to contribute to the evaluation of the impacts of the project in question. Draft EISs need not be sent to all federal, state, and local agencies which are authorized to develop and enforce environmental standards on the off chance that they should be considered "appropriate" agencies, but only to those which might be reasonably assumed to have an interest in or a contribution to make to the evaluation of the impacts of the project in question. Most importantly, emphasis should be given to providing for basically local review of local projects of primarily local significance and both state and local review of projects of statewide significance.

EQC rules and regulations currently require that

> [p]ublic meetings . . . be held by the Responsible Agency or Responsible Person as part of the Draft EIS review process. This requirement may be met by the incorporation of the discussion of the Draft EIS into another public meeting or hearing (e.g., a permit hearing) that is already scheduled as part of that action, provided that notice is properly given of the incorporation. [Minn. Reg. MEQC 26]

We believe this requirement to be necessary and would only point out that other hearings will almost always be necessary on projects for which EISs are prepared. Every effort should be made to incorporate the discussion on the EIS draft as described above.

The current review period for draft EISs that is provided in the EQC rules and regulations is anywhere from 45 to 90 days at the discretion of the responsible agency. We strongly recommend that this period be shortened. One of the primary complaints about the EIS process everywhere is the horrendous delay it introduces. We believe that the present review period introduces a delay that is safely eliminable. The longer an agency has to review an EIS, the longer that EIS will sit on a desk unattended. We recommend that the review period for draft EISs be made 30 days with the possibility of a 15-day extension if an agency submits a written request to the responsible agency for such an extension. The review period should be initiated as of the date of newspaper publication of the notice of availability of the draft EIS or the date of the mailing of notice to owners of property abutting the property which is the site of the proposed project, whichever is later. Receipt of no written comment within the specified period from any agency, group, or individual would result in the forfeiture of the right of that agency, group or individual to expect a response to such comment.

(4) Final EISs

At or before the end of the review period, the responsible agency should begin preparation of the final environmental impact statement. If the draft statement was carefully and adequately done, preparation of the final statement should be a simple matter requiring relatively little time. In the case of impact statements on private projects, the responsible agency should be required to produce the final statement within 30 days of the date which ends the review period, unless the Environmental Management Hearings Board grants a written request from the responsible agency for an extension. Such request must show material need for an extension to be heard.

The final EIS should include (a) the draft EIS, updated, corrected, and expanded as necessary in view of the review comments (including an update of the list of recipients of the draft), (b) all comments submitted in review of the draft, and (c) responses to all reasonable comments submitted in review of the draft to which a response is appropriate. Review comments making the same point(s) may be grouped together for a single response. The point is not to provide an individual response to every comment, but rather to be sure that all comments are responded to in some way. The best way to respond to review comments will depend on the nature of the comments received.

If evaluation of the review comments reveals that the draft statement requires little revision, the final statement may consist of the draft EIS as originally produced, together with a Supplement to the Draft EIS detailing corrections and changes and including the review comments and responses to the review comments. In this case, the Supplement alone may be sent to agencies and individuals who received the draft statement, thereby completing the final EIS package. There is no reason to send a second copy of the draft if it is used as a part of the final statement. If the draft statement re-

quires substantial revision and/or expansion, a single new document should be prepared containing a cover letter explaining how this statement relates to the draft EIS and summarizing the major changes. It should be made clear in either case in just what ways the draft EIS has been updated, in order to facilitate evaluation of the final EIS.

(5) Notification of Availability of Final EISs

We believe it to be of considerable importance that the EIS process have a definite end-point. For this reason, we recommend that a statute of limitations be placed upon appeal of EIS adequacy and procedural compliance with MEPA[1] which is automatically triggered by a required step in the process. The triggering mechanism should be a public notification of the availability of the final EIS. Such notification is desirable whether or not it triggers a statute of limitations. The public notification should be required to be given at the same time as or after the delivery or mailing of the final EIS to the appropriate agencies. It should include: (a) the publication of notice of the availability of the final EIS (and the triggering of the statute) in a newspaper of general circulation in the county, city, or general area where the property which is the site of the proposed project is located; and (b) the mailing of notice to all owners of property abutting the property which is the site of the proposed project. The second requirement should be satisfiable by the mailing of copies of the newspaper notification. The opportunity should be provided to combine these notifications with other public notices (e.g., permit hearing notices) given for the same project. The information provided in public notices on the availability of final EISs should include:

(1) Project sponsor, location, and description;
(2) Responsible agency and contact person;
(3) Location and statement of the availability of the final EIS (office, address, and phone number);
(4) Approximate cost of the final EIS for individuals desiring personal copies; and
(5) Final date for initiating appeal of the adequacy of the EIS or of satisfaction of the procedural requirements leading to the EIS.

We also recommend that notification of the availability of final EISs be included by EQC staff in the MEPA Monitor.

Any other means by which the public which is to be affected by or which is interested in the proposed project can be notified of the availability of a draft environmental impact statement are strongly encouraged.[2]

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[1] See sub-section G of the present section.

[2] See Appendix C to this report for a summary of public notification in the EIS process.

(6) Disposition of Final EISs

Final EISs (or Supplements to Drafts, if appropriate) should be sent as a matter of course to the Environmental Quality Council, the regional development commission in whose jurisdiction the project is proposed to occur, the State Planning Agency[1], all public agencies with jurisdiction by law over the proposed project, all other public agencies which submitted review comments on the draft statement and/or which request a copy of the final EIS, all environmental or public interest groups active in the area to be affected by the proposed project, the project proposer (in the case of a private project), and any private group or individual who submitted review comments on the draft statement. Copies of the final statement should be available for public inspection at the office which houses the responsible agency and placed in the public library (if one exists in the area of the project). Copies of the final statement should be available for the cost of reproduction to any other individual or group.

Production of the final EIS is not the end of the evaluation of environmental information relative to the action it addresses. In an important sense, it is only the beginning. Once the information has been collected, analyzed, and publicized, it is to be used by decision makers in judging whether or not the project in question should be approved or disapproved. The final environmental impact statement should accompany the proposal through the existing agency review process.[2]

The existing statutory authority of state agencies and local governments in Minnesota provides for a wide variety of regulatory uses of the information contained in impact statements, both in terms of the grounds for project approval and disapproval and in terms of the scope of conditions that may be attached to project approval. We have recommended that conditionalization authority be expanded if and as necessary to give all agencies (including local governments) the power to attach mitigating measures identified in EISs as project conditions. MEPA itself provides two further regulatory controls for putting EIS information to use which we heartily recommend be retained:

> No state action significantly affecting the quality of the environment shall be allowed, nor shall any permit for natural resources management and development be granted, where such action or permit has caused or is likely to cause pollution, impairment, or destruction of the air, water, land or other natural resources located within the state, so long as there is a feasible and prudent alternative consistent with the reasonable requirements of the public health, safety, and welfare and the state's paramount concern for the protection of its air, water, land and other natural resources from pollution, impairment, or destruction. Economic considerations alone shall not justify such conduct. [Minn. Stat. Section 116D.04, subdivision 6 (Supp. 1973)]

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[1] See sub-section (7) below.

[2] In the case of an EIS done on a project proposed in a critical area, this recommendation would require that the EIS accompany any permit applications relating to the project which are reviewed by the EQC.

> Prior to the final decision upon any state project or action significantly affecting the environment or for which an environmental impact statement is required, or within ten days thereafter, the [environmental quality] council may delay implementation of the action or project by notice to the agency or department and to interested parties. Thereafter, within 45 days of such notice, the council may reverse or modify the decisions or proposal where it finds, upon notice and hearing, that the action or project is inconsistent with the policy and standards of sections 1 through 6. . . . [Minn. Stat. Section 116D.04, subdivision 9 (Supp. 1973)]

The provision of such regulatory teeth in MEPA gives the EIS process in Minnesota a significance which it does not have in other states.

(7) The Long-term Use of EIS Information

One of the great tragedies of environmental impact statement processes wherever they are in use around the nation is that there is no systematic provision made for the long-term use of the information contained in EISs. A great deal of time, money, and basic research are involved in the analysis of the environmental impacts of proposed projects, but once a project is finally either approved or disapproved the EIS becomes dead paper gathering dust on shelves. As mentioned previously, one of the main reasons for the need for an impact statement process in the first place is that existing information on the environment is inadequate for sound decision making and long range planning. There is something absurd about requiring impact statements because existing information is inadequate and then not incorporating the information provided with the previously existing information.

The State Planning Agency is currently attempting to provide a comprehensive overview of Minnesota's natural resource information, pulling together a variety of sources. The developing system is called the Minnesota Land Management Information System (MLMIS). We strongly encourage this effort and urge that adequate continued funding be made available. Further, the need for incorporating EIS information into the system when it has matured can hardly be over-emphasized. In order for those working with the MLMIS to have EISs available for the eventual inclusion of the information they contain, they will need to receive copies of all EISs produced in the state (hence, the inclusion of the State Planning Agency as a final EIS recipient above) and they will have to have some kind of simple filing system for keeping them straight.

If copies of EISs are centrally located and sorted out in this way, very little additional work would be necessary to provide a simple environmental data library, which we believe would fulfill what will be an increasing need. The information contained in EISs is not only useful with respect to the long-term goal of providing a comprehensive statewide information system; it is also useful as data sources for new EISs and other environmental analyses. If a responsible agency charged with the production of an EIS could obtain copies

of previously prepared EISs dealing with the same location and/or the same type of project, a great deal of "original research" on the part of the new impact statement preparer could be eliminated. Nor is the preparation of a new impact statement the only reason for needing the information contained in previously completed EISs. Nor are EISs the only documents that could be usefully stored in such a library.

The need for an interim environmental data library should be obvious. Ideally, such a facility would receive, catalog, store, and retrieve all environmental impact statements and other analyses, studies, reports, theses, and dissertations produced in the state. It could be set up and operated at a minimal cost and, by establishing a minimal user charge, part of the operation cost could be recovered. It could act as a depository for information producers in the state and could in turn be used by all.

The key to the success of a system like this is the cataloging structure. It must be simple enough to allow data input without complication and quick retrieval upon request. There should be a location index to recall documents dealing with specific sites and there should also be a project index to obtain information on similar types of projects. They should be cross-referenced to allow the user to obtain the greatest number of relevant information documents while referring to only one of the index systems.

Since the MLMIS geo-grid system is based on the U.S. Land Office Survey, the environmental document library location index should also be keyed to this system. A much larger grid cell is likely to be necessary for library use, however--perhaps the six mile square township would be appropriate. Each geographical township in the state would have an index number, and as documents were received by the library they would receive a location number according to the township in which the project was located. A location index file would be maintained with file cards for all documents, arranged by township number. Recall of any document in the library could be accomplished by referring to the location number.

A second document index should be provided in order to obtain material dealing with project types similar to those of a new proposal. A project category list should be developed with a numerical coding system, and as documents are received by the library, a project number could be assigned. Another index file would be maintained with the file card for each document in the library, organized according to the project category list. Any person requiring information on the common impacts of a particular type of project could request documents from the library by specifying the project type involved.

The library staff would compile and maintain a catalog for use by persons in the state to identify documents stored in the library. The catalog would consist of summaries or actual copies of the index cards of both data organization systems. This catalog would be distributed to all potential users and periodically updated by issuing catalog supplements. The catalog updating procedure could be tied to the MEPA Monitor.

Initially, the library would operate as described above, with users obtaining copies of whole documents using one or both of the index systems. As this system matured and the MLMIS also became more advanced, the data stored in the library could be abstracted from the documents and fed into the data banks of the MLMIS, using the coding manuals presently being developed. This would enable a wealth of data that would normally be lost to accelerate the development of a much needed central state data system with complex analysis capabilities. Not only would this provide a mass of detailed natural resource data for use in preparing environmental impact statements now and in the future, but as the MLMIS begins full speed operation it would also provide a natural resource input into the planning processes of the state and local governments.

G. Appeal

(1) An Administrative Appeal Process

There is currently no administrative appeals process which can be used to handle various appealable decisions made and actions taken under MEPA. A handful of appeals have been made of actions taken by the EQC, and all such appeals have been made directly to the courts. We strongly recommend as an important adjunct to decentralization that an administrative appeals body be established to hear appeals of decisions made and actions taken under MEPA. If the Environmental Quality Council is to be freed from project-by-project decisions, allowing it to direct its attention to the subjects recommended in sub-section B of Section IV, the Council cannot be saddled with an administrative appellate function. We recommend that a new body, to be called the Environmental Management Hearings Board, be created to perform the appellate function. (See sub-section A of Section IV for recommendations on the structure and general functioning of the Board.)

The advisability of creating a special appeals process for MEPA is not clearcut. At least three major objections might be raised against such an undertaking: (a) we are, in effect, simply adding another step in the EIS process before appeals are taken up in court, and the time delay is unacceptable; (b) such a Board could not maintain the image of objectivity that is attributed to the courts; and (c) a special appeals process would be expensive. While none of these points may be taken lightly, we feel that arguments on the other side are somewhat stronger.

In response to (a), it should be pointed out that, currently, in cases where applicants actually do get a case to court, there is frequently a long delay because of present court overloads. This situation will become worse if numerous appeals relating to the decentralized EIS process are added to court dockets. [1]Under existing administrative environmental appeals processes in other states[1], there is a significant "washout" of cases--that is, a significant percentage of cases appealed administratively never get taken to court. Experience elsewhere indicates that a full-time administrative appeals body is able to decide on cases brought before it far quicker than issues can be settled in court. Though more appeals may be filed with the Board than would be filed in court, the quickness of administrative action and the washout effect make it very unclear whether or not an administrative appeals process would result in time delays overall. In response to (b) in the preceding paragraph, while it may be true that an image of objectivity is less likely for a hearings board than it is for the courts, it is likely, on the other hand, that courts will not have the environmental expertise attainable by a board hearing only appeals on environmental issues. In response to (c), it should be pointed out that it is not at all obvious that a new administrative appeals system will be more expensive overall than court appeal. Ideally, MEPA appeals would be heard on the record only and no expensive personal appearance (or

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[1]The two administrative appeals board with which we are most familiar are the Pollution Control Hearings Board and the Shorelines Hearing Board in Washington State. Both boards are effective and provide positive test cases for statewide appellate mechanisms for the handling of environmental issues.

hiring of attorneys) should be necessary. From the point of view of the private citizen, then, appeal to the Environmental Management Hearings Board would be much cheaper than appeal in court. From the point of view of public expenditure, the issue is not clear. The existence of the Board is very likely to reduce the number of cases that would otherwise be taken to court (the "washout" effect mentioned above), and the money spent on the one side is likely to be saved on the other. For these reasons, and because we feel that an administrative appeals process would provide far more equitable access to aggrieved citizens than is available at present[1], we recommend the creation of an Environmental Management Hearings Board and an administrative appeals process.

(2) Appealing Decisions Made and Actions Taken under MEPA

Appeal of decisions made and actions taken under MEPA to the Environmental Management Hearings Board should constitute the only administrative recourse for these decisions and actions. Appeal should be allowed to be initiated by the project proposer, any governmental agency, and any private individual, corporation or organization in the area to be affected by the project in question. The point at issue should be decided on the record, together with such supporting documents, briefs, affidavits, and oral arguments as the Board may in its discretion require.

Appeal would be heard on declarations of exemption, significance decisions, environmental impact statement adequacy, and all forms of procedural compliance with MEPA. If public notification is given as described in sub-section E of this Section for an exemption or significance decision, an appeal of the decision or of the fulfillment of procedural requirements leading to the decision would not be valid unless filed with the Board within sixty days of the date of newspaper notification or within sixty days of the date of the mailing of notice to interested governmental agencies and owners of property abutting the property which is the site of the proposed project, whichever date is later. Exemption and significance decisions should be appealable on the grounds that an incorrect decision was made as shown by the material submitted in support of that decision or on the grounds that the support material was inadequate for the making of the decision. The Board should be empowered to reverse or declare null and void a decision made or an action taken, and/or remand the decision or action to the responsible agency for further study.

If an environmental impact statement is required on a project, an appeal of the adequacy of the statement or the fulfillment of the procedural requirements leading to the statement should not be valid unless filed with the Board within sixty days of the date of newspaper notification of the availability of the final environmental impact statement or within sixty days of the date of the mailing of notice to owners of property abutting the property which is the site of the proposed project, whichever date is later. A finding by the Board that an EIS is inadequate would require the responsible agency to revise the document as specified by the Board.

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[1] As argued in sub-section A of Section III, the petition process currently available does not appear to provide adequate access for aggrieved individuals. Nor does the Citizens Advisory Committee provide the appropriate channel.

The Board should also be empowered to (a) select a local government to fulfill the role of responsible agency with respect to a project for which the local governments involved are unable to choose a responsible agency by mutual agreement, and (b) decide on requests from responsible agencies for a time extension on the preparation of final EISs in the case of private projects. The Board should not be empowered to hear any appeal of a decision made or an action taken by the Environmental Quality Council.

(3) Court Review

We strongly recommend that court review of the decisions rendered by the Environmental Management Hearings Board be strictly limited. The possibility of an action going through an endless appeals process, potentially causing time delays, should be avoided to whatever extent possible. For this reason, we suggest that the decisions of the Hearings Board be final, except that within thirty days after the final decision on an appeal, the aggrieved party to the appeal should be allowed to appeal to the district court. But such appeal to court should be allowed solely on the grounds that the Hearings Board's disposition of the appeal was either (a) arbitrary or capricious, without a basis in fact, or (b) illegal because it was based on an unlawful procedure.[1] To further speed the process, if an appeal of a Hearings Board decision is heard and a decision is rendered in court, we recommend that the prevailing party in the appeal be entitled to recover reasonable costs and attorney fees from the losing party.[2] This combination of controls should ensure the timely use of the administrative appeals process as embodied in the Environmental Management Hearings Board without causing undue delays resulting from unnecessary and ill-founded appeals of decisions to the courts.

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[1]It is clear that the courts reserve the inherent power of review of decisions and that any legislative limitation of appeal from administrative decisions concerning compliance with MEPA can go no further than to limit appeal to the conditions under which the courts have reserved the right to hear appeals. Some careful legal research would be necessary in the State of Minnesota to determine precisely what power Minnesota courts have reserved for themselves. The limitations mentioned in the text may not be allowable.

[2]The requirement that a losing party in a court appeal pay the reasonable court costs and attorney fees of the prevailing party is suggested to help limit court review to the most significant cases. It is important to note here, though, that although this may significantly limit court appeals, it would not affect anyone's right to administrative appeal.

VI. NON-PROJECT ACTIONS

In sub-section B of Section V of this report, it was suggested that activities can be conveniently divided into two classes. The first class includes those activities which themselves constitute manipulation of the environment, which were referred to as "projects". The second class includes those activities which do not constitute such manipulation, and are referred to as "non-project actions". The proposed environmental impact statement process presented in Section V was made applicable to projects only. Through actual experience, it has been found that an EIS process works relatively well for projects. However, for other actions which do not have as a direct end the establishment of some type of project, the EIS process has been less satisfactory.

Non-project actions generally include the following types of actions: legislative proposals; the adoption of rules and regulations and local ordinances and resolutions; the establishment of special purpose governments and rates and tariffs; the adoption of plans and programs; sales, leases and rentals of public property; leases, rentals and purchases of property for public use or control; the adoption of budgets; and governmental approval pertaining to applications submitted by private parties, including authorizations for land use and land use changes. In some of these non-project action situations, the implementation of an action approval or disapproval may be the only governmental decision or action before a specific project is actually undertaken. In these instances, it is required (under the proposed system) that the action be treated as a project and undergo the normal environmental review procedures as necessary. This application of the process to governmental approvals pertains especially to private applications governed by land use controls. The EIS process would also be triggered by the sale, lease, or rental of land when the transaction includes approval of a specific use of the property in question. A third non-project action which may specify the implementation of a specific project for a specific location is a legislative proposal. However, we believe that legislative proposals cannot be adequately handled by the EIS process because of the nature of the legislative system and the problems associated with it.

Since the passage of NEPA, there have been numerous attempts to grapple with the question of how to handle non-project actions. It is recognized that non-project actions may well end up having a significant effect on the environment. However, at the time they are implemented, they usually represent a commitment only to a general course of action, which may or may not relate to any given project or for that matter to any given site location or set of site locations. Since the EIS tool is very much oriented to the analysis of individual projects occurring on a given site or sites, how can it be made to apply to an action which is so vaguely related to a specific site(s) as are most non-project actions. After struggling with this question for more than two years, we have come to the conclusion that the project-type of EIS process cannot adequately accomplish an effective non-project action environmental analysis. At best, EISs prepared for these cases result

in an expenditure of money for rhetoric which tends to be totally useless. Monies potentially earmarked for this project-type analysis would be much more effectively spent if they were allocated to strengthening the planning process rather than doing unhelpful impact statements. However, this does not obviate the need for some type of tool for environmental analysis which can be utilized for non-project actions potentially affecting the environment.

The present section is devoted to the presentation of a simple means of establishing a workable and meaningful process of environmental analysis for non-project actions. Generally, the procedure which we are suggesting involves the use of an "environmental note", the concept of which will be developed for the non-project action category of legislative proposals.

One of the most prevalent types of non-project actions is the legislative proposal. At the state level, this takes the form of proposed bills in the state senate and house. At the local level, it usually takes the form of proposed ordinances. Whatever form it takes, though, legislative proposals are one of the most difficult of non-project action types to handle under the auspices of an environmental policy act. Legislative proposals at the local governmental level may number into the hundreds over the course of a year. State legislative proposals may well number into the thousands for one legislative session. By limiting the environmental analysis of legislative proposal to those bills which have the potential to affect the environment, the affected number of proposals can be cut substantially. However, even if the number of legislative proposals needing some analysis is cut in half, or to one-third the total, or less, there will still be a large number to contend with.

Not only does the large number of legislative proposals cause problems to an environmental analysis system, but so also does the way in which they are proposed, processed and amended. In many instances, legislative measures are proposed on the very day on which they are passed. This is particularly true in the final few days of the state legislative session. This rapidity of action would pragmatically preclude any type of environmental analysis except something that is only purfunctory. The processing of large numbers of legislative proposals practically eliminates the possibility for including a lengthy environmental analysis, even if there was sufficient time to complete it. Quite often legislators, councilmen and commissioners have little time to read the legislation itself, let alone read and study an extensive environmental analysis. Finally, legislative proposals rarely make it through the full process in the form in which it is proposed. Our own experience with an amendment to the State Environmental Policy Act in the State of Washington points dramatically to this fact. The amendment which was first proposed, well thought out and researched, including extensive background information was amended some twenty-seven times in committees and on the house and senate floors before it was finally adopted and signed into law. It would be almost impossible to update the typical type of impact statement analysis each time a legislative proposal is amended.

Due to such basic problems as these, the State of Minnesota, when it developed its present rules and regulations for the implementation of MEPA, excluded legislative proposals for consideration under the Act. Exclusion because of problems relating to how to provide the means for environmental analysis for legislative proposals should not be taken to suggest that legislative proposals will not have an effect on the environment, potentially a very significant effect. Quite the contrary. It is merely a recognition of the fact that the typical environmental impact statement process, including the time-consuming review process, which is necessary, is totally inapplicable to these actions. If there is a desire to provide some type of environmental analysis of proposed legislation so that decision makers considering the legislation will be potentially better informed, a much simpler tool than the environmental impact statement must be developed and used.

In our attempts over the past years to come up with an adequate solution to this perplexing situation, we came upon a method utilized in some states to provide a fiscal impact analysis of those legislative proposals which have the potential to require the appropriation of monies in their implementation. In the State of Washington, this tool is referred to as a "fiscal note". The note is a short, two page form which provides space for the basic description of the proposed legislative action and then a brief summary of what and how much money it will take to implement the proposal if it is passed. It became apparent that this type of mechanism might also be useful in providing a summary environmental analysis for those legislative proposals which have the potential to affect the environment.

The proposed form for this type of brief environmental analysis is appropriately called the "environmental note". Its purpose is to summarily describe the legislative proposal and state the purpose of it, and then to briefly address five basic questions which should be answered in order to provide some indication as to what effect that legislative proposal might have on the environment. A proposed form for this environmental note is included on the following two pages. It should be emphasized that this environmental note form is the absolute minimum which we would recommend for inclusion in legislative proposals potentially affecting the environment. In certain cases where the proposed legislative proposal will result in a specific project which will significantly affect the environment, we would strongly recommend a more detailed analysis than is called for in the environmental note.

The environmental note, whether it be the very short form presented in this section or include expanded documentation of the proposed legislation's effect on the environment, would not undergo the same procedural steps as the environmental impact statement. The responsibility for preparing the environmental note would belong to the proposer of that legislation. Once the legislation is available for committee (or council or commission) review, and/or for citizen review, the environmental note would be attached to the proposed legislation and subsequently be available for review in the same package with the legislative proposal. The "note" should take very little time or effort to complete, and it should be kept as short and as simple as possible so that busy legislators or other decision makers can effectively use it. If the legislation is amended or changed in a way which substantially alters the accuracy

ENVIRONMENTAL NOTE

Responding Agency Title

Concerning _____
SF No. HF No.

Requesting Agency

Original . . . . . .
House Committee Amendment. . .
Senate Committee Amendment . .
Engrossed House Bill . . . . .
Engrossed Senate Bill. . . . .
Substitute . . . . . .

Bill Requested By: Executive ; Department ; Legislative Committee _____
Title

New Program or Activity ; Change in Existing Program or Activity

Title of Bill: An Act Relating to . . .

PROJECTED ENVIRONMENTAL IMPACT OF THE PROPOSED LEGISLATION

Description and Purpose of the Proposed Legislation:

Existing Conditions to be Affected:

Environmental Impact of the Proposed Legislation:

Measures to Mitigate Adverse Impacts:

Growth Inducements Resulting from the Proposed Legislation:

Alternatives to the Proposed Legislation:

of the note's statement of the projected environmental effect of the legislation, and if there is adequate time, it should be changed to reflect the altered environmental effects.

If the concept of the enivornmental note is accepted as a potentially useful tool for legislative proposal analysis, it may be a vehicle which can be used to provide environmental analysis of other non-project actions which do not specifically authorize a given project for a given site location as well. The environmental note may be quite useful when attached to the following types of non-project actions: the adoption of rules and regulations; the adoption of budgets; the establishment of special purpose governments and rates and tariffs; the adoption of plans and programs; sales, leases and rentals of public property for non-specified uses; and the purchase, lease or rental of property for non-specified public use or control. If the environmental note concept is used for these other non-project actions, the format would have to be somewhat altered from that presented previously for use with legislative proposals. It is hoped that the environmental note form presented here will be of assistance in providing a form type which can be altered for use with these other non-project categories.

Many rules and regulations which are adopted daily fall into the category of non-project actions affecting people in a "non-environmental" way. These rules and regulations should not be considered for MEPA analysis, even by means of the environmental note. There are some rules and regulations, however, which do affect the environment. An example of such would be the adoption by rule and regulation of certain measures for implementing a siting program for power transmission lines. In this case since the rules and regulations would not relate to any specific transmission line routing, an environmental note should be attached to the proposed rules and regulations as these rules and regulations go through the normal review and hearings process for official adoption. Also, in many cases, the adoption of local governmental ordinances resembles the adoption of state rules and regulations much more closely than it does the process for legislative proposal adoption. Again, in this case, an environmental note would be the minimum analysis which should accompany the proposed ordinance.

When the adoption of budgets is considered for potential environmental review, the environmental note should in all cases be attached to budget items relating to individual capital improvement projects and especially to capital improvement items that are programmatic in nature. The EIS process would be triggered in relation to the individual projects budgeted for at some point before project implementation (see sub-section B of Section V), but it would not be triggered by the budget proposal itself.

The establishment of a special purpose government is usually oriented to the desire to provide a single, specific service for a given jurisdictional area. Quite often the mere act of establishing the governmental agency does not constitute the authorization for and/or implementation of specific projects, but rather it establishes the potential for the development of a specific service for yet unidentified areas. In this case, it would be appropriate to

attach an environmental note to the legislative or initiative proposal which, when voted upon, would result in the formation of this special purpose governmental unit.

Generally speaking, a rate or tariff deals in the regulation of the movement of goods, people and/or power. Whenever the regulations governing rates and tariffs change, there may be a change in the frequency or pattern of these movements, and the consequent change may have an effect on the environment. Also, if a change occurs or a new rate or tariff is established, it will generally affect an area of wide geographical and physical diversity and it would be impossible to provide specific commentary on specific environmental effects. A general statement of the potential effects included in an environmental note should be considered sufficient pragmatically to meet the needs of MEPA compliance.

Another set of non-project actions for which the use of the environmental note should be considered in some form are plans and programs. Although quite often plans and programs are presented as separate documents, they tend to be inextricably tied together, with one predicating and helping to implement the other. For example, the adoption of a program by a city council may call for the adoption of a comprehensive plan for the city. In this case, an environmental note would most likely not be needed for the adoption of the program, but it should be included with the comprehensive plan when the plan is considered for adoption.[1] Other programs, such as the adoption of a community development program in a local area, may include specifics such as housing relocation criteria, and consequently should minimally be covered with the environmental note as well. The note should suffice for the type of environmental disclosure necessary at this point in the decision-making process. Extensive time and/or monies should not be wasted on meaningless environmental review or disclosure, but rather those monies and efforts should be expended on strengthening the environmental integrity of the plan or program which will be developed.

The sale, lease or rental of governmental property frequently contains conditions identifying specific uses as being the only allowable uses for the property in question. In these instances, particularly if the sale, lease or rental is the only governmental control action associated with the property and its potential use, we recommend that the full environmental impact statement process be utilized. However, if the sale, lease, or rental is merely a general transaction, without specific uses or conditions attached, which is a frequent occurrence, an environmental note should be completed if the transaction will have the potential to affect

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[1] An environmental note would not even be necessary at this stage if the adoption of a comprehensive plan also meant that the environment was being adequately considered as an integral part of that plan. However, this has not been the general case to the present time, so the environmental note must be considered a minimum for environmental analysis and disclosure concerning that plan. (See Section VII of this report.)

the environment. The same would hold true in the case of the purchase, lease, or rental of property by a governmental agency.

One final point should be addressed here. Obviously, all or some of the above-mentioned non-project actions could be considered for total exemption from the MEPA process, including exemption from the use of the environmental note. However, we do not recommend this move since the non-project actions dealt with here sometimes result in substantial impacts on the environment of the State of Minnesota. We feel quite strongly that at least a minimal effort must be made to analyze and disclose the potential environmental impacts resulting from any activity which has the potential to affect the environment. Consequently, the minimal level of analysis which we would recommend for the non-project actions described herein is the environmental note or a similar type of brief analysis. The key to any approach to non-project actions, though, is to keep it simple and short so that it becomes a tool of actual use in the decision-making process.

VII. AN ENVIRONMENTAL PLANNING PROGRAM

A. Introductory Remarks

> The environmental impact statement is an attempt to inject environmental sensitivity into the decision-making machinery. It is, however, a tactical approach rather than a strategic one. It suggests that environmental quality as a public policy has not been institutionalized into the decision-making framework, and, until it is, proposals will have to be reviewed for their effect on the environment. An effective environmental management program would have no need for impact statements. Environmental concerns, just like economic, social, and political concerns, would be an integral part of the total decision-making effort. The environment would no longer be an afterthought.[1]

The above statement all too accurately focuses on one of the most important problems facing an environmental policy act, which, by its nature, must rely on that document referred to as the environmental impact statement as the tool for injecting a detailed environmental awareness into the decision-making process. An impact statement tends to be a reactionary response to a proposed project. Quite often, informal decision has already been made to implement a project before the EIS relating to that project is begun. The EIS becomes merely paperwork, a stumbling block in the path of "progress".

This is not true in every case, of course. The impact statement as a tool has become very important for a number of reasons. It has provided a public disclosure of projects which has not occurred before. It has, over time, developed an environmental awareness in those bodies or individuals proposing projects. It has given a much broader and more complete view of what a proposed project might do to the environment. And, without question, it has helped bring to the more staid and traditional planning processes an environmental orientation that was seldom found in previous years.

The environmental impact statement process nationwide seems to be in a "holding pattern". Governmental officials, the general citizenry, and private developers alike are now used to its presence, and, given a properly devised and operating system, find that it can be a useful decision-making tool, even though sometimes quite a nuisance for everyone. As both the national and state environmental policy acts are maturing, so too are the EIS systems which help implement them. Legitimate efforts are made increasingly to do environmental impact statements on plans in the hope of making planning and the decision-making based on planning more environmentally sensitive. EISs are now being prepared on programs in an attempt to deal conscientiously

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[1] American Society of Planning Officials, statement found in a project narrative of a proposal submitted by ASPO to the Environmental Protection Agency.

with the cumulative impact of a multitude of projects and non-project actions. Such efforts are a very good sign of an increasing environmental awareness, but, as argued in sub-section B of Section V, we believe that they are misdirected. If the EIS process is applied to plans and programs, it tacks a detailed environmental review onto the end of the planning and programming processes. It does not, however, inject environmental considerations into the processes themselves. It does not provide for environmentally sensitive planning and programming at a time when alternative uses are truly meaningful, when most substantive decisions are made, before monies are allocated.

The relationship between planning and the EIS process is frequently argued from a different perspective as well. If a local governmental jurisdiction has a comprehensive plan, is that not sufficient to ensure environmental protection? Fortunately, it is increasingly widely recognized that the answer to this question is a resounding no. Current planning processes (together with existing permit processes) provide only a beginning on the task of collecting, analyzing, and using the site-specific environmental information that is necessary for environmentally sound decision making. We concur with the Minnesota Legislature in believing that MEPA (and its EIS process) is necessary at this time and that existing planning and permit structures are not adequate to provide the environmental protection and enhancement that are needed.

The overriding goal of both MEPA and the state's planning enabling statutes is to develop a better decision-making process. The tools offered to attain this goal are not the same, but they have one very important point in common. For either the EIS process or the planning process to be effective, the data on which both are based ("existing conditions" in an EIS) must be carefully collected and analyzed. In an EIS the analysis of existing conditions includes an exhaustive study of the pre-project environment, including geology, soils, flora, fauna, hydrology, etc. In the comprehensive planning process, the same kind of data, usually on a larger scale, is researched and mapped in order that the policies and goals of the municipality, county, or state can be properly related to the physical makeup of the jurisdiction.

It is this common need for environmental information that provides the base for a transitional tie between the EIS process and a comprehensive environmental planning process. We believe that a comprehensive planning program that is strongly oriented to the collocation of environmental information on a relatively small scale would go a long way toward fulfilling the overriding goal of MEPA: to ensure environmentally sound decision making. If such a planning program were implemented, the EIS as currently known should not be needed. Establishing such a program could not be easily or quickly accomplished, but we believe that it would provide an invaluable input into the decision-making process.

The mechanism which we recommend for developing this transitional program is the optional modification of local and state agency planning programs. This modification would result in the adoption of an "environmental element" in the planning program of the jurisdictions opting to implement

such a program, and the subsequent requirement that all planning implementation tools, such as zoning ordinances and subdivision controls, be in consonance with the adopted comprehensive plan, of which the environmental element would constitute a major part. It is anticipated that by adopting such an "environmental element" in a planning program, much information which is presently included in an EIS concerning a specific project site or alternative sites can be adequately covered in the planning process itself. This would not obviate the need for a project report of some type to enable the appropriate planning officials to correlate a proposed project with a given site (or sites) for the identification of potential problems. (This project report will be described in greater detail in sub-section B of this section.)

Before attempting to set forth specific procedural and substantive detail for this proposed planning program, a number of basic assumptions should be noted. First, it is assumed that the decentralized environmental impact statement program recommended in Section V will be adopted by Minnesota and that it will be applicable to all agencies of the State of Minnesota in one form or another.

Second, it can be assumed that certain agencies, cities and counties may well be confronted with numerous projects which will require some type of environmental review on a project-by-project basis. Such governmental bodies will most likely be those most interested in implementing an alternative program which would alleviate the need for massive and time consuming project-by-project impact statements. Local governmental agencies confronted with this type of situation will for the most part be those which are presently relatively well developed and undergoing change or continued development or those which are beginning to undergo development pressure of either a residential, commercial, or industrial nature.[1]

Third, the planning program to be presented assumes that there should be a desire in those governmental agencies which have already attempted to

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[1]It should be noted that project-by-project environmental analysis may be far more realistic, less costly and more practical to implement for small cities and counties, basically in rural outlying areas, than would the undertaking of a massive jurisdiction-wide environmental planning effort. Given the extremely large number of very small political jurisdictions in Minnesota, both municipalities and counties (as well as townships), it can be assumed that their ability to undertake a planning program as will be described below will be minimal. Further, they can expect to have few, if any, projects occurring within their jurisdictions that would ever require large-scale environmental review through a massive EIS undertaking. It is probably much more practical for these units of government to continue to operate under a project-oriented impact statement procedure than it would be to develop and implement an environmentally sensitive comprehensive plan. Their capabilities to develop an adequate comprehensive plan in terms of alleviating the impact statement requirements, and an RDC's or state agency's capability of assisting them in carrying out this task, do not make such a task appear realistic at the present time or in the near future.

develop strong planning programs to further strengthen those programs with a mechanism which would give them a proper alternative to a project-oriented impact statement program. It assumes that these jurisdictions, by their recognition of the importance of the role of planning in their decision-making process, will be amenable to strengthening that process to get away from that EIS syndrom which nobody really likes and to which everyone would like to find an alternative.

Fourth, since we are attempting to present an integrated program to the State of Minnesota, we must assume that the roles recommended previously for various agencies, particularly the Environmental Quality Council, the State Planning Agency, and the Environmental Management Hearings Board, are the roles such agencies will actually have.

Finally, a purplexing dilemma should be presented and brought to the forefront in the very beginning. As almost everyone recognizes, the EIS process which is usually oriented to specific sites on a small scale, requires the development of environmental information on a scale that is sometimes quite minute. For example, it may be relatively easy to identify soils of a given area in close detail if the area under examination is only a single acre. On the other hand, a city or county planning jurisdiction, not to mention the potential geographical jurisdiction of a state agency, will be many hundreds or thousands or tens of thousands of acres in size. The information collected on a jurisdiction-wide basis cannot, practically speaking, be of such minute proportions as can potentially be obtained when analyzing a specific project site. However, there are important trade-offs relating to the question of data scale. First, an environmental analysis for a given project usually lacks the data for the surrounding areas to show that project's locational interrelationship with surrounding environments. Second, on a larger scale, areas of potential problems can still be identified, and instead of doing a broad-based, small-scale analysis for a number of environmental categories, it should be possible to zero in on and research a specific problem or problems in greater detail if it is found necessary to do so, without going through a full environmental impact statement process. Finally, through a strengthening of the planning process as described below the overall ability of the decision-maker to become environmentally aware of the entire jurisdiction should be increased. Even though a certain amount of specific detail may be given up, the environmental planning program should develop a more environmentally balanced decision-making process on the whole.

B. The Environmental Planning Program for Local Governments[1]

Under present planning enabling laws in the State of Minnesota, neither cities nor counties are required to adopt comprehensive planning programs or plan implementation mechanisms such as zoning and subdivision controls. The present law merely empowers the local communities to undertake this type of planning. The environmental planning program proposed here does not purport to change this policy. Although it may be desirable from a pure planning standpoint to require all local units of government to plan and implement those plans with various control mechanisms, it is not needed to ensure immediately necessary environmental protection and is impracticable in any case. The environment should still be afforded adequate immediate protection through MEPA and the EIS process previously recommended.

However, if a local government does exercise its option to establish an environmental planning program to replace the EIS process, there should most assuredly be clearly specified procedures which it should undertake to accomplish it and minimum standards for the completed program. Consequently, the remainder of this section will be presented in three parts: (1) procedures for developing an environmental planning program; (2) identification and specification of the hard tools which should be found in this planning process; and (3) operation of the environmental planning program once it is adopted and certified.

(1) Procedures for Developing an Environmental Planning Program

A city or county must first make the policy decision to undertake the comprehensive planning program (or program update and amendment if it already has a comprehensive plan) which includes the elements necessary for moving from project-by-project impact statements to reliance on the overall planning program as its replacement. Once the decision has been made to move ahead, the planning agency for the jurisdiction should be required to file its intent to begin this environmental planning program with the Environmental Quality Council and the appropriate regional development commission. This "letter of intent" should be an outline of the steps the jurisdiction will undertake to accomplish the environmental planning program, including but not limited to the following points:

1. Development of statements on goals and policies relating to economic, social and environmental priorities and programs within the jurisdiction, involving the following groups in the formulation of such statements: (a) local citizens and citizen rep-

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[1]The basic system description will be presented in terms of municipalities and counties in Minnesota. Political townships which exercise comprehensive planning authority should be able to implement the program in much the same manner as that which is described here for a city or county. A discussion of state agency implementation of an environmental planning program will be found in sub-section C of this section. State agencies may be forced to look at an environmental planning process in a different manner than will a general purpose local government.

resentative organizations, professional groups, educational institutions, and other active civic groups; (b) representatives of industry and commerce within the affected jurisdiction; (c) the appropriate regional development commission; (d) the State Planning Agency, if deemed desirable and appropriate; and (e) other interested public officials and agencies of jurisdictions abutting or overlapping the jurisdiction undertaking the program.

2. Identification of the specific planning elements and sub-elements to be developed in the comprehensive planning process, which must include as a minimum[1]:

(a) Transportation element
(b) Community facilities element (including public utilities)
(c) Environmental element
(d) An inventory of current land use and water use
(e) Geographical identification of environmentally sensitive areas

3. A statement to the effect that during comprehensive planning program development, the governmental unit will undertake the development of a "project reporting" system which will replace the project-by-project environmental impact statement process. This system should include a listing of all projects which would not need any project reporting. The basis for the list should be the exemption list in the EQC rules and regulations governing the EIS process or a similar list which has been adopted by local ordinance and approved by the EQC for use in that governmental jurisdiction for the EIS process. Further, indication should be given that it is the intent of the jurisdiction to develop a short project report form to be used by the jurisdiction as part of the planning agency (staff) report to the Planning Commission, Board of Adjustment, or the local legislative body, and to state agencies as may be appropriate (The project report is discussed in greater detail in sub-section (2) below.)

4. The agency should identify its intent to implement the planning program, once formulated, with specific implementation tools (e.g., zoning and subdivision controls, performance standards, etc.) which will be consistent with and recognize the parameters developed by the comprehensive plan and its individual elements.

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[1]Items (a) and (b) are already described in the planning enabling legislation for municipalities and counties. Items (c) and (d) will be described in the next portion of this sub-section, and item (e) would be completed by taking the information developed in the environmental element and relating the physical data to the general statements of goals and policies and to the general parameters for environmental sensitivity which will be in the rules and regulations implementing amended MEPA. (See sub-section C of Section V.)

5. An estimate of (a) the timing of the program to be undertaken, with an indication of (b) how the governmental unit will accomplish the work elements (i.e., in-house staff, university assistance, consultants, RDC, etc.), and (c) what sources of funds it intends to utilize for developing the program, including local, state, and federal funding programs.

After filing the letter of intent to begin the program, the appropriate RDC and the Environmental Quality Council will comment on the general orientation of the proposed program indicating that the intent does or does not meet the requirements for such a program as established by EQC in rules and regulations for purposes of environmental planning. If it does not meet the intent of the EQC, the EQC will identify those items which have been left out or which need expansion. If the agency wishes to continue the development of the environmental planning program, and if the original letter of intent was found to be lacking by the EQC for whatever reason, the agency must reformulate the program and then resubmit the letter of intent. Acceptance of the letter of intent by the EQC indicates that if the intentions are carried out by the jurisdiction which is undertaking the program the program should meet future certification by the EQC. With acceptance of the letter by the EQC, the local jurisdiction may then begin its environmental planning program or its update and amendment process relating to an existing comprehensive planning program.

It should be emphasized at this stage that for the most benefit to be achieved in this type of environmental planning program, the agency should itself be responsible for doing the majority or all of the work, including background data accumulation, analysis, and integration into the comprehensive plan. However, it is recognized that this will not be possible in all cases. The situation may arise where the agency does not have or cannot obtain the necessary in-house expertise to carry out many of the necessary technical analysis functions. In recognition of this fact, local jurisdictions should be allowed to utilize outside assistance from RDC, state agencies, educational institutions, or consultants to help develop specific elements or sub-elements of the plan. The function of actually integrating the various elements into the comprehensive plan for the affected jurisdiction, however, should be completed by that jurisdiction if it is at all possible. The process of developing an environmentally sensitive comprehensive plan may be as important in developing environmentally accountable decision-making in a jurisdiction as actually having the planning documents and process once they are completed. Further, a comprehensive planning process is a dynamic program, with elements and interpretation of the plan constantly undergoing change, and the responsibility for adequately keeping up with the change will belong to the local jurisdictions, not some outside agency or consultant.

It is assumed that the development of the environmentally sensitive comprehensive plan or plan update will potentially take a considerable length of time and much intensive effort to complete. The agency undertaking the program should be able to seek and receive advice and assistance from the EQC or the State Planning Agency for program direction to assure

proper development. This type of contact should be encouraged by these latter agencies, whenever possible. Numerous technical questions concerning various aspects of the environmental sub-elements will undoubtedly arise, potentially requiring the assistance of other state agencies. Those agencies should also provide assistance to the jurisdictions undertaking such a program which have reasonable requests for data and/or assistance in interpreting and using the data.

Both the present municipal and the present county planning legislation allow for the preparation and adoption of a comprehensive plan. The municipality requirements for the preparation, adoption and amendment of a comprehensive municipal plan are given in Minn. Stat. Section 462.355 and the county requirements are covered in Sections 394.23 ("Comprehensive Plan") and 394.26 ("Public Hearing Required"). Under both statutes, adoption of a new comprehensive plan and amendment of an existing plan require a public hearing. We strongly urge that these procedures be followed for the adoption of the environmental planning program.

Once the plan and a detailed description of the planning process, as outlined in the accepted letter of intent to the EQC, have been completed, they should be transmitted to the appropriate regional development commission for comment. The regional body should utilize the established A-95 review mechanism to solicit review and comments on the proposed planning program. After review the documents will be returned to the local government. If needed changes in the plan are identified in the review process, the local agency would be responsible for making the appropriate changes or explaining why the recommended changes identified in the review process are not made. After the review and comment procedures by the regional body are completed, the next step would be the actual adoption of the comprehensive plan, using the existing statutory mechanisms cited above.

The local governmental agency, after officially adopting the comprehensive plan, would forward the plan, with the comments resulting from the RDC and A-95 review process attached, to the Environmental Quality Council for certification. The EQC would review both the adopted plan and the attached comments for compliance with the items outlined to be undertaken in the letter of intent and, further, for the details of the plan and plan implementation mechanisms to determine whether or not the plan is an appropriate substantive vehicle to replace the normal environmental impact statement system of project-by-project environmental review. The EQC would officially certify all such plans which came before them at their regular meetings. If the EQC found any procedural or substantive problems which would make certification impossible, they would comment to that effect, detailing the areas where problems exist, and return it to the local agency for revision. After appropriate revision to alleviate the problems identified by the EQC, the local governmental agency would officially amend the plan and resubmit it to the EQC for certification.[1]

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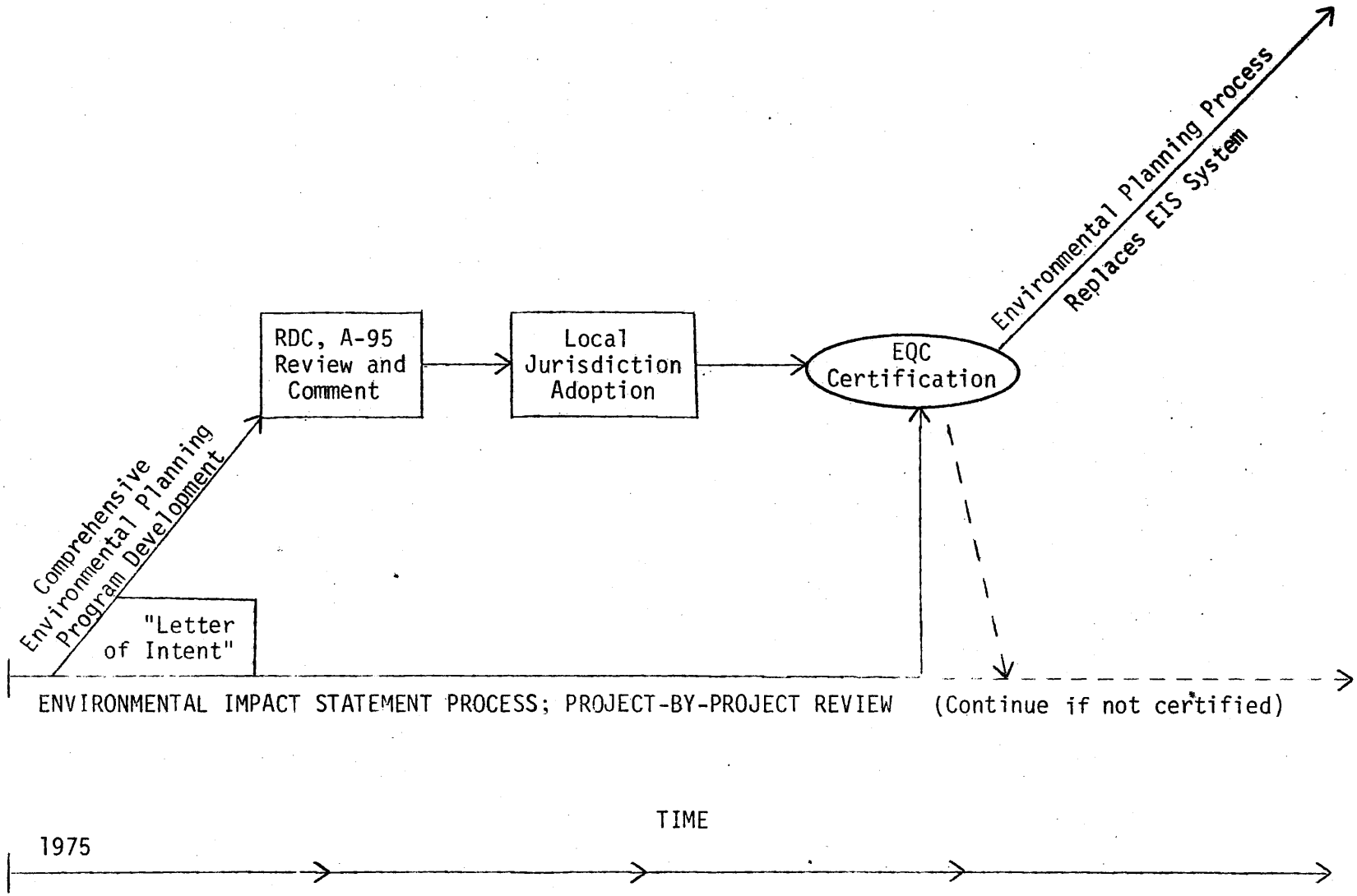
[1] A graphic display of the procedural steps recommended for establishment of local environmental planning programs is presented on the following page.



DEVELOPMENT OF THE ENVIRONMENTAL PLANNING PROGRAM

After certification, the local agency should immediately replace the MEPA impact statement procedures with the planning process procedures. It would no longer be required to go through the EIS process as detailed in Section V. Any subsequent substantial amendment to or revision or modification of the comprehensive plan by the local agency would require EQC review to determine whether or not certification within sixty days of being presented with the comprehensive plan revision, modification, or amendment, the plan, as modified, would automatically be considered to be accepted by the EQC. If the EQC revokes certification, it should detail the reasons why and return the plan to the local governmental agency. At the time of revocation, the adopted MEPA procedures would automatically be in effect for that jurisdiction once again, until such time as the local government reapplies for and receives certification from the EQC.[1] EQC certification, revocation of certification, and recertification should be appealable only to the courts. Any appeal should be limited to within sixty days of the EQC action.

(2) Environmental Planning Program Tools

In the development of the environmental planning process and the comprehensive plan by a local governmental agency, two specific tools must be constructed to ensure implementation of the completed program. Specifically, these tools are: (a) the environmentally sensitive comprehensive plan, including a number of new items such as the environmental element, the geographic identification of environmentally sensitive areas, and an inventory of current land and water uses in the jurisdiction; and (b) the project report, utilized in those instances when a proposed project is not specifically exempted from review under the planning process.

(a) The Environmentally Sensitive Comprehensive Plan

Currently, both the municipal and the county planning legislation allow the development of a transportation element ("plan" to use the exact terminology) and a community facilities element (or "plan") as part of the comprehensive planning process if a municipality or county opts to undertake comprehensive planning. For an environmentally sensitive comprehensive plan, we see these two elements as mandatory, due to the fact that one of the purposes of the plan will be to identify potential or future growth areas. Such facilities as roads, other transportation modes, sewers, water supply systems, schools, etc., are very important in facilitating or retarding such growth. In an environmentally sensitive planning program these elements clearly cannot be developed totally apart from input relating to such considerations as existing land and water use, ownership patterns, and environmental factors identified in an "environmental element".

One of the new elements which is an absolute requisite to the development of a responsive and responsible environmental planning program is the

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[1] Once certification has been given by the EQC, an amendment to the comprehensive plan should usually not require the EQC to revoke certification. Once adopted, any amendment will most likely strengthen the environmental considerations in the plan according to changing conditions in the jurisdiction.

"environmental element" of the comprehensive plan. We believe that this element should consist of eight mandatory sections and three optional sections. The recommended mandatory sections of the element and a brief explanation of each are presented below:

(a) Topographical Features: The jurisdiction should be mapped for slope, with particular attention given to critical (unstable) and steep slope conditions as well as normal gradients. Also included should be a description of any previous and significant man-made slope adjustments. Special attention should be focused on dominant and/or unique landforms within the jurisdiction.

(b) Soils: Relevant soil conditions should be identified and mapped, including their classification under an acceptable soil classification system.[1] Analysis should include comment on those soil types subject to erosion and slippage, with direct data developed on soil composition and particle size, and how these relate to soil permeability, compactability, and potential or existent agricultural fertility.

(c) Geological Substructure: A presentation of bedrock types and conditions to a depth of 400 feet should be the main emphasis of this sub-element. The substructure composition, depth of the composition and stability with respect to the soil overburden and potential for future construction should be indicated. Special geological considerations should be identified and include, but not be limited to, metallic and non-metallic mineral deposits, fuel deposits (coal, oil, natural gas), sand, gravel and other extractable resources.

(d) Hydrology: Basic to this sub-element is the identification of all water and water-affected lands. Included should be the identification of running surface water; intermittent flow stream channels where the flow is greater than 100 cfs; ponded surface water, including wetlands, major ponds, lakes and reservoirs; ground water recharge areas, and major aquifers in the jurisdiction. Specific attention should be given to any area with flood potential, and the 100 year flood plains should be delineated.

(e) Vegetative Cover Type: This sub-element should consist of the identification of major vegetative types with a minimum breakdown including forested areas, brushland cover, natural grasses, agri-

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[1] The issue of the utilization of common classification/nomenclature systems for data development will be discussed below. Suffice it here to mention that we recommend that it be the duty of the State Planning Agency, in consultation with other appropriate state agencies, to develop classification systems to be utilized for all data accumulation and analysis in the State of Minnesota. Obviously, there should be close interaction with the Minnesota Land Management Information System program in the establishment of a common classification/nomenclature.

cultural areas (by type of agricultural activity), and major man-influenced vegetative covers within urbanized areas. Particular attention should be paid to the identification and location of any species of flora which is considered "endangered" and any vegetative cover which provides the habitat for an endangered species of fauna or provides the habitat for a substantial community of wildlife (excluding the human type). Also, identification and mapped location of endangered species of fauna, if known, should be included in this analysis of vegetative cover. If further inventories of fauna located within the jurisdiction are available, they should be correlated with this analysis of the vegetation.

(f) Climatic Factors: Analysis and mapping should include the identification of maximum and minimum temperatures within the jurisdiction and any variations of such according to location; the amount and types of precipitation including rain, snow, fog, ice, their intensity, duration and seasonal occurrence; humidity levels according to maximum and minimum and seasonal variation; wind speed, direction and duration; and atmospheric stability, including periods and intensity of unstable air conditions as well as the identification of areas where temperature inversions occur or are likely to occur.

(g) Historic and Archaeological Features: This should include the identification of natural and man-made structures or areas which may be of a unique, rare, and/or special significance to the culture and/or history of the local jurisdiction, state, or nation.

(h) Unique Natural and Scenic Areas: Delineation should include those areas (both private and public) or transportation corridors which include views or vistas of landscape which is generally referred to by the local residents and tourists as having unique beauty.

The following sub-elements can be considered desirable in the development of the environmental element, but they should be made optional dependent on the needs and capabilities of the jurisdiction undertaking the planning program:

(a) Water Quality and Pollution: In light of the water systems which are identified in the hydrology section of the environmental element, this section would serve to identify the quality of those systems, particularly the surface ponds, lakes, and streams, and the subsurface ground water. Quality should be determined in terms of organic materials, inorganic chemical pollutants, bacterial and viral counts, dissolved salt or mineral content, dissolved oxygen concentration, mean temperature, and odiferous aesthetic quality. Also, all industrial sources of pollution of a hydrologic system should be mapped, identifying the type

of pollutants associated with the source. Mapping of major residential areas or subdivisions utilizing septic tank drainfield systems would be useful.[1]

(b) Air Quality and Pollution: If information is available, the airshed (or airsheds) showing the basic circulation systems should be identified. Existing air quality problems such as particulate levels, carbon monoxide, ozone, nitrogen oxides, hydrocarbon concentrations, etc., should be identified, and if data is available, isoplethed. Site-specific industrial and commercial sources of air contamination should be mapped, identifying the type of pollutants associated with each source. The volume and dispersion rate of these site-specific pollutant sources would be useful information to include, also.[1]

(c) Noise: If this sub-element is undertaken, it should be developed in two sections. First, a quantitative analysis of present noise levels associated with highway, railway, and airport transportation systems should be developed and presented in terms of noise contours expressed in any standard acoustical scale which includes both the magnitude of noise and the frequency of its occurrence. Noise level contours should be shown in minimum increments of five decibels and should use 50 db(A) as a lower limit. Second, the jurisdiction should project noise contours based on transportation expectations as presented in the transportation element for two five-year intervals dated from the present.

It is recognized that the development of the above elements will be a time-consuming, difficult process. In many municipalities or counties, the data necessary will already have been developed for the production of such elements to a degree meeting the outlined requirements with little or no updating necessary. In other jurisdictions, the majority if not all of the data research must start from point zero. In any case, certain standard parameters should be followed by all jurisdictions in the development or updating of their transportation and public community facilities elements and in the development of the new environmental element.

First, as noted above, a common system of classification and/or nomenclature should be established and utilized by all agencies undertaking this type of planning effort and by those bodies involved in doing specific area or program studies which could provide information to a jurisdiction wishing to undertake such a planning program. It is anticipated that the State Planning Agency will provide the common classification system to be utilized in the preparation of data for each of the planning elements required in this program.

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[1]This sub-element, if developed, should be related to existing land use, and, if a specific land use element is developed as allowed by law, should relate to projected areas of residential, commercial and industrial use as well as to existing and future transportation corridors.

Second, some type of standardization of the size of data unit utilized by the various jurisdictions needs to be set. On the one hand, enough detail has to be presented to allow the planning process to be site-sensitive, but on the other, the size cannot be so small as to pragmatically preclude the development of necessary data for a jurisdiction. Because of the different basic geographical sizes of cities and counties, we believe that one data unit size should be used by municipalities (and urban townships which undertake planning) and a larger unit size should be used by counties (and the other townships). The recommended data unit scale for municipalities and urban townships is one inch equallying two hundred feet (1"=200'). The recommended data unit for counties and non-urban townships is one inch equallying two thousand feet (1"=2,000').[1] This larger data unit size will most assuredly not be sufficient for relatively small projects. However, it should provide sufficient informational parameters for those projects which would otherwise be found to be environmentally significant under an EIS system, such as large-scale residential subdivisions, commercial developments, and industrial activities. It is recognized, though, that even small developments in areas identified as environmentally sensitive may have adverse environmental effects. For this reason, it is strongly urged that as a county which opts to undertake this environmental planning program geographically designates environmentally sensitive areas, it also produces data information for these areas at a scale of 1"=200'. This should provide sufficient detail on existing conditions for the analysis of even small projects which are proposed for these sensitive areas.

Another major element of the comprehensive plan which needs to be developed by local jurisdictions is the identification and mapping of environmentally sensitive areas. It is suggested that the criterial parameters for environmentally sensitive areas established for the EIS process be utilized by local jurisdictions to give them directional assistance in delineating these areas. (See sub-section C of Section V of this report.) We strongly urge that the specifics of what is to be included as "environmentally sensitive" be developed by the local jurisdictions, reflecting their own determinations as to those resources or land areas to which they wish to give the strongest protection. Because of the wide variation of environments found in Minnesota, what may be considered environmentally sensitive in one county may be a condition that is not considered sensitive in another. We strongly recommend some consistency in the application of criteria. Delineation (or non-delineation) of environmental sensitivity should be closely monitored by the EQC in order to determine whether or not a local jurisdiction is implementing the intent of the environmental sensitivity parameters outlined in rules and regulations for the EIS process. Determination of environmentally sensitive areas which can be geographically mapped for a given jurisdiction should obviously occur in the latter stages of the environmental planning program development. The information outlined for development in the environmental element should be invaluable for this planning function.

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[1]Counties may find it desirable to supplement their basic data based on the 1:24,000 scale with data developed on the same scale as the municipalities. This would be particularly useful for (1) those unincorporated areas of a county essentially identified as urban or those areas under immediate pressure for future development or some other type of use not consistent with its present use; and (2) areas the county may designate as being environmentally sensitive.

The final major element of the comprehensive plan which needs to be developed is an inventory of current land and water uses in the jurisdiction. Most local governmental agencies which have attempted to develop a comprehensive planning process have at some point inventoried land and/or water uses in their jurisdictions. This type of inventory is imperative to an environmental planning program because it will point out any existing uses which may have a strong influence on future growth and development patterns. Existing uses may or may not be the optimal uses for any given area after a comprehensive environmental element is developed. However, most uses, until abandoned or changed, cannot be affected unless a specific effort is made by either the private or public sector to alleviate existing conditions which may be detrimental to the community. It is recommended that an inventory of all existing uses, utilizing some type of standard classification system, be developed as part of the comprehensive environmental planning program. Further, one part of this inventory should include the identification of whether the land and/or water is of public or private ownership. If it is of public ownership, the body of government which is the owner should be indicated. It has been found that many general purpose governments do not know which properties in the jurisdictions are owned or used by public agencies, including themselves. Identification of public lands may well result in different (perhaps more stringent) mechanisms for the implementation of the environmental plan than can be used with respect to private lands, since there would be no question of the infringement on private property rights in these areas.

(b) The Project Report in the Planning Process

One aspect of the environmental impact statement process which it seems quite desirable to retain, hopefully in a much simpler form than the obtrusive environmental impact statement, is the mechanism for relating the details of proposed projects which may significantly affect the environment to their proposed site location (or alternative locations). The impact statement system accomplishes this goal quite laudably, even though the process and the document itself tend to be laborious. However, the present planning processes of local governments which have planning processes and which have professional staff to assist in implementing planning and zoning programs also already have a mechanism to assist here. Usually, when a project proposer comes to a local government for a permit or a variance of some type (e.g. a zone change), which requires authorizing action by the planning commission, board of adjustment, or the jurisdiction's legislative body, the professional staff presents a written and/or verbal staff report to whichever body will be passing judgment on that project on the details of the project and what the project might mean to the jurisdiction. It is anticipated that with an adopted environmental planning process, the best elements of both of these systems (the EIS-type of detailed analysis and the planning-type of staff report) can be melded together in an extremely useful document that is of manageable proportions and which will have much more meaning to decision makers than will a complex, hard-to-follow and lengthy impact analysis, without sacrificing environmental disclosure or protection, since these latter elements will be integrated into the system.

The key document involved in the environmental planning program, once it has reached the stage of implementation, is the "project report." Briefly, the project report might be similar to the Environmental Clearance Worksheet (ECW) presented in Appendix C to this report. The first two pages of the ECW, which deal specifically with the details of the project (i.e. basic description, location, and description of operating characteristics) would most likely remain the same. However, the last four pages of the ECW, which deal with the description of the project area and a summary of anticipated impacts, can be substantially shortened and modified to reflect the fact that this information should now be available in the planning agency and already a matter of public record. A proposed format for a "project report" form is included as the following four pages to give a general indication of the type of document we would recommend as being useful in the environmental planning program and the decision-making process which it is designed to assist.

As will be discussed in detail in the following sub-section, the project report form would only be utilized when a project is found not to be exempt from the specific analysis required in a project report. The exemption procedure should be similar to, and possibly the same as, the exemption system recommended for the environmental impact statement process in Section V of this report. In the exemption system recommended there, the exemptions relate to determining environmental significance. If a project is exempted, in the EIS process, it is automatically assumed that it will have no significant environmental effect. The same criterion should hold true for a planning process. Emphasis and more specific analysis should be given to those projects which have the potential for significant effects and certainly not given to every proposed project which comes under the purview of a governmental jurisdiction.

The most important substantive element of the project report form is found on the the third page of the model (page 133). That is, information is requested on whether or not the proposed project is in consonance with the adopted comprehensive plan, the various elements of that plan, and the implementing ordinances and tools utilized by the jurisdiction. If it is not, any and all variations are to be described and the problems caused by those variations are to be identified. An example might serve to emphasize this point. In many instances, a project will have only one particular environmentally significant problem associated with it.[1] The only mechanism for addressing such a problem in an EIS system is a full-scale environmental analysis in an impact statement, quite often involving a number of categorized analysis areas that are found not to be of any consequence <u>after</u> the analysis is completed. There is no good mechanism at the present time for weeding out the real problem areas from those that aren't problems until after a total analysis of the project is completed. Further, it is likely that the one problem area that does exist, say, for example, the capability of the soils to handle septic tank drainage, will not be given the level of analysis that is really necessary to solve it. The problem

[1] A good example of this kind of case is the Dayton School proposal brought before the EQC. See a brief summary of this case (#P-043-74) on page A-10 of Appendix A to this report.

PROJECT REPORT FORM

This form provides the basic information necessary for an evaluation of a project which has been found to be non-exempt in the Comprehensive Planning Program. The Planning Agency and other responsible officials will utilize the information provided here in their decision making relative to the proposed project.

Name of Project Sponsor _____

Address of Project Sponsor _____

Phone of Project Sponsor _____ or _____

Project Report Identification Number _____

I. PROJECT DESCRIPTION

A. Project Location (a locational map of the project site should be attached):

B. Brief Project Description:

C. Amount of Land Involved in the Project:

D. Operating Characteristics:

1. Residential projects (not including transient accommodations)

a. size, number, nature, and address of structures

b. anticipated number of occupants at normal full occupancy

c. anticipated number of autos and parking spaces

d. proposed access to major roads and transportation facilities

2. Non-residential projects

   a. size and number of structures

   b. number of people to be employed

   c. types of equipment and/or machines to be employed

   d. number of parking spaces required and traffic generated

   e. types of materials processed, packaged or stored

   f. prepared access to major roads, rail,water or air facilities

   g. transportation modes to be used by employees and customers

   h. transportation modes used for raw materials and products

   i. transportation or disposal of water products (solids, liquids, gases)

II. Will the project result in the emission of discharge of air and/or water pollutants? If yes, detail the type, quantity, and frequency of occurrence.

III.. Will the project produce objectionable noise, vibration, light, or odor? If yes, give specific details, quantifying projections of intensity if possible.

IV. Are any variances from the comprehensive plan or plan implementation controls (e.g., zoning ordinance, subdivision ordinance) needed for project approval? If yes, cite the variances necessary and the reasons why they are needed and detail any mitigating measures which could be implemented to offset any adverse effects which could occur because of the granting of the variances.

V. Are there any other problems associated with the project which are not addressed in either the comprehensive plan or this project report? If yes, give details.

(If additional space is needed for answering any of the above questions or for providing more detail about the project, additional pages should be attached.)

VI. Other agencies of the State of Minnesota which can reasonably be expected to have jurisdiction over or other interest in the proposed project and to whom this Project Report is being sent:

1.

2.

3.

4.

5.

6.

7.

VII. Other pertinent comments concerning the proposed project:

Acting official _____

Position _____

Agency _____

Address _____

Phone _____

Date _____

Signature _____

tends to be alluded to and then lost in the environmental shuffle. Under the environmental planning program which utilizes a project report, this situation would not arise.

If clarification is needed with respect to a certain problem or problems raised because of a request for a variance from the comprehensive plan or its implementing ordinances, or if a project is found to cause substantial problems for one of more of the sub-elements included in the comprehensive plan, this clarification should be expanded in an attachment to the project report. It may well be the case that certain design or implementing measures included as part of the proposed project will mitigate any adverse effect resulting from variations to the planning program. In any case, no more information than is actually necessary to answer questions about the implementation of the proposed project should be included in the project report.

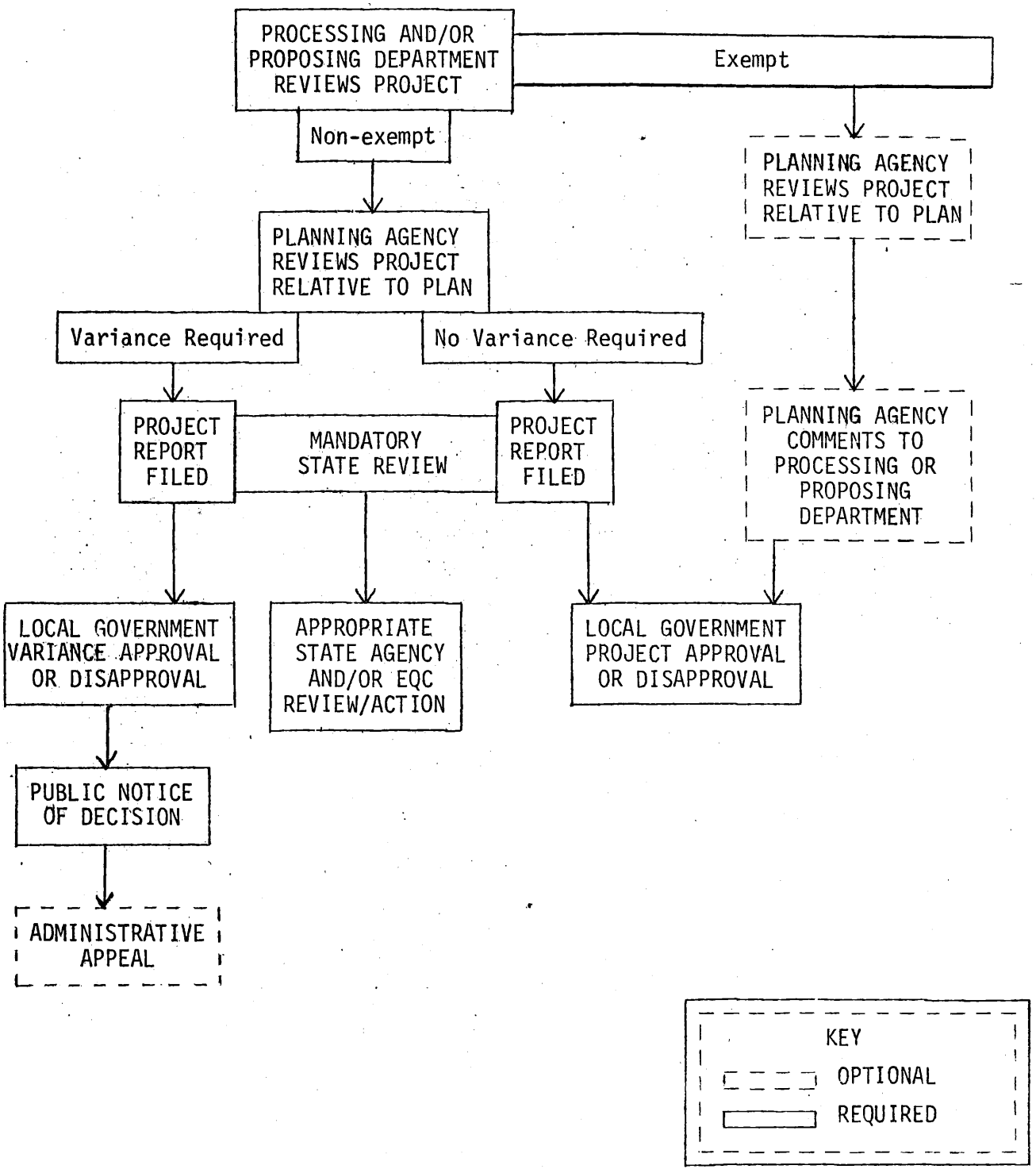
It is assumed that the project report can be filled out by officials in the planning agency with assistance from the project proposer (in the case of a private project). Certain items relating to project details and operating characteristics will, of course, have to be provided by the project proposer. However, any questions raised due to variations from the comprehensive plan or implementing tools should be jointly addressed by the planning agency and the project proposer. In all cases, the final project report should be prepared by the planning agency, since it is that agency's responsibility to provide the evaluation of the proposed project to the decision-making bodies. The project report would thus be utilized as part (or potentially all) of the planning "staff report" to the planning commission, board of adjustment, municipal or township council, or county board.

(c) Operation of the Environmental Planning Program

Up to this point the measures which need to be taken to develop an environmental planning program at the local level have been identified and a description has been given of specific tools that are necessary to implement the program in addition to the present planning legislation and requirements presently established for local jurisdictions in Minnesota. The present sub-section will outline and discuss the operating steps which need to be taken once the planning program has been developed and certified as a replacement for the impact statement process. The general details of the operating system for the environmental planning program are outlined in a diagrammatic flow chart on the following page.

The first step in the operating program is triggered when a project is first proposed by a department of the local governmental jurisdiction or when a project proposed by another agency (state or federal) or by a private party first comes to the municipality, township, or county for local approval or disapproval (i.e., a permit, license, zone change, subdivision approval, etc.). If it is a project proposed by the jurisdiction itself or a department of that jurisdiction, the local official who proposes that project will examine it to see if it is exempt or non-exempt. If

OPERATION OF THE ENVIRONMENTAL PLANNING PROGRAM



it is a project proposed by a private party or another governmental jurisdiction, the department which is first confronted with it will determine whether or not it is exempt.

The exemption classes would be prima facie the same as the exemption classes adopted for statewide application by the EQC for the EIS process. (See sub-section C of Section V of this report.) A local jurisdiction may have adjusted those exemptions to meet its own needs if it adopted an ordinance providing for local implementation of the EIS process. Further, modifications of those exemption classes may have been proposed for certification in the development of the comprehensive planning program. If the jurisdiction made no changes by ordinance or comprehensive plan adoption in the statewide exemption classes established for the EIS process, the statewide exemptions for the EIS process would automatically apply to the environmental planning program.

The exemption program would, however, be different from the EIS exemption program in one important respect. While the "environmentally sensitive area" rider on the EIS exemption system would be retained for the planning program, a second rider would have to be added as well. No project should be exempted if it requires any type of variance from the comprehensive plan or any tool used in implementing the comprehensive plan. A project report should be required on every project for which such a variance is required, and the report should specifically address the issue of the variance(s) involved.

If a project is exempt, the planning agency should be allowed (but not required) to review and comment on the exempted activity as it relates to the comprehensive planning program. The planning agency could exercise this option for review and comment on its own initiative, or it could be asked to review and comment on the project by the department proposing the project or the department which must decide on or advise a decision on the project. In any case, when a project is exempt, review and comment by the planning agency with respect to the comprehensive planning program should be optional. If such review is undertaken, it should be required to occur within the normal time limits specified for the local governmental approval or disapproval of the exempted project. The planning agency review should not be allowed to unreasonably delay a project beyond the normal period established for a decision on the project.

If a project is not exempt, it is automatically forwarded to the planning agency for review relative to the comprehensive plan and plan implementation tools. Determination should be made at that time if a variance from the comprehensive plan, or a variance from any officially adopted tool designed to implement the comprehensive plan, is necessary for project approval. If no variance is required, the planning agency, with the assistance of the project proposer, would complete the normal project report form. If no variance is required but the project presents minor problems or questions with respect to its fit with the comprehensive plan and its implementing tools, such questions and/or problems should be specifically addressed in the project report. A maximum of thirty days should be allocated to the preparation of a project report if no variance is required, unless specific problems are uncovered and additional time

becomes necessary to address those problems. In no case should preparation of the project report be held up by the planning agency if no problems are found relative to the environmental planning program in general and the comprehensive plan specifically. The project report would then be attached as a planning agency document to accompany the project through whatever decision-making process is necessary.

If the project is determined to require any type of variance from the comprehensive plan and/or implementing tools or controls for that plan, a project report, including all above considerations should be developed for the proposed project. Included in this project report, however, would be an additional section specifically addressing the variance or variances that are required to implement the project, the reasons why the variance is necessary in order to accomplish the project at the proposed site location, and a delineation of measures which may mitigate any adverse effects which could occur if that variance (or variances) were granted to allow for the implementation of the proposed project. This project report would then be attached as a planning agency document to accompany the project through the decision-making process. When any body representing the jurisdiction approves or disapproves that project, substantial consideration must be given to the identified mitigating measures as potential conditions for project approval, particularly if those measures are identified as being necessary to protect the integrity of the comprehensive plan and the environmental planning process.

Concurrent with the time the planning agency reviews the project and begins development of the project report, regardless of whether it requires a variance or not, a determination should be made as to whether or not the proposed project is of "statewide concern". 'Statewide concern' has the same meaning for the planning program that it has for the EIS process, indicating that the project is one of those listed in sub-section D of Section V for close state agency supervision. This mandatory state review process encompasses eleven categories of projects, and whenever a local governmental unit is confronted with one of these types of projects, it must notify the state agencies most likely to have an interest in the project and file its project report with those state agencies when it has completed the document. If a local government determines that there are problems which need to be addressed in the project report for projects of statewide concern, it may request assistance from the state agencies involved with the proposed project in the development of the project report. It shall be the duty of any state agency which has action to take relative to that project, to assist the local governmental entity to the best of its ability and resources in the development of the project report. Once the project report is completed, the local governmental unit may continue with its approval/disapproval process as per its established procedures.

In all cases for which a variance is requested, public notice of the decision on the variance should be required to be given by the local governmental body. Public notice here would be in the same manner as that described for public notice given for final environmental impact state-

ments, described in sub-section F(5) of Section V. Public notice should be required within seven days of the approval or disapproval of a variance. The date of the public notice should constitute the beginning date for a sixty day statute of limitations on any type of administrative appeal[1] of the decision on the variance, which the public notice would be required to state. (See page C-15 of Appendix C to this report.) If an appeal is not registered within the sixty day period, the decision on the variance made by the local government would stand. It would not be appealable at any future time, regardless of future authorizations which must occur concerning the proposed project. Appeal of the decision on any variance could be filed with the Environmental Management Hearings Board by any public agency, the project proposer, or any citizen in the area to be affected by the project in question.

The Environmental Management Hearings Board should be authorized to hold a formal hearing on any variance decision referred to it. The Board should have the power to reverse or modify the decision and cause action to be instigated by the local government which made the decision. Any such orders by the Hearings Board would be binding upon all parties involved (barring subsequent reversal in court). The Board's refusal to hear an appeal should also constitute a final order tantamount to approval of the local decision made. Individual Board members should also be empowered to hold hearings (and the Board should be able to hire hearings examiners) for the purpose of fact-finding. The findings of fact resulting from such would be presented to the full Board for a decision. (See sub-section G of Section V of this report for further detail on recommended Appeal Board procedures.) Court appeal of a Board decision should be required to be filed in district court within thirty days of the rendering of the final Board decision.

In the process of the operation of the environmental planning program in any local jurisdiction, any information that is developed in conjunction with a project report, or through the preparation an environmental impact statement or other research program undertaken by a state of federal agency which has bearing on the comprehensive plan of that jurisdiction (particularly the environmental element of that comprehensive plan), should be automatically incorporated. If that information substantially changes the nature of direction of the plan or brings to light new environmental data which substantially modify or affect the carrying out of the comprehensive plan program or its implementing tools, it should be included in the planning program by amendment to the plan. It is anticipated that a constant up-dating will be necessary as projects occur and conditions change in the local jurisdiction. However, minor adjustments in the comprehensive plan or individual elements should not trigger a complex system of plan

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[1] If there are existing "appeal" mechanisms within a local government (e.g., appeal to the board of county commissioners), a final decision from the local appellate body would be required as the final local decision before a variance decision could be appealed to the Environmental Management Hearings Board as described below. In such cases, appeal to the local appeal body would be governed by existing local statutes of limitations, and the sixty day period mentioned in the text for appeal to the Environmental Management Hearings Board would date from public notice of the final local decision.

amendment. Only when a substantial number of "minor" adjustments have taken place or a substantial new body of data has been developed which significantly affects the comprehensive plan should a systematic up-date and amendment occur.

Finally, it should be stressed again that the above-described system is designed to operate as an optional process for local governmental jurisdictions desiring to ensure environmental protection and enhancement which are looking for a different and more meaningful decision-making process than that which is afforded by project-by-project environmental impact statements. This type of planning program appears to us not to require changes in the present local government planning enabling acts, although it will require some type of legislative authorization.

C. The Environmental Planning Process and State Agencies

The role of Minnesota state agencies in the environmental planning process should essentially take two directions. First is interaction with the local governmental jurisdictions which decide to implement a local environmental planning program. And second, state agencies will be concerned with agency capabilities to undertake an environmental planning program similar to that which has been outlined for local implementation. The present sub-section will focus on these two points as well as try to delineate more specifically the role of the State Planning Agency and the Environmental Quality Council in the environmental planning program proposed here for Minnesota.

(1) State Agency Interaction with Local Governments

As described in sub-section D of Section V, there are certain types and classes of projects which should automatically call for state agency supervision. These have been referred to previously as projects of statewide concern. This system would not change under the environmental planning program. Projects of statewide concern would continue to be directed to the appropriate state agency(s). However, there is one derivation from the EIS system which becomes exceedingly important. That is, if a project of statewide concern occurs in a jurisdiction which has an adopted and certified environmental planning program, a state agency's involvement with that project may not need an EIS even if the project is environmentally significant. As noted above, the local unit of government must submit its "project report" on such a proposed project to the state agency(s) involved. If there are no, or only a very few, specific problems delineated in the project report, the involved state agency(s) may be able to assist the local government in specifically handling those identified problems without the extensive analysis necessary in an EIS. In fact, those problems may well be controlled by the various permit or licensing activities of the state agencies which have authority over the project. If the permit authority of the state agencies does in fact adequately address the problems which are identified in the project report or if those problems can be solved in some other way, there should be no need for an environmental impact statement. If the basic site-specific environmental questions, including delineation of existing conditions data, are essentially addressed through the local comprehensive planning program, there should be no need for state agency involvement beyond that which is specifically mandated for those agencies in their permit or licensing authority supplemented with very specific studies as necessary. In jurisdictions where an environmental planning program has not been established, the normal procedures detailed in Section V should still be followed.

A second major aspect of state agency interaction with local governments is providing local jurisdictions with information (a) to be used in the development of the comprehensive plan, and (b) which may be necessary to adequately address specific problems related to projects which are not of statewide concern. In both instances, it would be difficult, if not impossible, to require state agencies to provide necessary data and information to local units of government every time a request came in. However,

it is important to urge that state agencies, to the very best of their ability, assist those local governments which are undertaking an environmental planning program or which have actually implemented the program. Although it is desirable to develop as much self-sufficiency on the part of the local jurisdiction as possible, there are numerous technical questions on which state agencies can and should provide assistance to local governments. Further, state agencies should not wait for requests from local governments for assistance, but rather offer generally to assist those jurisdictions which are attempting to implement a planning program, or to assist on specific projects which may cause problems for local units.[1]

(2) State Agency Implementation of an Environmental Planning Program

Before discussing the possibility of state agencies actually undertaking and implementing and environmental planning program (or programs) patterned after that which has been recommended for local governments, two specific problems unique to state agencies must be mentioned. First, the question of state agency geographic jurisdiction presents a major stumbling block. The environmental planning program outlined for local governments requires an actual physical plan, mapped and recorded, which would provide site specific information for project-by-project evaluation. The smallest scale which we recommend for this type of analysis is 1:24,000, which is suggested for use by counties in basically non-urban areas. Most state agencies have as a practical jurisdiction the entire state of Minnesota. Developing detailed information on a 1:24,000 scale for the entire state is not a realizable goal within the foreseeable future.

The second major problem is that most state agencies are not "general" governmental bodies. That is, they usually do not exercise overall authority for project implementation, but rather exercise control over parts of projects via their permit (and other approval) systems. When they do exercise control over the entirety of a project, they are usually the project proposer. Such public projects are frequently associated with a specific type of program under their administration (e.g., the state parks program, under the Department of Natural Resources). It may be the case that agencies which administer programs of this type could develop an environmental planning program very similar to that proposed for local governments if they also have capability of developing the necessary environmental informational base on the lands where the programmed projects (like parks) may be situated.

There are a number of circumstances under which a state agency might fruitfully undertake an environmental planning program, particularly for specific program activities under its jurisdiction. First, if an agency has review authority or control over a program which is somewhat limited in

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[1]With respect to information availability, it is to be hoped that the Minnesota Land Management Information System will eventually at the very least provide general data to jurisdictions requesting information, and more hopefully, specific small-scale data for areas of special study which may be undertaken by the statewide information program.

its geographical coverage, the agency might find it quite desirable to begin an environmental planning process for that particular program implementation. Secondly, if an agency administers projects or has authority over private projects which substantially occur in local jurisdictions which have exercised their own environmental planning programs, the agency could utilize and build upon that local planning base. And thirdly, if at some time in the future the statewide information system is developed in detail which will allow project evaluation anywhere in the state, or within a given regional area, it may behoove an agency to begin to undertake a comprehensive planning program at that time.

In any case, it appears that at the present time an environmental planning program which can be effectively undertaken and implemented by state agencies is probably impracticable. This is not intended to discourage any agency from attempting to do so. If the environmental planning program alternative is legislated as an option for local governments to undertake in order to replace the EIS process, we whole heartedly recommend that the same option be made available to state agencies. However, since trying to detail here a general program which all state agencies could develop which would be responsive to all programs and program jurisdictions would be a fruitless exercise, we further recommend that state agencies be given relatively broad latitude in the structuring of the environmental planning program they wish to undertake. It may even be the case that two or more state agencies would find it prudent to undertake an environmental planning program together. State agencies should be directed to utilize the system recommended to the local units of government as a criterial model from which they should attempt to develop their own system responding to either a specific program or project authorizing activity in which they may be involved. If a state agency undertakes the development of such a planning mechanism, it should follow the general procedure of filing a "letter of intent" with the Environmental Quality Council indicating its intentions and outlining the environmental planning program it wishes to undertake. Upon completion of the planning program, EQC certification would be necessary before it could be considered an adequate replacement of the impact statement process.

(3) The Role of the Environmental Quality Council

The function of the EQC is anticipated to be much the same as that which has been outlined for it in Section IV of this report. Obviously, the Council would have some additional duties if and when local and/or state agencies attempted to implement an environmental planning program. First, the EQC would be the recipients of "letters of intent" to undertake such planning programs. It would be necessary for the EQC staff to comment on and critique all letters of intent to assure that the governmental agency undertaking the planning program does not have any mistaken or misdirected steps in its planning program. Second, the Council would have the sole authority over the certification of a completed program with respect to its replacement of the environmental impact statement process. Third, its role of coordination between state agencies would become even more critical as state agencies attempt to develop environmentally sensitive

program plans which will remove them from the EIS requirements, at least for certain specific programs. Finally, they may become involved, probably rarely, in certain individual project questions. This involvement would occur only in relation to projects identified as being of statewide concern which were located in a local governmental jurisdiction or other area which is geographically part of a certified environmental planning program. In this case, if the project report, coupled with the planning process, is felt to be environmentally adequate for state agency project approval (or disapproval), the state agency or agencies which have to approve the project should be able to petition the EQC not to require an environmental impact statement, even though the project may be found to be environmentally significant. If no such petitioning occurs, the Council should deal with an individual project which occurs in local jurisdictions with an adopted and certified planning program if and only if that project raises an issue of statewide policy or an issue relating to interagency coordination. All other questions relating to individual projects should be handled by the appropriate local jurisdictions and state agencies, the Environmental Management Hearings Board and/or the courts.

(4) The Role of the State Planning Agency

In addition to providing staff for the Environmental Quality Council, as recommended in Section IV, the main function of the SPA should be the provision of technical and financial assistance (if state funding is available) to local governments which undertake an environmental planning program. A particularly important function would be the provision of environmental information derived from the MLMIS program as it progresses. Also, if the SPA is the depository for all impact statements and other environmental documents which are filed for projects occurring throughout the state, and if it undertakes to utilize the environmental data from these documents in the statewide information system program, as suggested previously, the site and/or area specific information which is developed in this program may be of specific use to a local jurisdiction. Finally, the SPA may be saddled at some future time with developing a "statewide plan" using as a basis the various planning programs and information collected from other governmental agencies as well as the data that will be accumulated in programs such as the MLMIS and Critical Areas Planning Program, which are presently housed in the State Planning Agency.

D. Concluding Remarks

As the present section has progressed, it should have become apparent that the development of an environmentally sensitive planning program, designed to replace an impact statement system, will be no small undertaking. It is not intended to be. As pointed out in the introduction, environmental impact statements may provide review assistance for decision-makers on individual projects as a tactical measure, but they do little to strengthen the overall strategic machinery for institutionalizing environmental concerns in the day-to-day total decision-making effort. An environmental planning program which becomes part of that everyday decision-making system should provide a far more adequate strategic approach.

A number of potential discussion areas have either been ignored or have been brushed by in summary fashion. Perhaps brief comment on some of the most important of these is called for at this time. First, no mention was made of the Critical Areas Planning Process. This is not to say that the Critical Areas program was not considered in the formulation of the planning program presented in this report. In fact, it was a primary consideration. The Critical Areas program, though, has a somewhat different purpose from the program suggested here. The environmental planning program is designed to complement existing planning in the State of Minnesota, particularly that planning designed for implementation in municipalities, counties and townships. It is designed to strengthen those planning programs environmentally so that a viable alternative to project-by-project impact statements can become a reality rather than just a nice point for futuristic discussion. At the same time, this program is also quite complementary to the Critical Area process, in terms of both the content of the final planning product and the basic procedures in achieving that product. The chief difference is that the environmental planning program can be, and at some point hopefully will be, implemented by any and all general governmental jurisdictions in Minnesota, whereas the Critical Areas program is designed for limited use and not oriented to existing political jurisdictions but rather to areas designated by very specific criteria. In any case, the two programs should be able to work hand in hand, and in fact, if they are being undertaken concurrently in any given jurisdiction, should make the basic planning work in terms of the actual development of the plans a much easier task for both programs.

A second area which was only briefly examined is the role of the regional development commissions. It is anticipated that the RDCs would take on a support role with respect to local governments which attempt to develop this type of planning process. They should provide technical and informational assistance insofar as they have the capability. They should attempt to coordinate the planning efforts between and among the jurisdictions within their boundaries. Finally, they may find it desirable to undertake a more broadly based environmental planning program for their entire region in order to help provide the proper policy direction to the local units within their jurisdictions for future development and/or preservation activities.

Another potential concern of reviewers of this study who are acquainted with the positive attributes of the environmental impact statement program are the fact that EISs facilitate public disclosure of projects and other activities that would not otherwise occur and the fear that the proposed environmental planning program recommended here would not provide for the same type of project-by-project public disclosure. Though this fear may be well-grounded to some degree, there is a good deal to be said in response. First, it is expected that all project reports will be a matter of public record and should be made available to any member of the public who wants a copy for a cost not to exceed the actual cost of reproduction. Secondly, the whole environmental planning process is oriented to making project decisions based on a pre-existing, environmentally accountable planning process. If decision makers do utilize this type of accountable process, the need for immediate public disclosure in the case of every project should be minimized. In any case, when a project decision is to be made which involves any variance from the adopted comprehensive plan or from adopted plan implementation tools, which will have been certified by the EQC, a public notice of that decision is required. If citizens with legitimate complaints about the decision made feel that those complaints were not adequately handled in hearings or meetings leading to that decision, they would have the right to challenge the decision makers before the Environmental Management Hearings Board, and ultimately in the courts. The citizens may be giving up a detailed document (i.e., the EIS) which has been effective for public disclosure purposes, but they should be receiving in return a far better and more environmentally balanced decision-making system.

Finally, the point should be made once again that the environmental planning process, just like the environmental impact statement process, is only intended to provide an <u>input</u> into existing decision-making processes. Neither guarantees that "good" decisions will be made. We can only hope that the environmentally sensitive comprehensive planning program recommended here would be the beginning of a strategic process which will institutionalize a more environmentally accountable decision system than is currently available.

APPENDIX A

The Disposition of Cases Brought Before the EQC under MEPA

The present appendix consists of a brief case by case summary of the cases submitted to the Minnesota Environmental Quality Council under MEPA from the Council's inception through November 12, 1974. The summary focuses on the question of whether or not an environmental impact statement is to be required on the action in question, though brief commentary is provided on other interesting aspects of the cases as well.

The "decision" date referred to is the date on which the EQC decided whether or not an EIS would be required. The numerical code used to identify action proposals brought to the attention of the Council is the code that is used by the Council itself. The first digit of each identification number serves to identify the manner in which the action in question came to be presented to the EQC, as follows:

P = Petition (of five hundred signatures or more)
M = Mandatory assessment
X = Other.

P-001-74 Oakdale - Hadley Avenue (decided January 8, 1974)

The project was a proposed ten-block extension of a street in a suburban/rural area, involving some wetlands. The TRC recommended that it be declared not significant, but the EQC was unable to reach agreement and took no action. DNR resolved the case by persuading Oakdale to develop a new route plan. The petition was withdrawn on January 22, 1974.

P-002-74 Ridgedale Periphery (decided April 9, 1974)

The action petitioned was the future commercial development on the periphery of Ridgedale shopping center (under construction). The peripheral development plans were already proposed. The TRC set up negotiations between the petitioners and the developer via the city task force. The EQC took no action as the petition was withdrawn pending the outcome of the task force report on development goals for the peripheral areas. Two of the four parcels involved in the petition were found to be exempt.

P-003-74 George Huston Subdivision in N.W. Angle (decided July 9, 1974)

The proposed action was a subdivision of 38 lots on a creek in the northwest angle. The TRC recommended that the action be declared exempt and the EQC so declared, since all lots were sold and some construction had begun prior to January 1, 1974. The policy was set on this case that subdivision projects are to be examined as a whole project rather than on a lot by lot basis. Construction on one or two lots would thus exempt an entire subdivision.

P-004-74 Nordic Square - Apple Valley (decided April 9, 1974)

The project in question was a proposed gravel pit of 640 acres, including landscaping and development after the gravel is removed. The TRC recommended that the action be declared exempt and the EQC declared it exempt as an existing action, since all necessary permits and approvals were obtained prior to January 1, 1974.

P-005-74 Maplewood (not yet decided)

The development petitioned was a proposed shopping center and mall in Maplewood. The petition attempted to address the question of high density development in a major portion of Maplewood, but the TRC found that insufficient material evidence was provided by the petitioners to focus the issue in an adequate way. The EQC has not yet heard the case.

P-006-74 Hyland Lake - Green Beyer (never decided)

The project was a proposed residential development of 950 units adjacent to county-owned parkland. Before the TRC could discuss the matter for a recommendation, the City of Bloomington denied a rezone request from the project proposer, the project was halted and the petition was withdrawn.

P-007-74 Northern States Power - Henderson (decided January 1, 1974)

The proposed action was the construction of a 1600 mgw coal-fired power plant on the Minnesota River. The TRC recommended that the project be considered a major action with the potential for significant environmental effect, and the EQC concurred. An EIS was required and PCA was designated the responsible agency. PCA is currently awaiting the submission of design plans by NSP. The site for this power plant was selected by an earlier EQC and was not automatically subjected to the EIS process. Normally, power plant siting is voluntarily submitted to the process, not petitioned.

P-008-74 North Park - Fridley (decided May 14, 1974)

The proposal was for a municipal golf course to be sited on a natural area with sections of undisturbed virgin prairie, wetlands, and diverse flora/fauna. Some rare or endangered flora may be involved. The TRC recommended that the project be declared a major action with the potential for significant environmental effect, and the EQC agreed. An EIS was required. DNR was particularly outspoken on the need for an EIS because of the wetlands and unique vegetation/wildlife involved. It appeared at the time of the EQC's decision that a fairly large percentage of citizens would rather see a nature center than a golf course on the proposed site. In a referendum on November 5, voters voted two to one against the golf course. On November 18 the City Council reversed its previous decision and decided that the area will be developed as a nature center, so no EIS will be prepared on the golf course.

P-009-74 Cedar-Riverside Development (decided August 21, 1974)

The project was the development of high-rise apartment complexes very near the Mississippi River. It was part of an urban renewal project being done in stages. The first stage was already complete, and the petition addressed the second stage. The TRC found that an assessment was mandatory and recommended that the project be declared a major action with the potential for significant environmental effect. The EQC ordered an EIS, designating HRA the lead agency. The assessment recommended the requirement of an EIS and suggested that the EIS prepared by HUD under NEPA be used for that purpose. The EQC concurred, and the HUD statement has been submitted as a draft EIS under MEPA.

P-010-74 Lake Ida - Williams Investment Company (decided October 8, 1974)

The proposed development consisted of 49 units near Lake Ida, one lot of which was the shore zone. The development would use septic tank systems, and it was noted that water quality is already a problem in the area due to overdevelopment. The TRC recommended that the action be declared exempt, since the land was purchased and a preliminary plat was already approved and a conditional use permit issued prior to January 1, 1974. But the EQC ruled that the action was not exempt, since final plat approval was still outstanding at the time. It was to be made after January 1, 1974. The EQC ordered an environmental assessment on the action and on the basis of the assessment subsequently submitted,

determined (October 8) that no EIS would be required. (The apparent import of this case is that the EQC considers any land use approval to be a "zone change", which is the wording of the regulations.)

P-011-74 Birch Lake - 19th Street Extension (heard June 11, 1974)

The project was a county road extension near Birch Lake, which would pass through a small port or branch of the lake. Members of the TRC could not reach agreement on a recommendation. The DNR representative favored the requirement of an EIS and the Health and Sanitation and State Planning representatives did not. Nor could the EQC reach agreement on the issue. The review period expired and the EQC could no longer require an EIS, so no EIS was ordered.

X-012-74 Opus II (decided May 14, 1974)

The project was a high density commercial, residential and industrial development of about 450 acres on old abandoned farm land. The TRC recommended that an EIS be required, and the EQC ordered the preparation of an EIS, apparently on the basis of the sheer magnitude of the project. The assessment that was voluntarily submitted was large and nearly complete enough to be considered an EIS. The EQC recommended minor improvements and stated that when the improvements were made the assessment could be used as the draft EIS. Minnetonka (the designated responsible agency) is still working on the draft EIS.

P-013-74 Crow River Reservoir Bridge - Hutchinson (heard August 21, 1974)

The proposal was the construction of a bridge to connect the newer development on the opposite bank of the Crow River Reservoir which has come about because of the growth of Hutchinson. The TRC could not reach consensus on a recommendation, nor could the EQC reach a decision. The review period lapsed and the recommendation of the assessment that no EIS be prepared was automatically accepted. (A lot of EQC time was spent on this primarily local issue.)

P-014-74 Freeborn County Road Spraying Practices (decided August 21, 1974)

The action petitioned was the use of 2-4D and 2-4-5T in pheasant habitats, it being alleged that such pesticides kill 90% of the broadleaf and some rare and endangered plant species. The TRC recommended that no EIS be required but that a task force should be put together to consider the pesticide question. The EQC required no EIS of Freeborn County, deciding that a piecemeal approach requiring EISs of every local government proposing to use such pesticides was not the most effective way of attacking the issue. The EQC required that a statewide analysis be undertaken and charged the CAC and EQC staff with the responsibility of determining the best approach to take.

MP-015-74 Knopp Valley Project (decided July 9, 1974)

The project was a 600+ unit residential and small commercial center on old abandoned farm land. On the basis of the mandatory assessment the TRC recommended that the project be considered of no more than local significance and that an EIS not be required. The EQC did not require an EIS although a non-degradation rider was attached. The project's effects on a small trout stream might have made the development of more than local significance, but the non-degradation rider was felt to be sufficient for the stream's protection.

P-016-74 Washington County Highway #4 (decided September 10, 1974)

The proposal was the rerouting of a county highway through a swamp about a mile square in order to straighten the road. The highway presently jogs around the swamp. The TRC recommended on the basis of the assessment that the project be declared not to be a major action, claiming further that no significant environmental effects were likely. The EQC heard the case on August 21 but took no action at that time. Before the next EQC meeting the EQC staff met with the Washington County Board and the petitioners. The road was virtually complete at that time, and the Washington County Board stated that it is preparing a resolution to designate the swamp as a park site. The petitioners will look for state and federal aid that may be available for funding to acquire that property. At the September EQC meeting no Council action was deemed necessary and no EIS was required.

M-017-74 Inland Steel Taconite Plant (decided November 11, 1974)

The EQC judged the construction of a new taconite mine and processing plant to be a major action with the potential for significant environmental effects and required that an EIS be prepared. The Council also attached permit riders for pre-monitoring and reclamation as determined necessary by DNR and PCA. This proposal was introduced at an EQC meeting without going through the TRC. The draft EIS was completed and circulated and the final EIS was subsequently prepared. The EQC decided not to invoke its power to review the final EIS.

X-018-74 Minnesota Zoological Garden (decided November 12, 1974)

The proposed action was the construction of a new state zoo in Apple Valley, for which the legislature authorized bonding and state board designing. The zoo would be one square mile and would cost $22 million. An assessment was prepared voluntarily. This proposed action was later grouped with EQC case number P-030-74, dealing with the zoo's fringe. (See P-030-74 for the EQC's action.)

M-019-74 Pig's Eye Coal Handling Facility (not yet decided)

The project was a new coal handling facility and barge terminal on Pig's Eye Lake (connected to the Mississippi River). The project area is an aban-

doned land fill site, which is at present a metropolitan sewage treatment plant site with a long and complicated legal history. The project was introduced at an EQC meeting without going through the TRC, but no EQC decision was reached. PCA held a lengthy hearing on an outstanding permit and will shortly decide on whether or not to grant it. If they refuse the permit, no decision will be required by the EQC. If they decide to grant it the EQC will decide on whether or not an EIS will be required.

M-020-74 Bohman Marina, Rainy Lake (decided November 12, 1974)

A marina was proposed for Rainy Lake. The project would require some dredging and presents a potential commercial/residential conflict. The TRC recommended that the project be considered exempt because of prior construction. The EQC determined that no EIS would be required.

M-021-74 Hanna Mining, Keewatin Taconite Plant Expansion (decided May 14, 1974)

The project proposal was an expansion of an existing taconite plant, changing the process and doubling the output with very little additional particulate emission. No new land or exterior construction was involved. The TRC recommended that the project be declared exempt as an existing action, and the EQC so determined with the provision that EQC review the outstanding PCA permit.

M-022-74 Ottertail County Highway #8 Realignment (decided October 8, 1974)

The action proposal was the realignment of a county highway near a small lake, involving some wetland and moving the road a little closer to the lake. The EQC did not require the preparation of an EIS but did request that the county hold a public hearing on the realignment.

M-023-74 American Crystal Sugar Beet - Renville (decided May 14, 1974)

The proposal was the construction of a new sugar beet refinery. Since construction began in early 1973, the TRC recommended and the EQC ruled that an EIS not be required.

M-024-74 American Crystal Sugar Beet - East Grand Forks (decided October 8, 1974)

The project was an internal sugar beet plant expansion adding a second production line but involving no external changes. There was potential for a water appropriation problem. The EQC voted not to require an EIS on the expansion.

M-025-74 Cenex Tank Farm Expansion (decided June 11, 1974)

Two new 500,000 gallon tanks were proposed to be added to the existing facility. The tanks were placed on order in November, 1973. The TRC recom-

mended that the action be declared exempt, and the EQC subsequently declared it exempt as an existing action.

P-026-74 Lakeridge Estates - Lakeville (decided August 21, 1974)

The project was a subdivision of 88 single-family houses on 63 acres adjacent to a lake (one-third of the units to be on shoreline property of Lake Marion). The TRC recommended that the action be declared exempt as an existing action. But the EQC decided that the action was not exempt, since final plat approval was still outstanding (again interpreting any land use control approval as a "zone change"--see case P-010-74 above). An assessment was required, but no EIS was ordered on the basis of the assessment. Non-degradation and erosion control riders were attached to the proposal. It was decided that it would be more detrimental to the land to leave it uncovered while an EIS was being prepared than to proceed with the project.

P-027-74 Penn Avenue Bridge - Minneapolis (decided July 9, 1974)

The action proposal was the widening and reconditioning of an old bridge, involving the removal of nine trees. The TRC recommended that no EIS be required since the action was not major and did not have the potential for significant environmental effects. The EQC concurred and did not require an EIS.

M-028-74 Loring Park Planned Unit Development (not yet decided)

The project was an urban renewal project, a combined effort by the City of Minneapolis and a development team, involving eleven square blocks of residential property. The project involved legislative approval for a funding procedure. Since regulation MEQC 23(b)(2) provides that an action is exempt if it is a legislative proposal or enactment of the State Legislature, the question of whether or not the action in question is exempted on these grounds was submitted for a legal opinion to the Special Assistant Attorney General assigned to the EQC. The resulting opinion was that the action is not exempt as a legislative proposal or an enactment of the State Legislature. The EQC could not reach a majority decision on the action, the review period lapsed, and the assessment's recommendation that no EIS be required was automatically accepted. The EQC and the City of Minneapolis were sued for not having fulfilled their responsibilities, and the case is still in court.

P-029-74 Bryant Avenue S. - Apartment Complex (decided July 9, 1974)

The proposal was for a two-story apartment complex on the east side of Bryant Avenue S. in a residential area in Minneapolis. Since construction was already underway, the TRC recommended that the action be declared exempt as an existing action, and the EQC so ruled.

P-030-74 Zoological Gardens (fringe) (decided November 12, 1974)

The action in question was the commercial development on the south fringe of the new zoo (see case X-018-74). The land is private and undeveloped, but a zone change was required. The EQC grouped this case with the zoological garden itself (case X-018-74) and required that information on commercial development of the periphery and on the access road be added to the original assessment. An EIS was subsequently required with the Minnesota Zoological Board designated the responsible agency. Construction of the Zoological Garden and Zoo road was allowed to proceed. The Council also endorsed the inter-agency effort to coordinate a Development Guide Plan for the peripheral area and indicated that it may consider critical area designation at its February 1975 meeting.

P-031-74 WAPPA - Rutzick and Associates (decided November 12, 1974)

This project was a high density residential development consisting of two apartment buildings about five blocks apart with a small pond midway between. A zone change was required. The TRC recommended to the petitioners that the petition be rewritten to address specific issues and recommended to the EQC that both apartment buildings be declared exempt. The TRC felt that the pond area was questionable. The EQC exempted both apartments and the pond but ordered an environmental assessment on the St. Paul zoning ordinance. Subsequently, no EIS was ordered on the rezone.

M-032-74 Ellerbe Architects - Bloomington (not yet decided)

The TRC recommended that this planned unit development be declared exempt as an existing action, on the grounds that the first development phase is already completed. The EQC has not yet heard the case.

M-033-74 M, P & L Transmission Line (decided June 11, 1974)

The project consisted of running an approximately 370 KV line about 200 miles from Manitoba Hydro to a mining district to serve taconite plant expansion. A power plant siting procedure emergency was requested. The TRC found an environmental assessment mandatory under EQC rules and regulations and recommended that an EIS be required. The EQC declared the action to be a major action with the potential for significant environmental effects and required that an EIS be prepared. The draft EIS was prepared and circulated, and the EQC has just received the final EIS.

M-034-74 Froning's Elevator and Shipping (not yet decided)

The project consists of the dredging of 1,750,000 cubic yards from the Mississippi to fill a slough to form a 60-acre site in a commercial harbor at Winona. A grain elevator and service buildings are to be built on the site. The proposal was withdrawn before either the TRC or the EQC heard the case.

X-035-74 General Mills Groundwater - Golden Valley (never decided)

The proposal was to drill a new well for air conditioning water for a new office building. The TRC recommended that an environmental assessment was not even necessary in this case, and the EQC dismissed the case without requiring an assessment. (The project may even have been exempt.)

MX-036-74 Shepherd Park - Stuart Corporation (not yet decided)

This proposal for a housing development in St. Paul was withdrawn for additional design work before either the TRC or the EQC heard the case. It may be resubmitted at a later date.

M-037-74 Northern Border Pipeline (not yet decided)

This project is the part of a forty-eight inch natural gas pipeline from Saskatchewan to the east coast of the United States which passes through six counties in southwestern Minnesota. A federal assessment was prepared on the entire pipeline, but it does not address specific impacts in Minnesota. The State has unofficially advised that a more adequate Minnesota-oriented assessment be prepared. The case has not yet been heard by either the TRC or the EQC.

M-038-74 Eveleth Taconite Company Expansion (decided July 9, 1974)

The project is a fairly sizable expansion of an existing taconite operation. The TRC recommended that it be declared exempt, though the exemption evidence was not conclusive. The EQC exempted the proposal.

P-039-74 Judicial Ditch #15 (not yet decided)

The action in question here is the construction of a drainage ditch through Delano DBD, channelizing Sucker Creek. Over 100 acres of types 3, 4, and 5 wetland are involved. The project has a long and complicated history in and out of court. The judicial district in charge of administering such drainage ditches is not capable of preparing an assessment or an EIS. On September 10, 1974, the EQC ordered Wright County to prepare an environmental assessment. On November 12, 1974, the EQC reviewed the assessment but came to no decision on whether or not an EIS was to be required or on whether or not a public hearing was necessary. The EQC review period ends on December 2, 1974, before another EQC meeting is scheduled. Barring some special action before that date, the recommendation of the assessment that no EIS be required will automatically be accepted.

P-040-74 White Bear Rod and Gun Club - Hugo (not yet decided)

This proposed shooting facility near Hugo abuts Rice Lake and the Rice Creek drainage ditch. The petitioners alleged that the project would cause

noise and lead shot water pollution problems. The TRC recommended that an assessment be required but made no recommendation on whether or not an EIS should be required. An assessment was ordered on August 21, 1974. The EQC heard the case on November 12, 1974, but reached no decision on whether or not to require an EIS. The EQC review period ends December 16, 1974, which will give the EQC another chance to decide on the matter. The recommendation of the assessment is that no EIS be required, and that recommendation will automatically be accepted if the EQC makes no decision at its December meeting. The EQC went to court on this proposed action to force the developer to stop work until a decision had been made on whether or not an EIS is to be required, but the legal action was not really decided on since the developer agreed voluntarily to stop work until after the November EQC meeting.

P-041-74 Lyndale Avenue and Minnehaha Apartments (not yet decided)

The project was an eight to sixteen story high-rise apartment to be constructed in a single-family residential area close to Minnehaha Parkway. The TRC recommended that an assessment be prepared and an assessment was ordered on August 21, 1974. The whole case has been postponed for the moment pending the firming up of site plans by the developer.

X-042-74 Kampers Resort Inc. (decided August 21, 1974)

The proposed development of multiple dwellings on an existing campground near Elk River would consist of 400 apartments to be done in stages. The TRC recommended that an EIS not be required provided that the developers comply with certain stipulations and non-degradation riders. The EQC required that an EIS be prepared but stated that the decision will be reversed when design plans are approved by DNR for aesthetic compatibility with potential recreation river designation. The EQC also attached a non-degradation rider.

P-043-74 Proposed School Site - Village of Dayton (decided November 12, 1974)

The proposed new grade school would serve two communities and would use a septic type system for waste water treatment in this undeveloped area. The school is anticipated to be a growth stimulus. The TRC recommended that an assessment be prepared by the school district, and the EQC so ordered on August 21, 1974. Based on the assessment, the EQC decided that an EIS would not be necessary.

P-044-74 Broadview Development (not yet decided)

The project consisted of twenty-two single-family houses on septic tanks which are anticipated to drain into a trout stream. Septic tank problems are alleged since the site is underlain in close proximity to bedrock. The TRC recommended that an environmental assessment be required, and the EQC subsequently ordered an assessment. The case has not yet come before the EQC for a decision on whether or not an EIS is to be required.

M-045-74 Kerfoot Condominium - Saganaga Lake (not yet decided)

This condominium project would consist of 25+ units on a site surrounded by the Boundary Water Canoe Area, though the project itself would be on private property. Sewerage problems are anticipated, since the site is underlain at a shallow depth by bedrock. An environmental assessment was mandatory and was ordered on September 10, 1974, with Cook County designated the agency responsible for the preparation of the assessment. The case has not yet come before the EQC for a decision on whether or not an EIS is to be required.

P-046-74 AMAX Copper/Nickel Exploration (decided November 12, 1974)

The project consists of an exploration by AMAX for copper/nickel in the mining region of northern Minnesota. The proposal contains a detailed program for monitoring the environmental effects of the exploration and the subsequent mining should the exploration prove fruitful. The monitoring would provide valuable data for a region-wide copper/nickel EIS on the whole question of copper/nickel mining in Minnesota. An assessment was ordered on August 21, 1974, and the monitoring program was explained to the EQC in considerable detail at a subsequent EQC meeting. The TRC could reach no consensus for a recommendation on whether or not to require an EIS on the AMAX exploration but did recommend that the EQC address the whole question of copper/nickel mining in Minnesota. The EQC decided not to require an EIS on the exploratory action on the grounds that this exploration would not constitute a major action with the potential for significant environmental effects. The EQC did require that DNR and PCA report to the EQC in December on the acceptability of AMAX's environmental monitoring program.

M-047-74 Potlatch Corporation N.W. Paper Division (never decided)

This 67% expansion of an existing facility did not exceed the mandatory assessment thresholds, although water quality might have been a problem. Air pollution control equipment was to be installed. The TRC recommended that an assessment be prepared, but the proposal was withdrawn before the case went before the EQC.

P-048-74 Lutsen - Spraying Toxic Chemicals (not yet decided)

The action in question is the use of 2-4D and 2-4-5T in Lutsen, which raises the whole question of pesticide use in Minnesota. Though this specific case has not yet been decided by the EQC, the Council has ordered a statewide program review of pesticide use.

X-049-74 Space Center Industrial Park - Oakdale (decided October 8, 1974)

The proposed project was a 50-acre industrial park in a suburb of St. Paul. The EQC ruled that an EIS was not required on the action.

MX-050-74 Arden Hills Tennis Court (decided September 10, 1974)

The project proposal was the construction of a tennis court, involving the filling of more than five acres of wetlands. The TRC recommended that no EIS be required because state waters were not involved and the scope of the proposal was not sufficient to justify considering it to be a major action. The EQC concurred and no EIS was required.

P-051-74 Masonic Temple, St. Paul (decided September 10, 1974)

The proposed action was the demolition of an abandoned Masonic Temple made necessary by the need for connector roads leading to I-94. Petitioners claimed that the building has potential for cultural significance and contended that alternatives to demolition had not been adequately explored. The EQC invoked subdivision 9 of section 4 of MEPA to stay demolition pending a substantive decision on the part of the EQC. Investigation led the EQC to the conclusion that the demolition would have no impact on the physical environment and that the building has only marginal historical and architectural significance. The Temple was determined to be of purely local cultural significance. For these reasons the EQC ruled that an EIS would not be required.

P-052-74 Beltline Interception - Lake Phalen (not yet decided)

The project is a 72-inch sewage interception of considerable length with a gravity flow to replace a smaller inadequate pressure flow sewer. It would be located adjacent to Lake Phalen, and the petitioners fear in-seepage and drainage into the lake. An assessment was ordered on September 10, 1974, to be prepared by the Metropolitan Sewer Board. The case has not yet been heard by the EQC for a determination on whether or not an EIS is to be required.

M-053-74 West Publishing Company - St. Paul (decided November 12, 1974)

The proposed action is the expansion of an industrial facility by 600,000 square feet, which is beyond the mandatory threshold for an environmental assessment. The EQC decided on the basis of the assessment prepared by the City of St. Paul that an EIS would not be required.

M-054-74 UPA-CPA (not yet decided)

The project is the running of a 450 KV DC transmission line from North Dakota through western Minnesota farm land to the Twin Cities. An assessment was mandatory and was ordered on September 10, 1974, to be prepared by the Department of Agriculture. The case has not yet come before the EQC for a decision on whether or not an EIS is to be required.

M-055-74 INCO - Superior National Forest (not yet decided)

The proposed action is for an open pit copper/nickel mine in northern Minnesota, the exploration having been completed previously. An environmental

assessment was mandatory and has been completed. The assessment recommends that an EIS be required, but the case has not come before the EQC for a decision on the matter. A federal EIS is being prepared on the project under the National Environmental Policy Act.

P-056-74 Lake Nicollet Development - Minneapolis (decided November 12, 1974)

The action is a small urban renewal project in downtown Minneapolis. An environmental assessment was voluntarily submitted by the City of Minneapolis. The TRC recommended that no EIS be required, since the project is not of more than local significance and fits well with the development district and comprehensive plans. The EQC concurred and ruled that an EIS would not be required.

X-057-74 U.S. Highway #10 - Morrison Company (decided November 12, 1974)

This new two-lane connector highway of about 10 miles in length involves considerable wetland. A low traffic volume is expected. The TRC recommended that DNR and the Department of Highways work out the problems on an inter-agency basis but that no EIS be required. The EQC determined not to require an EIS.

P-058-74 MTC Garage/Humbolt Heights School (not yet decided)

The old Humbolt Heights School is proposed to be remodeled to become a bus garage for the Metropolitan Transit Commission. An assessment was ordered on October 8, 1974, which will become due when the federal environmental assessment is finished on the same project.

M-059-74 NSP 500 KV Line (decided August 21, 1974)

A 500 KV line is to be run by Northern States Power from Manitoba to Sherborn County. The proposal is going through the power plant siting process. The EQC requested more information and designated itself as the responsible agency.

M-060-74 Aitkin Company - International Realty (not yet decided)

The TRC found the voluntarily submitted environmental assessment inadequate, and the EQC concurred. Aitkin County was named the agency responsible for the expansion and rewriting of the assessment, with direction from PCA, the Department of Health, and DNR.

M-061-74 Lotus Lake Development (not yet decided)

An assessment was ordered on this proposed lake development on October 8, 1974, but the case has not yet come before the EQC for a decision on whether or not an EIS will be required.

X-062-74 St. Mary's College Academics Facility (decided October 8, 1974)

The project is a proposed new building for school activities. Based on the environmental assessment, the EQC decided that an EIS would not be necessary.

X-063-74 Pioneer Gateway (decided October 8, 1974)

Based on the information contained in the voluntarily submitted assessment, the EQC ruled that an EIS would not be required on this residential development.

M-064-74 Ditch #17 - Kandiyohi County (not yet decided)

Proposed ditch #17 would eliminate 43 acres of wetlands and affect 31 additional acres. The case has not yet come before either the TRC or the EQC for a decision on whether or not an EIS will be required.

M-065-74 Ditch #17 - LeSuer County (not yet decided)

Proposed ditch #17 would eliminate 160 acres of wetlands and affect 225 additional acres. The case has not yet come before either the TRC or the EQC for a decision on whether or not an EIS will be required.

M-066-74 Ditch #18, Lateral C-Kandiyohi, Meeker Counties (not yet decided)

Proposed ditch #18 would eliminate 300 acres of wetlands. The case has not yet come before either the TRC or the EQC for a decision on whether or not an EIS will be required.

M-067-74 Ditch #1, Meeker, Kandiyohi and Renville Counties (not yet decided)

Proposed ditch #1 would eliminate 57 acres of wetlands and affect 4 additional acres. Since the proposal was originally submitted, the proposed length of the ditch was decreased, and an environmental assessment is no longer mandatory on the modified proposal. No EQC action has been taken.

M-068-74 Lower St. Croix (no decision made)

The Lower St. Croix was the first area in the state to be designated a critical area under the critical areas program. Because of federal requirements pertaining to the same area, a federal EIS was prepared under NEPA. DNR voluntarily submitted the federal EIS to the EQC as an EIS fulfilling the requirements of MEPA. The final MEPA EIS is currently being prepared. The case was never actually brought before the EQC for a decision on whether or not an EIS was to be required.

P-069-74 Credit River Township Race Track (not yet decided)

An assessment was ordered on this medium speed auto race track on October 8, 1974, with Scott County designated the agency responsible for the preparation of the assessment. The case has not yet come before the EQC for a decision on whether or not an EIS will be required.

M-070-74 American Shield Corporation (not yet decided)

This copper/nickel mining proposal has not yet come before the TRC or the EQC for a decision on whether or not an EIS is to be required. The American Shield Corporation has expressed concern in a letter to the federal district forest ranger that the federal EIS being prepared on the INCO mining proposal (see case M-055-74) be regional in nature in order to provide information on other mining proposals in Minnesota.

P-071-74 Hines-Spur Landfill, Beltram County (not yet decided)

An assessment was ordered on this landfill project on November 12, 1974, with Beltram County designated as the responsible agency. The case has not yet come before the EQC for a decision on whether or not an EIS will be required.

P-072-74 Union Gospel Mission (not yet decided)

The proposed action is the demolition of the Union Gospel Mission facility in downtown St. Paul and the construction of a new facility in an older residential/commercial area. An assessment was ordered on November 12, 1974, with the City of St. Paul designated the responsible agency.

X-073-74 Minnesota River Bridge - Highway 36 (not yet decided)

The proposed project consists of an improvement to highway 36. The assessment was voluntarily submitted by the Department of Highways, and the case has not yet come before the EQC for a decision on whether or not an EIS will be required.

M-074-74 Timbers Development, Edina (not yet decided)

An assessment was voluntarily submitted on this development by the developer. The TRC could not reach consensus on whether or not to recommend that an EIS be required, and the matter has not yet come before the EQC for an EIS decision.

X,M-075-74 Arcturus and Parcel #4 Mines, Marble, Minnesota (decided November 12, 1974)

The proposed project is a mine dewatering operation by U.S. Steel. Based on the assessment, the TRC recommended that an EIS not be required, and the EQC concurred.

M-076-74 McGowan Barge Fleeting Slip (not yet decided)

An environmental assessment was ordered on this project on November 12, 1974, with the Lower Minnesota River Watershed District designated as the responsible agency.

X-077-74 Jones & Laughlin, Welton & Mary Ellen Pits (decided November 12, 1974)

Based on the environmental assessment on this mine dewatering project, the EQC decided that an EIS would not be required.

P-078-74 La Crescent Quarry (not yet decided)

This proposed quarrying project in Houston County has not yet come before the TRC or the EQC.

P-079-74 Pesticides in Itasca County (not yet decided)

The action petitioned is the usage of 2-4D and 2-4-5T along public roadsides of Itasca County. No decision has been reached by the EQC on the specific action, but a statewide program review of the use of pesticides in Minnesota is underway.

M-080-74 Graham Land Development, Maple Grove (not yet decided)

The proposed project is a residential development within 1,000 feet of the shoreline. The TRC recommended that an EIS not be required, though an NPDES permit would be necessary from PCA. The case has not yet come before the EQC for a decision on whether or not an EIS will be required.

X-081-74 Pittsburg Pacific Knox Mine (not yet decided)

This mine dewatering project has not yet come before either the TRC or the EQC for a decision on whether or not an EIS will be required. An assessment on the project was voluntarily submitted.

APPENDIX B

Budget Estimates for the Implementation of MEPA

Introduction

The budget estimates presented in the present appendix assume that the recommendations presented in Sections IV, V, and VI of this report are implemented as proposed. Section VII detailing an optional environmental planning program has not been considered in the budget analysis.[1] Central to the budget analysis presented here are a number of assumptions which need to be detailed prior to the presentation of specific details.

First, and probably most important, it is assumed that the environmental protection program established under MEPA and its implementing rules and regulations will be altered to allow for a functional decentralization of basic environmental analysis and decision-making to all governmental agencies in Minnesota, particularly general purpose local governments and state agencies.

Second, we will assume that the present Environmental Quality Council staff function, independent of any agency at the present time, will be lodged in the State Planning Agency. It is assumed that the staff functions will be to advise EQC on state environmental policy issues, to provide advice to governmental units implementing MEPA, and to aid in the coordination between and among other state agencies.

Third, it is assumed that the legislative adoption of any amendments to implement the proposed MEPA program will occur on or about March 1, 1975, and that the drafting of implementing rules and regulations designed to clarify the new system will be undertaken as soon as a draft bill detailing the legislative program is submitted. Official proceedings for the adoption of these rules and regulations should occur immediately after the adoption of any legislative amendment. It is anticipated that new EQC-MEPA implementing rules and regulations could be adopted by July 1, 1975. Consequently, all budget estimates are presented to begin as of July 1, 1975, which corresponds to Fiscal Year 1976 and the beginning of a new biennium budget period for Minnesota.

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[1] It is anticipated that if a local unit of government wished to implement such a program, part of the local government planning assistance funds which will probably be introduced for legislative consideration under the title of a Land Use Planning Grant Program could be utilized for this type of activity. If the environmental planning program alternative to the environmental impact statement system is authorized by the Legislature, as is proposed in sub-section C of Section IV, it is our hope that local governmental agencies opting to implement such a program would be given priority consideration in their application for these planning assistance funds.

Fourth, we assume that all direct costs for the preparation of draft and final environmental impact statements will be charged to the project for which the EIS is being prepared. If the project is proposed by a private party, the responsible agency would have the authority to charge draft EIS preparation to that private party. If the project is proposed by a public agency, the public agency, which becomes the responsible agency for the project, should consider the EIS as a cost of undertaking the project, and consequently a direct project cost.

Fifth, this appendix assumes that the preparation cost of Environmental Notes for certain non-project actions potentially affecting the environment (see Section VI) will be quite nominal and will be internalized in the development of the non-project action proposal, as appropriate.

Sixth, there are three items which are presently budgeted for and administered by the EQC which are not included in the budget figures presented in this section. First, the function of power plant siting has not been included. We have recommended that the duties in the power plant siting program be moved from the EQC to the Energy Agency and have given a breakdown below for the power plant siting program (as it relates to MEPA) for the Energy Agency. Second, the critical areas planning process which is administered at the state level by the EQC has also not been included. As is the case with power plant siting, this is a continuing program, but a budget figure for critical areas should be considered separately from this proposed program. Finally, we are assuming that the Citizen's Advisory Council, for reasons indicated in the body of this report, will no longer be functioning after July 1, 1975, and there will thus be no need for specific EQC funding for this program.

Seventh, three types of budget breakdowns are provided. For selective state agencies, a proposed budget for Fiscal 1976 is presented. In some instances, such as for the EQC-SPA program and the Environmental Management Hearings Board, Fiscal 1976 will be considered a "start-up" year for the new program, with activities and duties changing for Fiscal 1977, which moves into the "on-going operations" year. Consequently, a biennium budget figure for these agencies will include different amounts for each of the two years. In other agencies, the Fiscal Year 1976 budget can be assumed to reflect an on-going program, and the biennium budget figure would simply reflect a doubling of the Fiscal 1976 dollar amount. A third type of budget breakdown is the one presented for local governmental assistance in implementing the MEPA program. It is not individual-agency oriented, but rather program oriented for potential use by any applying and qualified local governmental agency. Specific budget details as to how a local governmental unit may utilize the funds, or how they may utilize locally provided funds, have not been included due to the potential for very wide variations in local program implementation.

Eighth, state agency and local governmental budgets, particularly the agency budgets specifically detailed in this study, may well be effectively

reduced in dollar amounts if staff people are utilized who are generally budgeted for under the MEPA program but who work on private project impact statement preparation where the primary costs can be charged to the private project and not to the MEPA budget. At the present time, the impact of this eventuality is totally unpredictable, although it would be most significant if it occurs for the Department of Natural Resources, the Energy Agency (if they have power plant siting and related EIS functions), and local governmental units.

Finally, it should be stressed that the budget estimates presented herein are just that: estimates. They are based on our knowledge of what it takes to implement a decentralized environmental policy act program such as this and our pragmatic experience of developing a budget program for the State of Washington for a similar program. Also, extensive experience with the preparation of all ranges of impact statements, ranging from small locally significant projects to major nationally significant projects, has provided us with a good deal of practical knowledge of how the impact statement preparation and processing program itself works. However, even the most extensive past experience will not replace the actual operation of the system itself for future projections. Consequently, the budget should be constantly reviewed in order to make adjustments as necessary to adequately implement the proposed program.

This budget report has been organized into four major sub-sections. First, present state agencies are addressed, giving particularly close attention to the EQC-State Planning Agency budget. Second, a proposed budget for the Environmental Management Hearings Board is presented. Third, a basic budget program for regional development commissions (including Metro) is set forth. This program is essentially oriented to the provision of technical assistance in EIS program implementation and operation to local governments. Finally, a description of program implementation for state-funded local governmental assistance monies is provided.

A. State Agencies

(1) Environmental Quality Council - State Planning Agency

At the present time, the Environmental Quality Council staff is housed in the State Planning Agency, but it is identified as a separate staff from the State Planning Agency staff. We have recommended that the staff function for EQC actually be handled as a direct SPA staff function, with the identification of specific positions for EQC work. It is anticipated that the EQC part of the State Planning staff would then also be the SPA people who would handle any other SPA functions related to implementing the MEPA program.

As can be seen below in the presentation of the detailed budget, the EQC-SPA work has been divided into six areas. First, General Administration would include the EQC Coordinator functioning as staff director for the entire MEPA program for the State of Minnesota. This position would be equivalent to the one currently held by John Mohr. We are suggesting that General Administration also include an assistant to the Coordinator. Not only would these two individuals be responsible for overall administration, but they would also be the people working most closely with the Council itself, as well as providing the direct liaison with other state agencies. Other duties would include working with assigned task forces and the staff environmental coordinators of the agencies represented on the EQC.

EIS System Operations would be headed by an executive assistant (to the EQC Coordinator) and would be responsible for the direct implementation and operation of the EIS program in Minnesota. In most cases, this will be a coordinative and informational program and could involve running workshops, direct work with local governments, some negative and positive declaration work, and EIS analysis and review.

The proposed MEPA Monitor program, as described in Section IV and V will need essentially two people for successful implementation. First, the director of the program will have to have some technical backgrounding in impact statements and MEPA-type situations which could cause problems for agency implementation. The actual duties would consist primarily of notification, but there is a need for some analysis and interpretation of unique and/or problem situations which are addressed by either the courts or the Environmental Management Hearings Board. These individuals would also be responsible for reporting on activities in other states which may be relevant to Minnesota governmental agencies involved in implementing the program. In addition to the technically oriented director, it is suggested that another individual with a journalistic or writing background be considered, since much of the work would be drafting synopses and putting together the weekly newsletter itself.[1]

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[1] As was mentioned in Section IV, the MEPA Monitor may well be part of an overall "Minnesota Register". If this is the case, the basic work for the MEPA Monitor will still have to be done, but it would be incorporated into another document. At the moment it is anticipated that the MEPA Monitor would be a free-standing document put out by the EQC.

A fourth program involves needed coordination with the National Environmental Policy Act program. It is assumed that at the present time that one technical analyst could act as the clearinghouse coordinator for the State of Minnesota for NEPA impact statements and negative declarations, review those statements for the EQC, and assist other agencies which have any type of NEPA/MEPA coordination problem. This person would also be assisting on other aspects of the MEPA program, since the exposure this position will provide to NEPA procedures and problems would certainly assist the state. Finally, this person may well be able to assist local communities which become involved with the new HUD environmental regulations for impact statement preparation. (See sub-section B of Section III for an explanation of the HUD program.)

Fifth, in Fiscal 1976 there will be a need for a full-time Assistant Attorney General. This is due to the fact that there will be at least 50 local ordinances implementing MEPA and potentially a dozen state agency rules and regulations implementing the program that are presented to the EQC for certification. These ordinances and rules and regulations will have to be reviewed for legal problems and consistency with MEPA and the statewide rules and regulations. This duty, along with the disposition of previous EQC cases which arise under the current operating procedures, will probably take the full attention of one person.[1]

And sixth, we have recommended both an impact statement system and a potential planning program which would require extensive contact and coordination with local governmental units. In most instances, whether it be the impact statement program or the environmental planning program, or both, the agency at the local level actually doing the work of implementation and operation will be the planning agency. It is suggested that the State Planning Agency division specifically given the task of coordination with locals, the Office of Local and Urban Affairs, be funded for one full-time person to assist local planning agencies involved in the above tasks. This position would become increasingly important as more and more local units of government get involved in environmental planning programs. In any case, the need seems evident for a person in the SPA office who is specifically assigned the duties of working with the locals on these environmental programs.

Fiscal Year 1975-76		PERSONNEL	MAN-YEARS
General Administration (includes internal (SPA-MEPA activities)			
Personnel:	EQC Executive Coordinator	1	1.0
	Administrative Assistant	1	1.0
	Clerical	1	.5
Budget Sub-total: $44,250		3	2.5

[1]The full-time Assistant Attorney General identified here would be in addition to legal staffing needed by the State Planning Agency for non-MEPA functions.

EIS System Operations			
Personnel:	Executive EQC Assistant	1	1.0
	EIS Operations Planners	2	2.0
	Clerical	1	1.0
Budget Sub-total: $57,100		4	4.0
MEPA Monitor			
Personnel:	Technical Analyst	1	1.0
	Administrative Assistant	1	1.0
	Clerical	1	.5
Budget Sub-total: $31,750		3	2.5
NEPA Coordination and Review			
Personnel:	Technical Analyst	1	1.0
Budget Sub-total: $14,800		1	1.0
Legal Assistance			
Personnel:	Assistant Attorney General	1	1.0
	Clerical	1	1.0
Budget Sub-total: $24,500		2	2.0
OLUA Local Governmental Aid - Environment			
Personnel:	Environmental Planner	1	1.0
	Clerical	1	.5
Budget Sub-total: $20,250		2	1.5
	TOTAL	15	13.5

Budget Totals:

Estimated Salary Budget (Average Man-Year Cost: $14,270)	$ 192,650
Goods and Services[1]	36,000
Travel (staff)	15,600
EQC Remuneration[2]	9,600
Travel (Board Members)[3]	4,800
Equipment	3,500
Employee Benefits[4]	28,898
TOTAL FISCAL 1976	$ 291,048

NOTES:

[1]This includes outside consulting fees and other EQC activities such as the provision of special funds to any agency task force which is designated by the EQC. (See sub-section B of Section IV.)

[2]We recommend that each of the eight citizen board members of EQC be given $50 per day for duties officially performed for the EQC. We estimate that this will average out to two days per month per citizen member: one day in an official EQC meeting and one other day on miscellaneous business.

[3]Board member travel is designated in this budget for the eight citizen members as well as the EQC Chairman. It has further been estimated that there will be four out-state EQC meetings per year and that some of the citizen Council members will have to travel to all EQC meetings, since they may well live in the out-state areas. Per diem is included in this travel budget as well as for all other travel budgets presented in this appendix.

[4]Employee Benefits include all applicable taxes and insurance and are figured at an across-the-board rate of 15 percent of basic salary for all employees. This 15 percent figure is used for all salary budgets presented in this appendix.

Fiscal Year 1976-77

For the second year of the biennium, there are two recommended personnel changes. These changes both occur in the legal department. It is estimated that most ordinance and rules and regulations adoption and certification work will have been completed by the beginning of this new fiscal year. We recommend cutting the Assistant Attorney General position and the related clerical assistance position to one half-time each. Also included should be a reduction in the Goods and Services amounts by $12,000 since it is anticipated that any problems in the first year of operation which may have caused the need for consulting services will have been solved. Finally, equipment costs have been reduced by $2,000. The budget summary for the 1976-77 fiscal year is presented below, assuming only the changes indicated above.

Budget Totals

Estimated Salary Budget (Average Man-Year Cost: $14,432)	$ 180,400
Goods and Services	24,000
Travel (staff)	15,600
EQC Remuneration	9,600
Travel (Board Members)	4,800
Equipment	1,500
Employee Benefits	27,060
TOTAL FISCAL 1977	$ 262,960
TOTAL: 1976-77 BIENNIUM	$ 554,008

(2) Department of Natural Resources[1]

This agency, because of the multifarious activities in which it is involved, is expected to need the largest single agency staff on an ongoing basis for MEPA program implementation. In addition to doing the normal review of impact statements and EQC advisory work, DNR will also be potentially saddled with actually preparing a number of EISs on projects over which they have jurisdiction or which they propose. Also, due to the many areas of environmental expertise which DNR represents in Minnesota, it is expected that it will be called upon by other state and local agencies when they are attempting to gather information for the determination of environmental significance and/or develop an environmental impact statement with a particularly thorny problem which DNR would be capable of handling. Also, it should be noted that the budget presented below is divided into two sections. The first deals directly with EQC-EIS coordination. It is suggested that a specific division or office be established in DNR with the assigned duties of handling or coordinating all EQC activities required of DNR and coordinating all DNR impact statement preparations and reviews. The impact statement preparation would actually be handled by two technical writers who would be in this office. Actual technical research to be included in these documents would be developed in those sections or divisions of DNR where that technical expertise is available.

The second part of the budget breakdown does not relate to an actual contemplated position or personnel classification, but rather to the type of expertise that staff individuals will have to have in order for DNR to carry out its EIS responsibilities. It is hoped that each area of technical expertise can be represented by a single individual, full-time whose only responsibility is to the DNR EQC-EIS program, even though that individual's actual physical location may be in the division where his technical expertise is usually needed. The technical expertise/aid people are expected to have three basic duties: (1) to provide technical advice and research for the preparation of EISs for which DNR is responsible; (2) to provide technical expertise in the review of EISs for their areas of responsibility; and (3) to provide assistance, when possible, to other state and local agencies which have environmental questions concerning their areas of expertise.[2]

Finally, a basic assumption has been made for DNR which is not made for any other state agency. That is, DNR will be assumed to have six to eight environmental impact statements per year to prepare. These impact statements will be for their own projects (initiated by DNR, the Legislature or the executive office) for which the cost of the EIS cannot be considered a part of the

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[1]All state agency budgets for the remainder of this subsection are presented for the 1975-76 Fiscal Year only. 1976-77 budgets are estimated to be the same as 1975-76. A biennium budget total is projected for each agency.

[2]Particular attention should be given to the position entitled "Soils Specialist". Many environmental questions in Minnesota relate specifically to the capability of the soils to handle wastes or runoffs from proposed projects. There should be a minimum of one person assigned to working on this extremely critical problem full-time.

project and paid for by direct funding for the project. For the purposes of budget estimates, no other state agency budget is assumed to require such special assistance.

Fiscal Year 1975-76		PERSONNEL	MAN-YEARS
EQC-EIS Coordination (includes internal EIS-MEPA activities)			
Personnel:	EQC Coordinator	1	1.0
	Technical Writers	2	2.0
	Governmental Agency Assistance Coordinator[1]	1	1.0
	Clerical	1	1.0
Budget Sub-total: $68,000		5	5.0
Professional/Technical Aid[2]			
Personnel:	Forestry	1	1.0
	Mining Engineering	1	1.0
	Wetlands Specialist	1	1.0
	Parks and Recreation	1	1.0
	Soils Specialist	1	1.0
	Game/Wildlife	1	1.0
	Fisheries	1	1.0
	Clerical	2	2.0
Budget Sub-total: $123,000		9	9.0
	TOTAL	14	14.0

Budget Totals	
Estimated Salary Budget (Average Man-Year Cost: $13,536)	$ 191,000
Goods and Services[3]	1,500
Travel[3]	6,350
Equipment[3]	500
Employee Benefits[4]	28,650
TOTAL FISCAL 1976	$ 228,500
TOTAL 1975-77 BIENNIUM	$ 457,000

NOTES:

[1]It is estimated that one full-time individual will need to coordinate and respond to the requests from other agencies to DNR for specific technical expertise. This person would also be responsible for any multi-expertise information requests and for coordinating the DNR response.

[2]Professional/Technical Aid people are indicated by their areas of expertise, not necessarily by job or occupation title. They would most likely be located in appropriate divisions relating to their expertise. Clerical assistance would be distributed by need.

[3]The budget amounts indicated for these items are for use by the 5-member EQC-EIS Coordination staff only. Expense estimates for the Professional/Technical Aid people have not been included.

[4]Employee Benefit estimates are given for all 14 staff positions listed above.

(3) Pollution Control Agency

The budget for this agency, like that presented for DNR, is divided into two parts. The first is an EQC-EIS coordination division, with the same functions as the DNR equivalent with the exception of the DNR technical writers. It is expected that PCA will not have any impact statements to prepare which will not be covered by direct allocation to either a private or a public project. Therefore, while it was anticipated that DNR may have as many as 6 or 8 impact statements to prepare that are not covered by monies from some other source, it is anticipated that PCA will not. In the case of PCA, though, the person assigned the position of Governmental Agency Assistance Coordinator should have a technical background in at least air and water quality areas.

The second budget division is, like for DNR, for professional/technical aid in the preparation and review of impact statements and for the provision of technical assistance to other governmental agencies. The position of economist/planner has been included here in addition to the pollution control positions specifically identified for air, water and solid waste. It is expected that the Economist/Planner will be able to address issues of environmental and economic cost/benefits of pollution problems associated with or caused by various projects coming within the purview of PCA.

Fiscal Year 1975-76		PERSONNEL	MAN-YEARS
EQC-EIS Coordination			
Personnel:	EQC Coordinator	1	1.0
	Governmental Agency Assistance Coordinator	1	1.0
	Clerical	1	0.5
Budget Sub-total: $36,250		3	2.5
Professional/Technical Aid			
Personnel:	Air Quality Specialist	1	1.0
	Water Quality Specialist	1	1.0
	Solid Waste Specialist	1	0.5
	Economist/Planner	1	1.0
	Clerical	1	1.0
Budget Sub-total: $60,500		5	4.5
	TOTAL:	8	7.0

Budget Totals

Estimated Salary Budget (Average Man-Year Costs: $13,821)	$ 96,750
Goods and Services	2,500
Travel	3,800
Equipment	1,500
Employee Benefits[1]	14,513
TOTAL FISCAL 1976	$119,063
TOTAL 1975-77 BIENNIUM	$238,126

NOTES:

[1]Employee Benefits are given for all 8 staff positions listed above.

(4) Department of Agriculture[1]

Fiscal Year 1975-76

EQC-EIS Coordination		PERSONNEL	MAN-YEARS
Personnel:	EQC Coordinator	1	1.0
	Soils Specialist	1	0.75
	Clerical	1	0.5
Budget Sub-total: $32,625		3	2.25

Budget Totals

Estimated Salary Budget (Average Man-Year Costs: $14,500)	$ 32,625
Goods and Services	1,000
Travel	1,450
Equipment	500
Employee Benefits	4,894
TOTAL 1975-76	$ 40,469
TOTAL 1975-77 BIENNIUM	$ 80,938

NOTES:

[1]All agency budgets hereafter should need no special explanation. The staff positions and man-year assignments should be sufficient to indicate the type and level of work expected from each agency.

(5) Department of Health

Fiscal Year 1975-76

EQC-EIS Coordination		PERSONNEL	MAN-YEARS
Personnel:	EQC Coordinator	1	1.0
	Sanitation Specialist	1	0.5
	Clerical	1	0.5
Budget Sub-total: $30,250		3	2.0

Budget Totals

Estimated Salary Budget (Average Man-Year Cost: $15,125)	$ 30,250
Goods and Services	1,000
Travel	1,450
Equipment	500
Employee Benefits	4,538
TOTAL 1975-76	$ 37,738
TOTAL 1975-77 BIENNIUM	$ 75,476

(6) Energy Agency

The budget presented below assumes that our recommendation for moving the power plant siting function from the EQC to the Energy Agency is implemented. The power plant siting functions budgeted for below include all items which might come under the purview of the proposed MEPA-EIS system. If power plant siting is not moved to the Energy Agency, we estimate that the agency Fiscal 1976 budget should be $15,694, and the 1975-77 Biennium Total should be $31,388. This lower budget level assumes a one-half time EQC Environmental Coordinator, a one-quarter time clerical assistant, $1,450 in travel and per diem expenses, $300 in equipment expenses, and employees benefits as per the salary levels.

Fiscal Year 1975-76

EQC-EIS Coordination	PERSONNEL	MAN-YEARS
Personnel: EQC Coordinator	1	1.0
EIS Technical Specialist (on power plants, transmission lines)	1	1.0
Research Assistant	1	1.5
Clerical	1	0.5
Budget Sub-total: $57,500	4	4.0

Budget Totals

Estimated Salary Budget (Average Man-Year Cost: $14,375)	$ 57,500
Goods and Services	1,000
Travel	2,450
Equipment	1,200
Employee Benefits	8,625
TOTAL 1975-76	$ 70,775
TOTAL 1975-77 BIENNIUM	$141,550

(7) Department of Economic Development

Fiscal Year 1975-76

EQC-EIS Coordination		PERSONNEL	MAN-YEARS
Personnel:	EQC Coordinator	1	0.5
	Clerical	1	0.25
Budget Sub-total:	$ 10,875	2	0.75

Budget Totals

Estimated Salary Budget (Average Man-Year Cost: $14,500)	$ 10,875
Goods and Services	-0-
Travel	1,450
Equipment	300
Employee Benefits	1,631
TOTAL 1975-76	$ 14,256
TOTAL 1975-77 BIENNIUM	$ 28,512

(8) Department of Highways[1]

Fiscal Year 1975-76

EQC-EIS Coordination		PERSONNEL	MAN-YEARS
Personnel:	EQC Coordinator	1	1.0
	MEPA-EIS Assistant	1	1.0
	Clerical	1	0.5
Budget Sub-total:	$34,750	3	2.5

Budget Totals

Estimated Salary Budget (Average Man-Year Cost: $13,900)	$ 34,750
Goods and Services	-0-
Travel	1,850
Equipment	500
Employee Benefits	5,213
TOTAL 1975-75	$ 42,313
TOTAL 1975-77 BIENNIUM	$ 84,626

NOTES:

[1]No NEPA-related work is covered here. The budget is established for the MEPA process and MEPA-EQC related work only.

(9) Governor's Office

Fiscal Year 1975-76

EQC-EIS Coordination	PERSONNEL	MAN-YEARS
Personnel: EQC-State Agency Environmental Coordinator	1	0.5
Clerical	1	0.25
Budget Sub-total: $10,875	2	0.75

Budget Totals

Estimated Salary Budget (Average Man-Year Costs: $14,500)	$ 10,875
Goods and Services	-0-
Travel	1,450
Equipment	300
Employee Benefits	1,631
TOTAL 1975-76	$ 14,256
TOTAL 1975-77 BIENNIUM	$ 28,512

B. The Environmental Management Hearings Board

The duties of the proposed Environmental Management Hearings Board are extensively outlined in Sections IV and V. However, one additional point needs to be made that has a direct effect on the proposed budget for the upcoming biennium. That is, we expect the Board to go through a build-up period over at least the first year of operation. During the first year, appealed MEPA cases should come in very slowly at first and then pick up as people become used to having the administrative appellate body around. Also, it will probably take some time before users of the MEPA system become sufficiently at ease with the system to have the knowledge and/or confidence to appeal a matter under this new program. Because of this, even though we are recommending a three member Hearings Board, during the first year of operation we are further recommending that only one of the three members be full-time with the other two operating on essentially a half-time basis. However, after the first year of operation, the Hearings Board should be considered to be in an on-going operative position, and at this time, all three members should become full-time members of the board. The Board's case load for the first year or any year thereafter is totally unspecifiable at this time.

Finally, before the details of the budget are presented, one additional point needs to be stressed. The functions of the Board, as envisioned in Sections IV and V of this study, relate only to the MEPA impact statement system. As an appellate body, the Board might at some future time take on additional duties, if the Legislature desires, which could include environmental appeals of local governmental comprehensive plan variances as outlined in Section VII, or administrative appeals of various types of permit applications (as the State of Washington's Pollution Control Hearings Board does for various water quality and air quality permits). If this occurs, we do not recommend an automatic increase in the full-time membership of the Board, but rather the more extensive use of hearings officers as may be appropriate.

Fiscal Year 1975-76

Board Officers	PERSONNEL	MAN-YEARS
Personnel: Board Members with various expertise as selected by the Governor	3	3.0
Budget Sub-total: $55,000	3	3.0
Research Assistants		
Personnel: Assistant (e.g., Law Clerk)	1	1.0
Budget Sub-total: $15,500		
Clerical		
Personnel: Clerk-typist	1	1.0
Budget Sub-total: $7,500	1	1.0
TOTAL	5	5.0

Budget Totals

Estimated Salary Budget (Average Man-Year Costs: $19,500)	$ 78,000
Goods and Services[1]	18,000
Travel[2]	18,350
Equipment[3]	7,500
Employee Benefits	11,700
TOTAL FISCAL YEAR 1976	$133,550

NOTES:

[1]This includes personal services contracts as may be needed for hearings officers and other consultation activities.

[2]This travel figure anticipates that the Board members and/or hearings officers, or both, will be traveling to the areas or jurisdictions where the appeals occur. Considerable out-state travel may occur. If all cases are heard in St. Paul, it can be expected that this figure of $18,350 can be reduced to approximately $6,350. Per diem is included in the travel figures.

[3]This anticipates the need to set up an entire new office; equipment, supplies and furniture leasing are included. Office space rent is not included in these figures. Initially, a 1,000 square foot office should suffice for the Board, increasing to approximately 1,800 square feet in the second year. Office space with the possibility of expansion should be chosen when initially locating the Board.

Fiscal Year 1977

All basic salaries and positions remain the same, except that the two one-half time Board Members are now working on a full-time basis. Salary totals and employee benefits are adjusted accordingly.

Budget Totals

Estimated Salary Budget (Average Man-Year Costs: $21,000)	$ 105,500
Goods and Services	18,000
Travel	18,350
Equipment	2,000
Employee Benefits	15,825
TOTAL FISCAL YEAR 1977	$ 159,675
TOTAL 1975-77 BIENNIUM	$ 293,225

C. Regional Development Commissions and the Metropolitan Council

The Regional Development Commissions in Minnesota, of which there are currently twelve (excluding the Metropolitan Council), could provide very strong support to the EQC-MEPA program recommended in this report. However, few of the RDCs are adequately staffed at the present time to provide the technical assistance that the local governmental units in their jurisdictions could be requesting. There appear to be at best three RDCs which could actually provide substantive staff assistance to locals if they had the funding to do so. In the future, the other RDCs will most assuredly develop staff expertise and capability, but it will probably be a relatively lengthy development process.

The Metropolitan Council is currently capable of providing substantial assistance to its constituents in the seven-county Metro area. It is a well-funded, well-staffed organization, and clearly has the capability of providing services in the MEPA-EIS program, which would range from coordinative assistance and technical help to actually preparing impact statements for jurisdictions requesting such help. It surely will be involved in the review of locally developed impact statements, and will have not only an interest in but also a legal responsibility to review projects of regional and statewide significance occurring within its boundaries.

We are projecting that if Metro (or any RDC, for that matter) actually gets involved in the preparation of an impact statement, it would be directly remunerated for that involvement by the party requesting its services. It may be feasible for Metro (or an RDC) to have a "traveling" impact statement preparation group.[1] If such a group comes into existence it should be self-sufficient from the funds received from whichever jurisdiction or private organization retained Metro to do work.

We recommend that some amounts of money be ear-marked initially for both RDC and Metro Council use in the MEPA-EIS system program. Basically, these monies should be utilized for the hiring of staff to assist local governments in implementing the EIS program, provide technical assistance in the preparation of EISs, and be responsible for the substantive review of impact statements prepared for projects occurring within their jurisdictions. We are specifically suggesting that the Metropolitan Council be funded for three staff positions. The first would be an EIS-Systems Coordinator, specifically assigned the duties of assisting the local governmental units and inputting into the preparation of EISs where possible. The second individual would be an assistant to this person and would have the basic responsibility for Metro Council impact statement reviews. The third would be a full-time clerical person. In addition to monies for actual staff positions, we are further recommending a very nominal amount to offset travel costs and goods and services which may be used by Metro.

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[1] A major goal of an EIS system is to develop better decision-making capabilities in the jurisdictions where the decisions are being made. Any outside group doing the work, whether it be Metro, a consultant, or whoever, will take away part of the process which is important in developing the backgrounding necessary for making better decisions in that jurisdiction. It is fully recognized, however, that it might not be practical for all local governments to actually prepare impact statements, and in these cases, a Metro preparation group should be at least as adequate as an outside consulting firm.

For the RDCs, we are recommending that one full-time EIS-Systems Coordinator be funded for three RDCs in Fiscal 1976 and expanded to include two additional RDCs for Fiscal 1977. In addition to the full-time coordinator, we are recommending that the funding also include one-quarter time for clerical assistance and employee benefits for those positions. Travel and other costs should be absorbed by the RDCs through other funding mechanisms. We are fully cognizant that the role of the RDCs in the MEPA-EIS process should expand as RDC capabilities expand. Each year there will have to be a review of their role and their needs in order to accurately assess what their input into the program should be and how it should be accomplished. The funding suggested below is simply a basis from which to begin.

Metropolitan Council

Fiscal Year 1975-76	PERSONNEL	MAN-YEARS
Personnel: EIS-Systems Coordinator	1	1.0
EIS Assistant (assigned to EIS reviews)	1	1.0
Clerical	1	1.0
Budget Sub-total: $40,000	3	3.0

Budget Totals

Estimated Salary Budget (Average Man-Year Costs: $13,333)	$ 40,000
Goods and Services	1,500
Travel	2,500
Employee Benefits	6,000
TOTAL FISCAL 1976	$ 50,000
TOTAL 1975-77 BIENNIUM	$100,000

Regional Development Commissions

Fiscal Year 1975-76 (Per RDC)	PERSONNEL	MAN-YEARS
Personnel: EIS-Systems Coordinator (Local government technical advice and EIS review)	1	1.0
Clerical	1	0.25
Budget Sub-total: $17,375	2	1.25

Budget Totals

Estimated Salary Budget (Average Man-Year Costs: $13,900)	$ 17,325	
Employee Benefits	2,606	
TOTAL FISCAL 1976	$ 19,931	(per RDC)
TOTAL FISCAL 1976 for FUNDING 3 RDCs	$ 59,943	
TOTAL FISCAL 1977 for FUNDING 5 RDCs	$ 99,905	
TOTAL 1975-77 BIENNIUM	$159,848	

D. Local Governments

At the present time, it is extremely difficult to project the manner in which all the local units of government will actually implement the proposed MEPA program (although all units will be required to do so in one way or another) and even more difficult to identify the number of significance decisions and impact statements in which they may be involved. With respect to the latter point, we can only postulate that if and when they find a project significant, the cost of preparing the impact statement will be borne by the project itself, regardless of whether it is public or private in nature. Consequently, the out-of-pocket expense to local governmental units will most likely be in setting up the MEPA system under which they will operate and getting the system internalized in their decision-making processes in some type of on-going fashion. Since we are strongly recommending that the State of Minnesota require local governmental implementation of MEPA for all municipalities and counties over 25,000 population, and since we feel that some governmental jurisdictions under that population breakpoint will find it desirable to have their own implementing ordinances (which should be strongly encouraged by the state), we are recommending that some of the funds programmed in the proposed Local Governmental Assistance Grant program be allocated to these jurisdictions implementing MEPA, particularly to be used to offset first and some second year costs. We further recommend that this grant program for the EIS systems work by local governmental units be only a one-time program, since we strongly urge local governments to integrate the MEPA-EIS system into their existing day-to-day decision-making processes. After the EIS process has been adequately integrated into a local system, the ongoing cost (except for the cost of preparing draft impact statements) should be no more than the present cost for administering an adequate local governmental jurisdiction.

We are recommending that $400,000 be set aside for local governmental use in implementing the MEPA program for the 1975-77 biennium. The distribution of this money should be through the State Planning Agency Office of Local and Urban Affairs, with advice and counsel of the EQC. It should automatically be made available to those 50 units of local government which will be required to implement MEPA and the EQC rules and regulations through local ordinance adoption within 180 days of the adoption of the rules and regulations.[1] The following criteria should be used to allocate the grant monies:

> Within 180 days after the EQC has adopted rules and regulations implementing amended MEPA, municipalities and counties which are required to implement MEPA by local ordinance may submit an application for grant funds of up to $5,000 with their submission of their local ordinances for EQC certification. This money must be utilized for a staff individual (time estimate to be 1/4 to 1/2 of a man-year) to work with the local EIS process. This staff person may be used in one

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[1] Ramsey and Hennepin Counties should be excluded from the requirement to pass a local ordinance implementing MEPA since they are presently excluded from the County Planning Enabling legislation.

or all of the following areas: (1) work on EIS program administration; (2) work on the development of one or more draft and/or final EISs for which that unit of government will be responsible; and (3) work on the processing and review of EISs. If the maximum amount of $5,000 is requested by a local government, it shall be granted by EQC if the appropriate documentation for its need has accompanied the request for local ordinance certification.

A maximum of $250,000 of the total $400,000 may be used for the above described program. It is expected that some units of local government under the 25,000 population figure will also implement the MEPA program through local ordinances. If they decide to pass an ordinance within 180 days of the adoption of the EQC rules and regulations, they should be eligible for funding on the same basis as described above. The remaining $150,000 would be made available, on a grant basis not to exceed $5,000 per jurisdiction. Obviously, these units of government would also have to have ordinance certification by the EQC.

After the 180 day period for adoption of local implementing ordinances[1], any remaining monies would be available to any local government which applies to the EQC for the specific application of funds to EIS preparation. The amount of this money should not cumulatively exceed $10,000 per jurisdiction. Guidelines for application for initial monies and EIS preparation monies should be issued jointly by OLUA and the EQC with the adoption of the statewide rules and regulations.

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[1]Implementing ordinances, or course, may be adopted after this time for any other unit of government desiring to do so. However, they will not be automatically eligible for grant funds, although if money remains, any request they have will be considered.

APPENDIX C

Forms

The major formal document required under MEPA is, of course, the environmental impact statement. An EIS is a "form to be filled out" in only the most abstract way. There is no specific format requirement under present law, and we are not recommending that any specific format be required. We are, however, recommending a basic EIS format for consideration by responsible agencies in Minnesota. The whole point of an EIS is to provide an adequate detailed analysis of the environmental effects of a given project in a clear way. Though there may be a variety of ways in which that analysis can appear on paper, we believe that the format recommendations contained in the body of this report would be most likely to lead to documents easily readable by technical reviewers, decision makers, and the lay public alike.

There are many additional written requirements that could be tied to the MEPA process. We have attempted studiously to avoid recommending required paperwork whenever it could be dispensed with without destroying the effectiveness of MEPA's implementation. As a result, there are only four forms to which we wish to draw attention here. (See, in addition, Appendix E, which sets forth some suggestions on formal tools for use in reviewing draft EISs.)

A. Declaration of Exemption

As stated in the body of this report, we recommend that every exemption of projects pursuant to amended MEPA and rules and regulations be recorded in writing. The point is to make this recording as painless as possible.

For the most part, there will be some form already required for exemptable projects: a permit form, a lease or sale agreement, a contract, etc. With slight re-arrangement of present format, a small section declaring an exemption under MEPA could easily be added to such forms; or if it is easier, a paragraph could be added on an attached page. We feel that it is important to record both the exemption and the exemption class to ensure awareness of MEPA's mandates and to provide a written record for possible subsequent challenge and such record is most appropriately kept on file with other written documents relating to the project in question. If no form is currently in use for a given project, a brief project description will be necessary in addition to the declaration of exemption and exemption class. The wording that we recommend for the declaration of exemption is as follows:

> The project described herein is declared exempt from the environmental impact statement requirement of Minnesota Statutes, Section 116D.04, in accordance with regulation MEQC _____ or local ordinance _____ [or state agency regulation _____].
> Exemption class: _____.

B. Positive/Negative Declaration on Environmental Significance

We are recommending that every significance decision and support sufficient for review of each such decision be recorded in writing. All public agencies in Minnesota with an interest in a given project should be notified of the significance decision on that project. Further, we recommend that each governmental jurisdiction keep an open notebook available to the public which records in summary form all of the interesting significance decisions of that jurisdiction as they are made. The notebook should include summaries of all significance decisions indicating that a project has the potential for significant environmental effects. It should also include summaries of all decisions that a project does not have that potential when such decisions help to illuminate the rationale used in significance decision making.

A single standardized two-page form can be used to advantage for: (1) the written recording of the significance decision itself; (2) notification of agencies in Minnesota with an interest in the project; and (3) summarizing the significance decision and its rationale. We recommend the form which constitutes pages C-4 and C-5 of this appendix for this three-fold purpose. The completed form would be filed in the responsible agency's project file with other information on the project (including written support sufficient for review of the significance decision). Copies would be: (1) sent to the EQC, the regional development commission in whose jurisdiction the project is proposed, and any other Minnesota agency which could reasonably be expected to have jurisdiction over or other interest in the proposed project; and (2) included in the jurisdictional significance decision notebook. It is important to note that the "reason(s) for the decision" should be made as specific as possible to avoid setting the wrong precedent for future cases.

The agency responsible for the significance decision would also be required to send a copy of the written support for the significance decision to any governmental agency upon the request of that agency. We feel strongly, however, that no standard form will fit every action in terms of the information sufficient for review to be provided in support of the significance decision.[1] On the other hand, we would like for a variety of reasons to draw attention to a particular form, to be called an 'Environmental Clearance Worksheet' (pages C-6 to C-12).

The Environmental Clearance Worksheet will, first of all, serve to outline our recommendation on the range of information potentially needed for the making of an adequately supported significance decision. If the Worksheet is filled out correctly, it should constitute adequate support for many significance decisions, granting the possibility of the need for additional pages of explanation as indicated in the form.[2] For this reason, it may be of actual use to responsible officials in a large number of cases.

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[1] See the information offered as adequate support for a significance decision in the lengthy example which constitutes Appendix F to this report (page F-29). Any form which required information beyond that presented there would lead to superfluous paperwork in that particular case.

[2] To stress the point again, it may also be requesting considerably more information than is needed in many cases.

For private projects the responsible official could give it to the project proposer, requesting that he supply the information available to him without extensive research. It is important to note at this point that information provided to the responsible official in this way does not excuse the official in question from the responsibility for the accuracy of the information on which his significance decision is based. If the responsible official checks off in the "official use only" columns on the information provided by the applicant, the Worksheet should be usable as official written support for the responsible official's significance decision. For government-proposed projects the responsible official could fill out the Worksheet himself and attach it as written support for his significance decision. Regardless of the source of the information appearing as support for that decision, the responsible official must be in a position to vouch for the accuracy of the information presented.

The term 'Negative Declaration' has become popular among officials across the nation who are working with environmental policy acts. We recommend that the term be retained in Minnesota and given a standardized meaning, being defined as the two-page declaration of non-significance together with written support sufficient for review of the significance decision. Correspondingly, we suggest the introduction of the term 'Positive Declaration' to refer to the two-page declaration of significance together with written support sufficient for review of the significance decision.

To reiterate, we recommend that the form which constitutes the following two pages be standardized and that the Environmental Clearance Worksheet be examined with care for possible distribution as an aid to responsible officials.

_____ DECLARATION ON ENVIRONMENTAL SIGNIFICANCE
(POSITIVE/NEGATIVE)

Project title _____

MEPA identification number _____

Project sponsor _____

Type(s) of environment affected _____

Governmental agencies which can reasonably be expected to have jurisdiction over or other interest in the proposed project and to whom this sheet is being sent:

Minnesota Environmental Quality Council

Description of environmental setting:

Project description:

The project described on the previous page is hereby declared _____ [to have/not to have] the potential for a significant effect on the environment. Therefore, an environmental impact statement _____ [is/is not] required under Minnesota Statutes, Section 116D.04, Subdivision 1. This decision is based on the information presented on the following page(s), which I hereby declare to be correct and sufficient for a decision on the potential significance of the environmental effects of the proposed project.

Reason(s) for the decision:

Acting official _____

Position _____

Agency _____

Address _____

Phone _____

Date _____

Signature _____

ENVIRONMENTAL CLEARANCE WORKSHEET

This form provides the basis for the initial evaluation and determination of environmental significance for public and private proposed projects except those that are exempt in accordance with state law. The responsible official will evaluate the proposed project with the aid of the following information and make a determination as to whether or not an environmental impact statement will be required.

Name of Project Sponsor _____

Address of Project Sponsor _____

Phone of Project Sponsor _____ or _____

Name of Project _____

MEPA Identification Number _____

I. PROJECT DESCRIPTION

A. Project Location:

B. Brief Project Description:

C. Operating Characteristics:

1. Residential projects (not including transient accommodations)

a. size, number, nature, and address of structures

b. anticipated number of occupants at normal full occupancy

c. anticipated number of autos and parking spaces

d. access and proximity to major roads and transportation facilities

2. Non-residential projects

a. size and number of structures

b. number of people to be employed

c. types of equipment and/or machines to be employed

d. number of parking spaces required and traffic generated

e. types of materials processed, packaged or stored

f. access to major roads, rail, water or air facilities

g. transportation modes to be used by employees and customers

h. transportation modes used for raw materials and products

i. transportation or disposal of waste products (solids, liquids, gases)

D. Description of the Project Area:

1. Amount of land involved in the project and current use of such land

2. Consistency of project with zoning and planning policies

3. Uses of adjacent parcels

4. Natural hazards in the project area; e.g., drainage problems, high water table, flooding

5. Proximity to public facilities; e.g., schools, hospitals, churches, parks, fire stations

6. Availability of utilities; e.g., water, sewer, electricity, gas, telephone

7. Natural and man-made aspects of the site and adjacent parcels

II. ANTICIPATED ITEMS OF IMPACT

A. The Natural Environment:	YES OR NO	OFFICIAL USE ONLY
1. Will the project have an effect on the topographic expression, relief, or elevation of the project area?	____	____
2. Will the project produce any changes in subsurface geology or surface soils, or would geological or soil instability affect project construction?	____	____
3. Will the project have an effect on the location, condition, quality or quantity of the area's surface (running or ponded) waters or ground waters?	____	____
4. Will the project affect natural drainage characteristics?	____	____
5. Will the project create any changes in the regional climate (temperature, rainfall, humidity, etc.) or the quality of the air?	____	____
6. Will the project result in the emission or discharge of air or water pollutants?	____	____
7. Will the project produce objectionable noise, vibration, light, or odor?	____	____
8. Will the project result in the discharge of waste heat or water vapor or interfere with the ability of sunlight to reach the earth's surface?	____	____
9. Will the project displace, destroy or otherwise interfere with the normal growth of any plants (trees, shrubs, grasses, weeds)?	____	____
10. Will the project displace, destroy or otherwise interfere with the normal lives of any land, water or flying animals, especially rare or endangered species?	____	____
11. Could the project affect any natural systems or process (including, but not limited to, ecosystems, plant communities, animal habitation, and lakes and streams)?	____	____

	YES OR NO	OFFICIAL USE ONLY
12. Are any of the natural features in the project area unique; that is, not found in other parts of the region?	____	____
13. Will the project use or produce any hazardous materials such as pesticides or radioactive wastes?	____	____
14. Will the project result in a drain on any natural resource, particularly in terms of energy consumption?	____	____
15. If any of the above questions concerning the natural environment were answered with a "yes" (indicating some impacts are anticipated), describe those impacts using the best available data, and indicate whether or not they are believed significant. Use additional pages, if necessary, to provide complete answers.		

B. The Human Environment:	YES OR NO	OFFICIAL USE ONLY
1. Will the project impact any existing transportation system or create additional traffic congestion?	____	____
2. Will the project cause the relocation of human beings, either directly or indirectly?	____	____
3. Will the project create the need, or add to the need, for expanded utilities or public services?	____	____
4. Will the project affect land use in adjacent areas?	____	____
5. Will the project involve any lands that may have a particular historic, pre-historic, or archaeological significance?	____	____
6. Will the project tend to induce growth in nearby areas?	____	____
7. Will the project add to or detract from the aesthetic qualities of the area?	____	____
8. Will the project add to or detract from recreational opportunities in the project area?	____	____
9. If any of the above questions concerning the human environment were answered with a "yes" (indicating some impacts are anticipated), describe those impacts using the best available data, and indicate whether or not they are believed significant. Use additional pages, if necessary, to provide complete answers.		

C. Will the project have any environmental effects which have not been discussed under A or B above? _____. If so, describe below and indicate whether or not they are believed significant. Use additional pages, if necessary, to provide a complete answer.

OFFICIAL USE ONLY

III. I hereby certify that the information furnished in this environmental clearance worksheet is true and correct to the best of my knowledge and belief.

_____
Name of Applicant

_____
Title

_____
Signature of Applicant

_____
Date filed

_____
Received by Initials

_____
Position

_____
Agency

C. Public Notification

We are recommending that public notification of exemption decisions and significance decisions be made optional to the proposer of a given project. The giving of public notice in these cases would trigger a statute of limitations on appeal of actions taken and decisions made on the grounds of non-compliance with MEPA through the exemption decision or the significance decision in the EIS process. Because of the optionality of this notice procedure and the availability of a statute of limitations to cut off appeal, it is essential that project proposers be made clearly aware of the possibility of exercising the notice option. To trigger the statute, we recommend: (1) a newspaper announcement publicizing the decision made and the statute of limitations brought into effect; (2) notice of the triggering of the statute to the EQC, the regional development commission in whose jurisdiction the project is proposed, and any other Minnesota agency which may reasonably be expected to have jurisdiction over or other interest in the proposed project; and (3) notice of the triggering of the statute to all owners of property abutting the property which is the site of the proposed project. In the case of (2) and (3), sending a copy of the newspaper announcement should suffice.

In the case of projects for which environmental impact statements are required, we recommend that public notification be made mandatory for: (1) announcing the availability of the draft EIS; and (2) announcing the availability of the final EIS, including an explanation of the statute of limitations which this notice triggers. We recommend that these notifications take place immediately after the delivery or mailing of the draft or final EIS to the appropriate governmental agencies. Such notification should include: (1) a newspaper announcement publicizing the availability of the EIS; and (2) notice of the availability of the EIS to all owners of property abutting the property which is the site of the proposed project (a copy of the newspaper announcement should suffice).

Whenever notice is given as described in the two preceding paragraphs, we recommend that the responsible governmental agency be charged with the giving of the notification and that the project proposer be charged with the cost of such notification.

The form in which press releases are to be submitted will vary with individual newspaper requirements. It is urged that MEPA newspaper notifications be grouped together in a given newspaper whenever such arrangements can be made.

In order to ensure that MEPA press releases are handled properly and that the requisite information is always included, we recommend that the following three pages be circulated to all potential responsible agencies in the state. The first should be handed out as a matter of course (with the Environmental Clearance Worksheet when it is used) to all private project proposers whose projects require a significance decision. (An example of the content of all three press releases will be found in Appendix F to this report.)

PUBLIC NOTIFICATION

Notice that a project is exempted from the environmental impact statement (EIS) requirement of the Minnesota Environmental Policy (MEPA) or that a project has been declared not to have the potential for significant environmental effects (and therefore does not require an EIS) will be given by the responsible agency at the request of the project proposer. The cost of such notice shall be paid by the project proposer. The giving of notice as set forth in law will trigger a statute of limitations providing a time limit on the appeal of governmental decisions made and actions taken on the project proposal up to that time on the grounds of noncompliance with MEPA. If an EIS is not required, the project would receive no further consideration under MEPA unless either the project proposal or the environment to be affected changed in such a way as to significantly change the environmental effects of the project as originally evaluated.

To trigger the statute, the following steps must be completed: (1) notice must be published in a newspaper of general circulation in the county, city, or general area where the property which is the site of the project is located; (2) notice must be sent to the Minnesota Environmental Quality Council, the regional development commission in whose jurisdiction the project is proposed, and any other Minnesota agency which may reasonably be expected to have jurisdiction over or other interest in the proposed project; and (3) notice must be sent to all owners of property abutting the property which is the site of the proposed project. The second and third notifications may be satisfactorily completed by the mailing of copies of the newspaper notification, which may be combined with other public notices given for the same project. The close of the appeal period will be sixty days after the date of newspaper notification or sixty days after the date of the mailing of notifications to agencies and individual property owners, whichever date is later. The information provided in a newspaper notification of exemptions or significance decisions shall include:

(1) Project sponsor, location, and description;
(2) Responsible agency and contact person;
(3) Statement and explanation of exemption or significance decision (whether or not an EIS is required);
(4) Location and statement of the availability of information supporting the decision (office, address, and phone number); and
(5) Final date for initiating appeal of the decision or of fulfillment of the procedural requirements leading to the decision.

In the case of a project for which an EIS is required, public notification is required at two points in the process: (1) an announcement of the availability of the draft EIS to trigger the thirty-day draft EIS review period; and (2) an announcement of the availability of the final EIS to trigger the sixty-day statute of limitations on appeal. In both cases, notification shall be given by: (1) the publication of notice in a newspaper of general circulation in the county, city, or general area where the property which is the site of the project is lo-

cated; and (2) the mailing of notice to all owners of property abutting the property which is the site of the proposed project. The second requirement may be satisfied by the mailing of copies of the newspaper notification. For both draft and final EISs, public notification must take place at the same time as or after the delivery or mailing of copies of the impact statement to the appropriate governmental agencies. Public notification shall be given by the responsible agency and paid for by the project proposer. Public notices of the availability of draft or final EISs may be combined with other public notices given for the same project. The information provided in public notices on the availability of draft EISs shall include:

(1) Project sponsor, location and description;
(2) Responsible agency and contact person;
(3) Location and statement of the availability of the draft EIS for review (office, address, and phone number);
(4) Approximate cost of the draft EIS for individuals desiring personal copies;
(5) Where review comments on the draft EIS should be sent (name and address); and
(6) Final date for the receipt of comments usable in the preparation of the final EIS.

The information provided in public notices on the availability of final EISs shall include:

(1) Project sponsor, location, and description;
(2) Responsible agency and contact person;
(3) Location and statement of the availability of the final EIS (office, address, and phone number);
(4) Approximate cost of the final EIS for individuals desiring personal copies; and
(5) Final date for initiating appeal of the adequacy of the EIS or of satisfaction of the procedural requirements leading to the EIS.

MEPA PRESS RELEASE

NEWS RELEASE FOR: _____

SUBJECT OF RELEASE: _____

CONTENT OF RELEASE:

MEDIA RELEASED TO:

Authorized by _____

Position _____

Agency _____

Date _____

Signature _____

D. Initiation of Appeal

As explained in detail in the text, several decisions under MEPA should be appealable to an administrative appeals body. We have recommended specifically that a board be created which we have called the Environmental Management Hearings Board. Appeal to the Board should constitute the only administrative recourse for MEPA decisions. Because of the strict limitations recommended on court review, it is essential that procedures for appeal to the Environmental Management Hearings Board be made extremely clear to both responsible officials and potential appellants.

Recognizing that the Board will want to design an appeal form of their own, we recommend that something very like the following two pages be circulated to all potential responsible officials in the state for subsequent distribution to potential appellants.

INITIATION OF APPEAL

Appeal to the Environmental Management Hearings Board shall constitute the only administrative recourse for decisions made under the Minnesota Environmental Policy Act (MEPA). The point at issue will be decided on the record, together with such supporting documents, briefs, affidavits, and oral arguments as the Board may in its discretion require.

Appeal will be heard on declarations of exemption, significance decisions, environmental impact statement adequacy, and all forms of procedural compliance with MEPA. Appeal may be initiated by the action proposer, any public official, and any citizen in the area to be affected by the project in question.

If public notification has been given as set forth in law for an exemption or significance decision, an appeal of the decision or the fulfillment of procedural requirements leading to the decision will not be valid unless filed with the Environmental Management Hearings Board within sixty days of the date of newspaper notification or within sixty days of the date of the mailing of notice to interested governmental agencies and owners of property abutting the property which is the site of the proposed project, whichever date is later. Exemption and significance decisions may be appealed on the grounds that an incorrect decision was made as shown by the material submitted in support of that decision or on the grounds that the support material was inadequate for the making of the decision.

If an environmental impact statement is required on a project, an appeal of the adequacy of the statement or the fulfillment of procedural requirements leading to the statement will not be valid unless filed with the Environmental Management Hearings Board within sixty days of the date of newspaper notification of the availability of the final environmental impact statement or within sixty days of the date of the mailing of notice to owners of property abutting the property which is the site of the proposed project, whichever date is later.

AN APPEAL TO THE ENVIRONMENTAL MANAGEMENT HEARINGS BOARD

Project title _____

MEPA identification number _____

Responsible agency _____

Decision appealed _____

Date initiating the appeal period _____

Appellant _____

Address _____

Grounds for appeal:

Date of appeal _____

Signature of appellant _____

APPENDIX D

The Scenario Method of Providing Criteria for Environmental Significance

It is strongly recommended in the body of this report that a proposed project's potential for significant environmental effects be used in Minnesota as the sole criterion to determine whether or not an environmental impact statement is to be required. Limelighting significance decisions in this way makes the soundness of such decisions extremely important. As explained in detail in the text, while local governments and state agencies would be responsible for the making of significance decisions under decentralization, we believe it to be a primary responsibility of the Minnesota Environmental Quality Council to provide strong guidelines of statewide application on what counts as environmentally significant.

The present appendix is devoted to the presentation of a detailed partial model of our recommendation on the format of guidelines for significance decisions. We have termed the recommended method of providing significance guidelines "the scenario method", since it consists of the presentation of a tightly organized set of scenarios. The following pages include thirty-two scenarios, including eight imaginary project proposals in each of four very different environmental settings. All thirty-two project proposals are geared to impact primarily (in varying ways and magnitudes) on the water resources of their respective proposed locations. A similar set of scenarios would be needed to deal with each of the other major aspects of the environment. The basic organizational structure of the scenario notebook would be according to a typology of environmental settings. We estimate that about eight such setting types would be adequate to represent the fundamental variations in Minnesota's environment. The four represented here are: (1) an environmentally sensitive natural location; (2) a rural/agricultural area; (3) a suburban environment; and (4) an urban location.

The point of doing scenarios, of course, is to convey criteria on what counts as environmentally significant. Each of the proposed projects representing a certain kind and magnitude of impact on a certain kind of location would be judged by the EQC with respect to whether or not it constitutes a project with the potential for significant environmental effect. Further, and perhaps most important, the EQC would provide reasons in as much detail as possible for each significance decision. Recording the reasoning would go a long way toward making clear the meaning of the policy tacitly conveyed in the decisions themselves.

The thirty-two scenarios included here are essentially the same as the scenario test set that was gone through in detail by the technical representatives committee on September 20, 1974, in an effort to evaluate the scenario method itself. Locational maps have been added and minor bits and pieces of information have been supplied here in response to requests by the technical representatives. For a scenario by scenario report of the tech reps' significance decisions, see Appendix B to our second report to the State of Minnesota.

The scenario evaluation session represented the first application of this new technique and brought to the surface a few minor problems relating to the scenario test set itself. Probably the most important was that our lack of knowledge of Minnesota's broad spectrum of laws led to the proposal of several scenario projects which would not be allowed to proceed because of some specific legal control. A legal review of proposed scenarios will be necessary to ensure that they provide meaningful choices to environmental policy makers. It was also pointed out at the test session that some of the scenarios may not provide enough information for the making of a solid significance decision. But it is hoped that the scenario set presented on the following pages, expanded and modified as necessary, will be seen as the exemplary base of systematic scenarios prepared by the State of Minnesota.

LOCATION I

Location I is a natural area in the eastern half of Smoke-in-the-Lake County (northern Minnesota), in the vicinity of Treefrog Lake. The lake itself has about 10,000 feet of shoreline and a surface area just over 178 acres with about 205 acres of associated wetlands (types 3, 4, and 7) called Forest of Night Songs. The lake is the site of a heron rookery with a population of about 35 birds. The transition zone between the lake and the wetland area is the location of continuing studies by the students and faculty of the University of Minnesota Biology Department. Bluerind Creek enters Treefrog Lake from the northwest and exits through the University study area on the south. The stream is considered an excellent local trout stream and supports a large sport fishery. The majority of the land around both the lake and wetland is publicly owned (both state and county lands). Less than half of the lake shoreline is privately owned with three seasonal recreation homes and a small marina existent. There is no other development in the area, and both the air and water quality are considered excellent. Smoke-in-the-Lake County has a zoning administrator but does not have a sophisticated planning process.

CASE A:

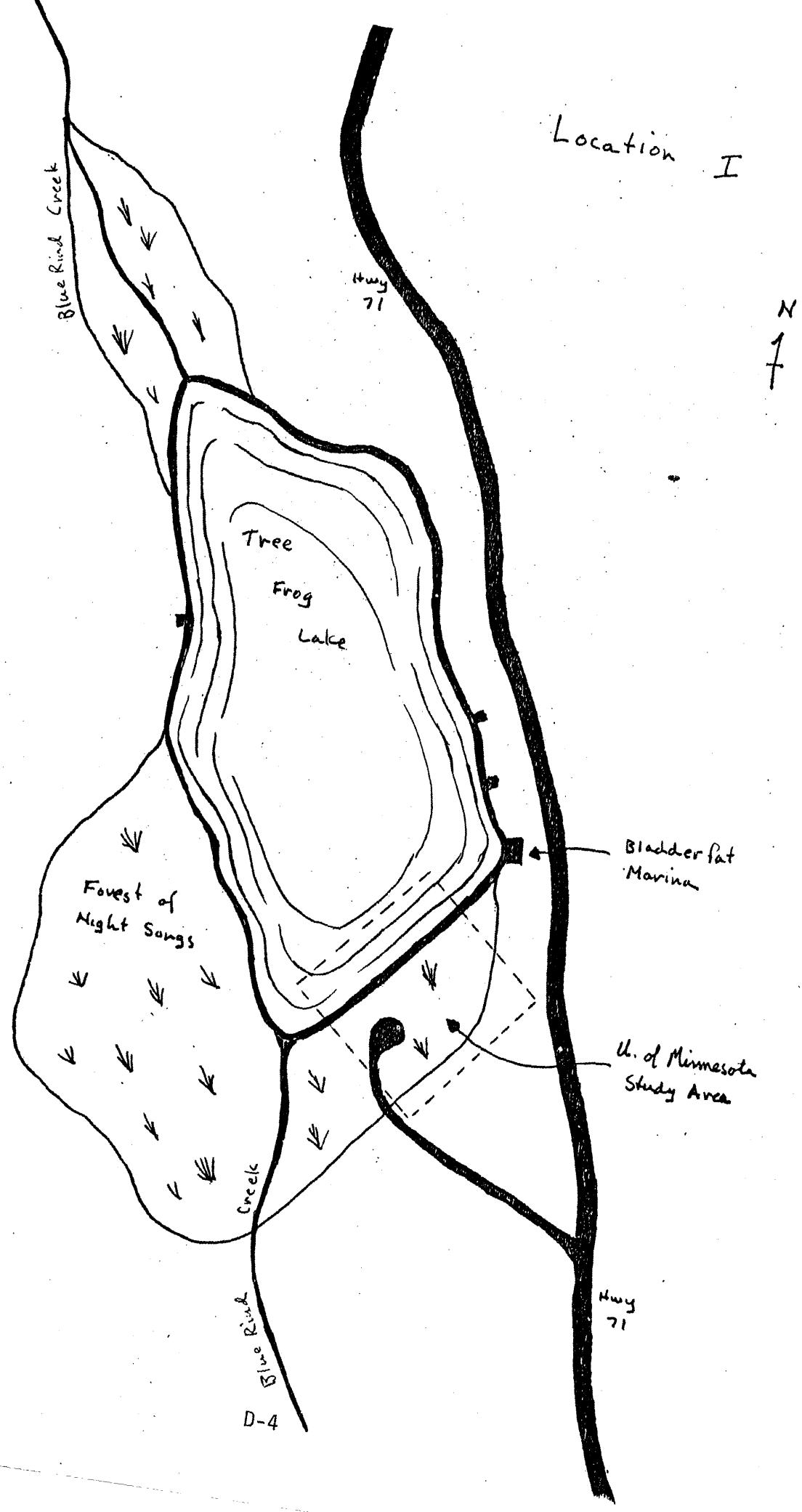
Bladderfat Lakeside Marina will expand its present facilities by approximately 50%. The facility presently involves 15,000 square feet of water surface, but will measure 22,500 square feet after expansion. No new onland expansion will be undertaken at this time although a new 1,300 square foot boat service building is planned for the near future. 300 additional feet of shoreline will be involved in the expansion, along with 1.5 acres of type 4 wetland. It is likely that some dredging will be necessary to accommodate the facility expansion.

EQC significance decision:

Reasons for decision:

CASE B:

Roundtree Development, Ltd., intends to construct a recreation/resort complex on private land on the north end of Treefrog Lake. The complex will consist of 55 rental-type summer cabins, an indoor recreation facility, a general-store type commercial center, and an automotive/marina service facility. The shoreline facilities include a small 75-boat marina, some limited bulkheading, two 85-foot


Location I
N
Blue Rind Creek
Hwy 71
Tree Frog Lake
Bladder Fat Marina
Forest of Night Songs
U. of Minnesota Study Area
Creek
Blue Rind
Hwy 71
D-4

long piers, and one floating dock approximately 200 feet off shore. The length of the shoreline involved is approximately 2,320 feet. Individual septic tank sewage systems will be employed and the septic tank capabilities of the soils are considered moderate to poor.

EQC significance decision:

Reasons for decision:

CASE C:

The Smoke-in-the-Lake County Park Department is planning to build 23.2 miles of paved bicycle trail around the lake/wetland and through the natural area surrounding the lake. Construction of the bicycle trail will affect about 17 acres of wetland (all types present). In addition, a county park facility will be located at the southern end of the lake, adjacent to the University of Minnesota Study area, and will cover 4.75 acres. Facilities will include overnight and picnicking areas, flush-type toilets on a septic tank system, and cold running water. The park and bicycle trails will involve 3,350 feet of shoreline in various segments around the lake.

EQC significance decision:

Reasons for decision:

CASE D:

A special studies task force from the University of Minnesota proposes to establish a study site on the eastern end of the lake near other University study areas. The new site will locate permanent instruments for monitoring air and water quality and collecting meteorological data. The instrument site will be located on a parcel of state-owned land measuring less than 0.5 acres. An unimproved service access road measuring 0.85 miles will also be necessary connecting the site with county highway 71. The service road and instrument site combined affect just over 500 feet of shoreline.

EQC significance decision:

Reasons for decision:

CASE E:

The North American Federation of Weight Reducers and Health Freaks (NAFWRHF) will be locating a reducing farm/exercise camp near Bluerind Creek, the major inflow stream for Treefrog Lake. The camp will cover nearly 23 acres of land with about 250 feet of lake shoreline and 7 acres of stream flood plain. The facility will include several large sauna baths and steam rooms. Water for use in these units will be withdrawn from Bluerind Creek and hot waste water will be returned to the stream. Water withdrawn may periodically amount to 1/3 of the stream's summer average discharge. Returning waste water will be well over 100°F under normal operation. Sanitary waste water generated at the facility will be disposed of using a septic tank system with drainfields to be located on or near the Bluerind Creek floodplain.

EQC significance decision:

Reasons for decision:

CASE F:

A 17-unit recreation home development has been proposed by the Portrock Investment Company for the near northern shore of Treefrog Lake. Seventeen private, seasonal recreation cottages will be placed on large lots on the lowland area just north of the Forest of Night Songs wetland. Over 3400 feet of lake shoreline will be involved in the 17-unit development. No other facilities are planned at this time although the Portrock Investment Company does own an additional 47 acres of land with 2100 feet of shoreline in the same area. Altogether the 5500 feet of shoreline owned by Portrock is about half of the area's available lake shore. Individual septic tank type sewerage systems will be employed by each of the 17 residential units although the soil capabilities in this respect are only considered marginal. The larger than normal lot size, allowing more extensive drainfields, will partially offset the soil conditions. A seasonally high water table may still result in system failures, however.

EQC significance decision:

Reasons for decision:

CASE G:

A 240-acre parcel of land on the eastern edge of Treefrog Lake is owned by Mr. Sod Buster. The parcel, which shares about 2,200 feet of its boundary with the lake and wetland associations, will be converted from its present natural grassland condition to use for production of soybeans. About 2 acres of wetland, set back a considerable distance from the lake itself, will be drained and put into soybean production. Mr. Buster indicated that a program of intensive fertilizer and pesticide use would be undertaken to insure profitable production in this area. All or most of this parcel slopes toward the lake, and both surface and ground water drainage would be toward the lake.

EQC significance decision:

Reasons for decision:

CASE H:

The Urban Recreation Resources Club, a group of urban dwellers banded together to organize various outdoor recreation activities, has just purchased 21 acres of forest land on the shore of Treefrog Lake. They intend to construct a private park facility on the newly purchased property for the restricted use of their members. The facility will involve a 4.5 acre decentralized campground with running water, flush toilets (on a septic tank system), a boat launching ramp, and three short nature hiking trails of 0.75 to 1.5 miles in length. A 2.5 mile surfaced access road will enter the private campground from county highway #71. The remainder of the Club's property will be left in a natural state with possible facility expansion in the distant future.

EQC significance decision:

Reasons for decision:

LOCATION II

The setting of Location II is the northern part of White River County. This is a rural agricultural area with light residential development encroaching from the metropolitan area around Klikit. The county's primary public facilities are some state and interstate highways. Nearly all of the land is privately owned, mostly agricultural. Some of the farm land has been abandoned, but the majority is still productive turning a moderate profit considering today's market. There is low-density residential development appearing mostly in the southern portion. Two lakes are located in the area: one of 23 acres surface area, and the other 170 acres. An additional 62 acres of wetland types 3, 4, 5, and 7 are scattered throughout the area of Location II. Both of the lakes and most of the wetland appear to be fed by ground water springs. Surface drainage of both lakes and some wetlands becomes a part of the White River drainage system, with White River flowing between the two lakes. The quality of both surface and ground water reflects the use of fertilizer on the farmland fields.

CASE A:

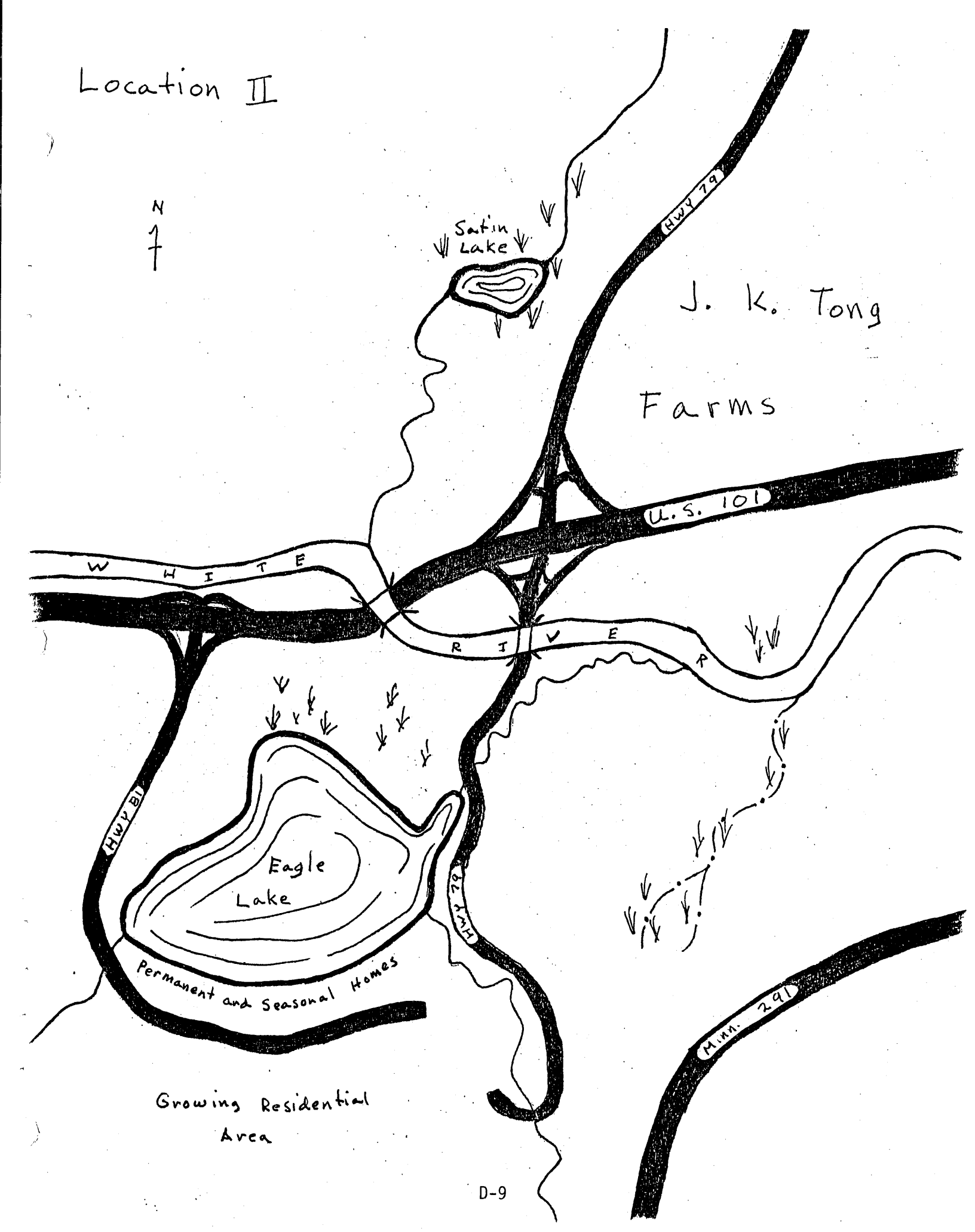
The Olympis Red Riders Company, a development association, has announced plans to construct a new planned community on the western shore of Eagle Lake, the larger of the two area lakes. The new community will consist of low through high density residential units, various commercial establishments and some light industrial/transportation facilities. It will be located on presently vacant farm land and will include a municipal recreation area with 6,200 feet of shoreline on Eagle Lake. Additionally, 9.7 acres of type 5 wetland will be drained and filled. Sewage treatment facilities will be constructed to provide secondary treatment of the municipal effluent (which will then pass into Eagle Lake). Storm-water runoff will be trapped in retention basins for about 80% of the land area and, for the remainder, it will pass directly into the lake.

EQC significance decision:

Reasons for decision:

CASE B:

A new connector highway is being proposed by the White River County Highway Department. Plans call for a four-lane limited access roadway approximately 21 miles in length. It is designed to connect the expressway (state highway #291) with U.S. Route 101. This will allow better access to the expanding residential development in the southern part of Location II. The route of the new county highway will pass through or affect about 10 acres of wetland, types 3, 5, and 7. In addition, it will travel the edge of Eagle Lake, impacting over 250 feet of lake shoreline.


Location II
N
Satin Lake
Hwy 79
J. K. Tong
Farms
U.S. 101
W H I T E
R I V E R
Hwy 81
Eagle Lake
Hwy 79
Permanent and Seasonal Homes
Growing Residential Area
Minn. 291

EQC significance decision:

Reasons for decision:

CASE C:

Golden Harvest Farms, owned by J.K. Tong, will erect two additional grain silos adjacent to existing grain storage facilities. Golden Harvest Farms comprises the largest single collection of productive agricultural land in the area. Several other grain storage facilities are scattered throughout the farm. Construction of the silos will require the draining and filling of 1.75 acres of type 3 wetland. It will also require the expansion of a private service road 1.50 miles, which in itself involves filling another 0.66 acres of type 3 wetland. The project will further require the re-routing of a 600 foot stretch of Satin Lake's outlet stream, which is small and intermittent.

EQC significance decision:

Reasons for decision:

CASE D:

The Loggar Brothers intend to construct a small 27-unit single family residential development that will include a 4.5 acre private park on the north bank of the smaller Satin Lake (involves 2,100 feet of shoreline). A small commercial center is also included in the development plans. Slightly less than six acres of type 7 wetland will be drained and filled to realize the development in the area of the park. Septic-tank type individual sewerage systems will be employed and the soil capabilities are considered adequate except under the lots at the lake's edge, where high water problems may be a limiting factor. Small storm water retaining basins will be employed throughout the development to minimize discharge into the lake.

EQC significance decision:

Reasons for decision:

CASE E:

Twiddley Brothers, Ltd., meat producers, with beef and pork feedlots, breeding farms and packing houses throughout the state, announced plans to install a small self-contained beef feed lot three miles north of Eagle Lake. The lot

will measure between 300 and 350 acres with an average steer population of about 250 head. Facilities will include cropland devoted to corn and alfalfa. A five acre wetland basin located on the property will be used as an animal waste disposal to be filled with untreated solid and semi-solid wastes. There is no surface inflow or discharge points for this wetland area although it is likely to be hydrologically connected to the White River ground water system. Some use of fertilizers and pesticides on the corn fields is to be expected although this will only involve a couple hundred acres.

EQC significance decision:

Reasons for decision:

CASE F:

The Deerborne gravels, a glacial outwash deposit of uniform pea sized gravel is located generally in the southern portion of Location II. The Metropolitan Construction Company has purchased nearly 250 acres of land on the Deerborne formation for the purpose of removing the gravel for their construction operations. The gravel pit operation will be carried out in two phases, with about 100 acres involved in the initial stage. Plans to remove gravel from the additional 150 acres are not yet complete. The open pit will extend well below the water table and considerable pumping will be required during mining operations. After gravel removal is completed, a rather large, man-made lake will be left and Metropolitan Construction representatives have suggested they may be willing to sell the property to the County Park Department for a minimal cost at that time.

EQC significance decision:

Reasons for decision:

CASE G:

The increasing residential development in the southern portion of Location II has been creating an access problem. The new residents are complaining of the round-about route they must travel to their jobs in Klikit to the south. The White River County Highway Department, therefore, is proposing that Underwater Drive (county highway #79) be extended northward approximately 2.25 miles and an additional road of 0.5 miles connect this with state highway #291. The Underwater Drive extension would involve filling of approximately 4.5 acres of types 3 and 4 wetland, part of a wetland complex that drains directly into White River. Construction of the smaller connector will involve no additional wetland although it does bisect the patch of the Great Pumpkin.

EQC significance decision:

Reasons for decision:

CASE H:

The Suburban Electric and Gas Society, a public utilities cooperative, has been asked by the residents of southern Location II to provide natural gas service to the area. This would require the placement of an 18" gas line from the existing transmission main north, slightly more than 12 miles. It would further require laying over 25 miles of 6" line to distribute the gas. The proposed lines would pass under 15 acres of type 7 wetland and 2 acres of type 4 wetland. Suburban Electric and Gas has further indicated their desire to extend this line all the way to Satin Lake, which would require crossing the White River.

EQC significance decision:

Reasons for decision:

LOCATION III

Location III is characterized by high density residential, heavy commercial and light industrial development. There is some heavy industrial development on the western periphery. This area is considered to be the older city center for the City of Klikit. The existing sewerage facilities (collector system and treatment plants) are operating very near capacity. This system is considered antiquated and much in need of repair/replacement. Additionally, occasionally severe air quality problems have been noted. A medium sized urban park surrounds a 14-acre lake near the center of Location III covering an area of 48 acres (including the lake). The lake tends to act as a storm water collecting basin and severe water quality problems are present. In the late summer season, objectionable odors result in the area around the lake.

CASE A:

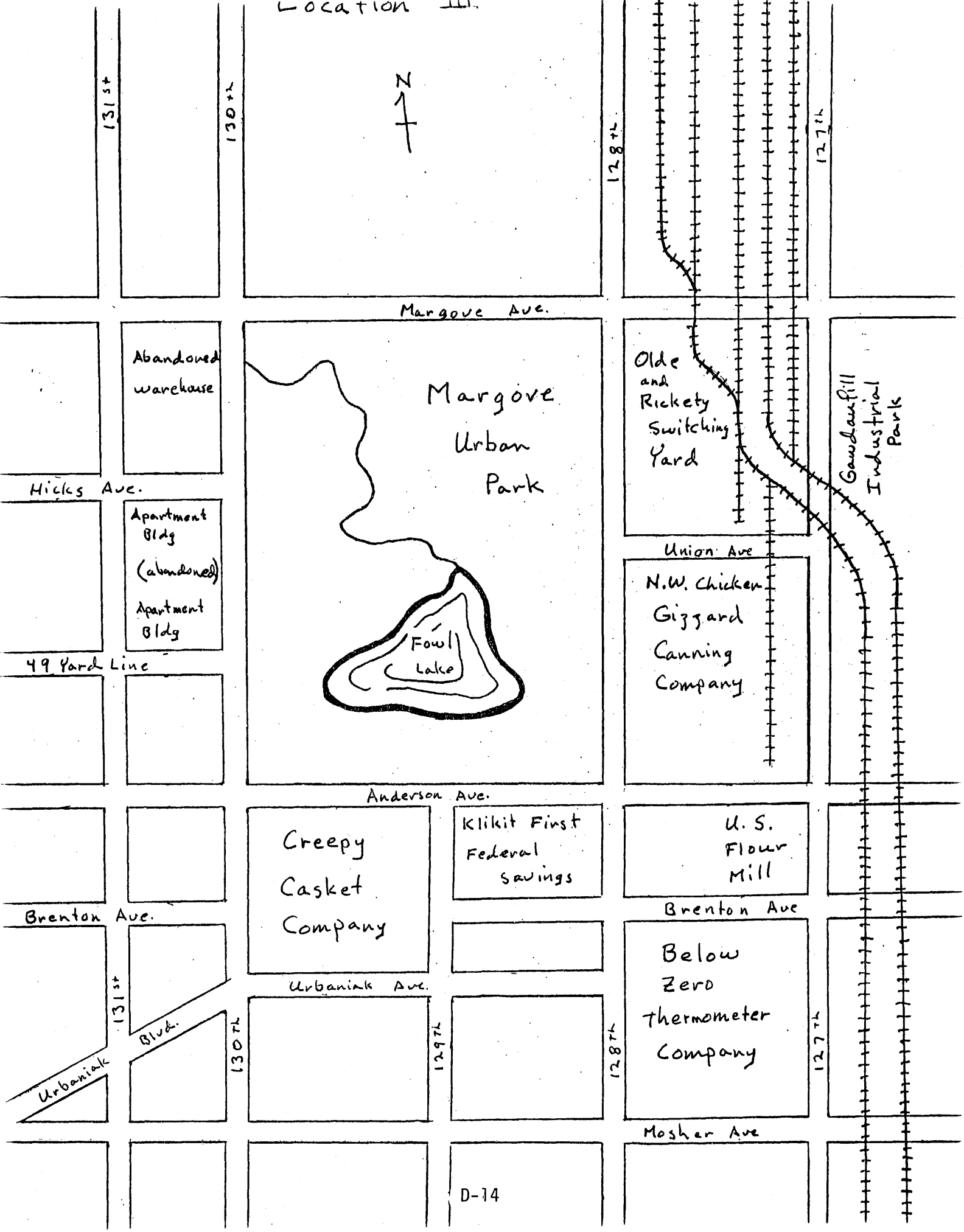
The old U.S. Flour Company mill, on the corner of 127th S.W. and Anderson Avenue, has been purchased by Gotham City, Ltd. The developer plans to create a unique service complex consisting of small specialty shops, office space, a variety of restaurants, and entertainment centers. The eight-floor structure, with planned lateral expansion of 50,000 square feet to the ground floor, will provide 450,000 square feet of floor space in the complex. Adjacent property, also part of the development, will be landscaped to become a patio-garden that opens to Margove Urban Park and Fowl Lake. The cooling water used in the complex's air conditioning system will pass into a small landscaped stream and travel 1,400 feet, through the patio-garden, to the lake.

EQC significance decision:

Reasons for decision:

CASE B:

The Klikit First Federal Savings, Mortgage and High Risk Insurance Corporation proposes to build a new bank and office building to house their Northwest district offices. The new structure will be 12-stories high and cover the double city block in the present location of the Creepy Casket Company warehouse and topless bar. On the adjacent block, where Klikit First Federal's existing district office is located, a 250-car open parking lot will be built that will be used by new office employees. The Klikit Sewer and Solid Waste Authority contends that present systems will just barely handle the sanitary waste of the building occupants if some other provision for storm water runoff can be made. Plans to pipe runoff from the structure and adjacent parking lot to Fowl Lake have cautiously been proposed.


Location
N
131st
130th
128th
127th
Margove Ave.
Abandoned warehouse
Margove Urban Park
Olde and Rickety Switching Yard
Gawdawfill Industrial Park
Hicks Ave.
Apartment Bldg (abandoned)
Apartment Bldg
Fowl Lake
Union Ave
N.W. Chicken Gizzard Canning Company
49 Yard Line
Anderson Ave.
Creepy Casket Company
Klikit First Federal savings
U.S. Flour Mill
Brenton Ave.
Brenton Ave
Below Zero thermometer Company
Urbaniak Ave.
Urbaniak
Blvd.
129th
Mosher Ave

EQC significance decision:

Reasons for decision:

CASE C:

The City Park Department intends to remove the condemned industrial structures once owned and operated by Northwest Chicken Gizzard Canning Company. These structures now occupy the lowland area adjacent to Fowl Lake and Margove Park and are subject to frequent flooding and seepage through the earth fill retaining Fowl Lake. The park department proposes to remove the earth fill, allowing the lowland area to flood and become part of the existing lake. The new lake will be more than double the size of the present Fowl Lake, measuring nearly 30 acres. The remaining industrial land will be designated as city park, almost tripling the size of the original park complex. Development of new park facilities, however, must be delayed until further funding becomes available.

EQC significance decision:

Reasons for decision:

CASE D:

The Klikit URA (Urban Renewal Authority) is involved in a small urban renewal project immediately to the east of Margove Urban Park. Three existing structures will have to be removed prior to construction, including one old abandoned warehouse, and two old but occupied apartment buildings. Three new buildings will replace those removed and include twin, 18-story, 250 large-unit condominiums and a small, multi-shop commercial center. No immediate improvements in the sewerage system are planned to accommodate the new development. It is felt that existing facilities have the capacity to handle the additional load under normal conditions. However, during over-capacity use, raw effluent may be leaking into Fowl Lake.

EQC significance decision:

Reasons for decision:

CASE E:

Farrot Rickety III, of the Olde and Rickety Railroad Company, announced plans to build an equipment maintenance, repair and cleaning facility in the

abandoned portion of the Olde and Rickety switching yard adjacent to Margove Urban Park. Double-story open-ended work barns will cover approximately 10 acres of the site, while an equipment wash-down yard will cover an additional 7 acres. A 1500 square foot triple-story material storage building is also planned. Waste water from the maintenance facility will enter the municipal sewer system. It will likely carry fairly large amounts of petroleum waste products (oils, lubricants, solvents) from the work barns to the sewage system for disposal. All waste water from the wash-down yard will flow, untreated, into Fowl Lake, or percolate into the ground water.

EQC significance decision:

Reasons for decision:

CASE F:

The Klikit Sewer and Solid Waste Authority is considering plans to replace the antiquated and inadequate sewerage facilities in the area of Location III. These plans will include larger high capacity collector networks for the entire area and a new supplementary treatment plant to increase the capacity of the city's treatment facilities. The project will be completed in three phases, the first to start immediately. Phase One consists of placement of the new 60" interceptor lines and the construction of the new treatment plant (outside Location III, intended to take loads from other parts of the city as well). Phase Two will consist of placement of collector and transmission mains in the major residential/commercial areas of Location III. Phase Three involves the location of collector and transmission mains in the predominantly industrial sector. One section of the 60" interceptor line will pass under Fowl Lake and Margove Park.

EQC significance decision:

Reasons for decision:

CASE G:

A Klikit Sewer and Solid Waste Authority petition to the federal district court resulted in a permanent injunction against the practice of the Below Zero Thermometer Manufacture Company of allowing large amounts of mercury waste to be passed to the Authority's treatment plants. The Sewer and Solid Waste Authority maintains that its facilities are not equipped to handle such wastes, and discharges by Below Zero were never approved by the Authority's Proper Poop Committee. As a result of the injunction, Below Zero intends to construct two large 145,000 square feet settling basins on their property behind the plant. The thermometer company officials say that the majority of the mercury will be filtered out by the specially designed gravel bottom filter layers of the settling ponds. The excess waste water will then pass into ground and surface water systems. Periodically, the special gravel filters will be replaced and the trapped mercury recaptured.

EQC significance decision:

Reasons for decision:

CASE H:

Mid-city Apartment Owners Cooperative, a private association of urban developers and landlords, has publicly announced its plans to construct a planned cluster of six highrise apartment buildings on a ten block area owned by members of the cooperative, just west of Margove Urban Park. The complex will consist of two 20-story, 300-unit structures; three 22-story, 440-unit structures; one 17-story, 425-unit structure; and one 16-story, 2400 automobile capacity parking garage. Each structure will be owned and operated by individual cooperative members or partnerships thereof, while the concept and design planning is being done by the Apartment Owners Cooperative. Sewerage demands made by this development and present inadequacies in the system remain in conflict although the cooperative contends that minor modification of the system would allow acceptance of Mid-city's waste water. No provisions for storm water runoff have been made except to allow direct drainage into Fowl Lake.

EQC significance decision:

Reasons for decision:

LOCATION IV

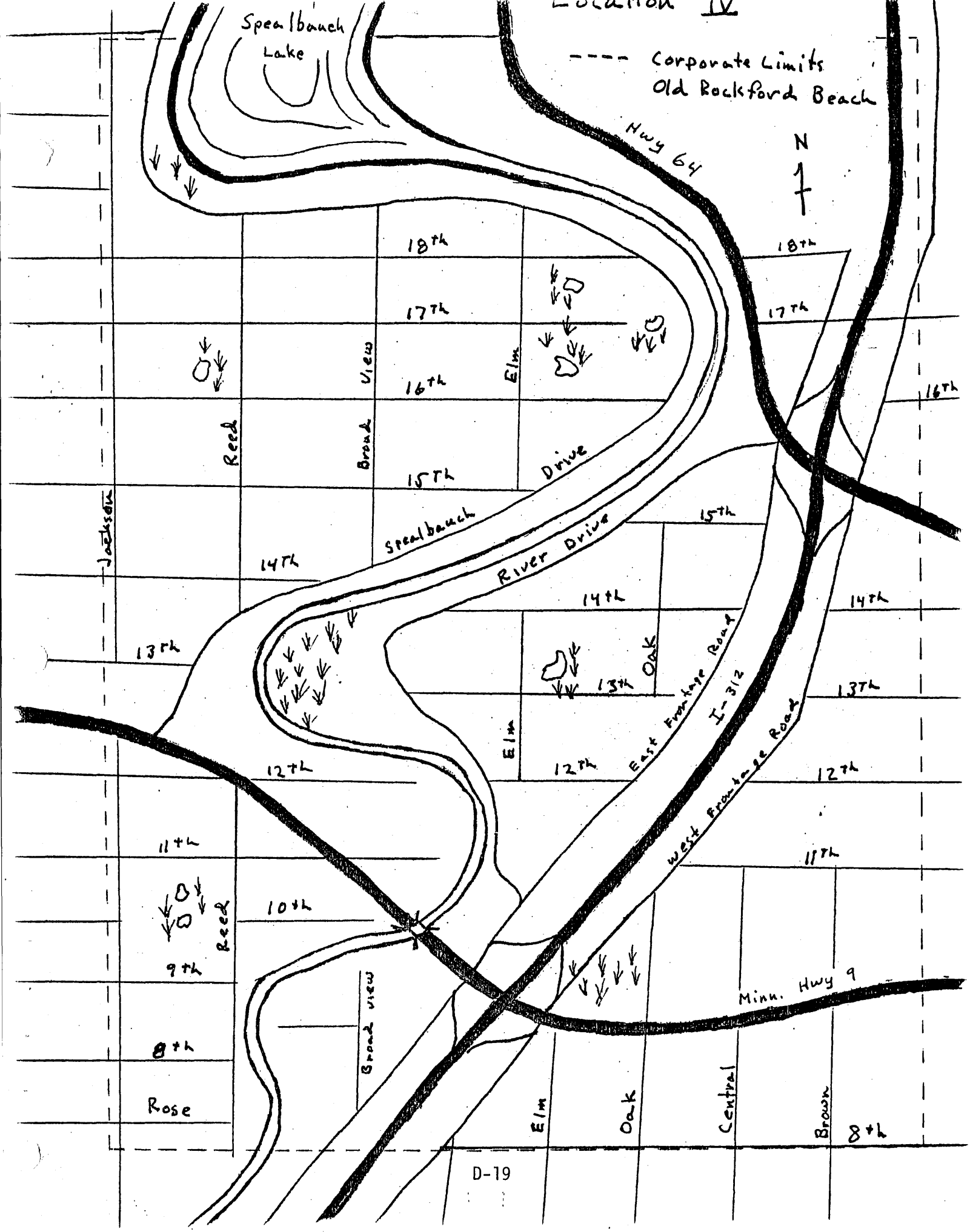
Location IV represents a suburban residential environment typical of those surrounding urban areas. The small suburban community of Old Rockford Beach is located to the southeast of the City of Klikit. The metropolitan area contains 37,000 people. Most of those residing in Old Rockford Beach travel daily to the Klikit CBD for work. Some, however, are employed at the aluminum reduction plant and rolling mill further to the south or at the pharmaceutical production and warehousing facilities to the west. The Beatlebite River meanders through the community generally south to north with a mean annual discharge of 5,000 cubic feet per second. The Beatlebite River is dammed north of Old Rockford Beach with the reservoir (called Spealbauch Lake) just barely extending into the community. No other major lakes exist in the area although there are many small ponds, potholes, and various wetlands. An 85-acre parcel of land with extensive wetland is owned by the state and is not presently designated for any particular use. Several small community parks are scattered about, ranging in size from three to seven acres, with some kind of pond or pothole on or adjacent to each park. The county does have one large park on the west bank of the Beatlebite River about two miles upstream of Spealbauch Lake. The county's comprehensive plan covers the metropolitan area and includes a transportation element, a land use element, and a public utilities element. Sewage collection facilities exist throughout the area for sanitary waste and the system capacity was designed for predominantly single-family residential use. Storm water does not join the existing sanitary sewer system but flows directly into existing ponds, potholes, and the Beatlebite River.

CASE A:

The presently vacant property near Spealbauch Lake has been purchased by Concepts Unlimited, an Atlanta based development company. The firm proposes to construct a regional shopping center on that site with a floor space of approximately 300,000 square feet. The complex will contain various retail establishments including a supermarket, three local department stores, two drug stores, a commercial laundry, a major restaurant and two quick service food outlets, plus many other small shop establishments. Construction of the shopping center will require filling two acres of type 3 wetland with a small portion of the wetland area retained to serve as a storm water retaining basin. This will provide a buffer between the shopping center's impervious surface and Spealbauch Lake. However, during construction, fairly large discharges of sediment-laden runoff are expected to reach the lake.

EQC significance decision:

Reasons for decision:


Location
Corporate Limits
Old Rockford Beach
Spealbauch Lake
Hwy 64
N
18th
17th
16th
15th
14th
13th
12th
11th
10th
9th
8th
Reed
Broad View
Elm
Drive
Spealbauch River Drive
Jackson
Oak
East Frontage Road
I-312
West Frontage Road
Minn. Hwy 9
Broad view
Rose
Central
Brown

CASE B:

Sunnyside Village Mobile Home Park, a facility occupied primarily by retired people, located in the northeastern sector of Old Rockford Beach, intends to expand its present facilities. The mobile home park is located on just over five acres of land with 55 fully occupied lots. Expansion plans call for the addition of 20 new lots on two acres of land adjacent to the park. The new land was formerly the site of the old Grant Grade School, abandoned in 1971 and demolished last spring. There is no wetland area involved in either the existing facility or the new addition. The Sunnyside Village is situated at the end of one of Old Rockford Beach's sewage collector lines and capacity is fixed at a rather low level (the old Grant School was not connected to this system). The expansion of the mobile home park may well represent maximum capacity demand for this section of the system.

EQC significance decision:

Reasons for decision:

CASE C:

The Quickie Service and Auto Repair chain of Substandard Oil will be locating a new service station just off the interchange of I-312 and state highway #9 in southern Old Rockford Beach. The new station will be located on the east siding road of I-312. However, this will require the realignment of approximately 2.5 miles of the siding road in order to avoid placing the service station in the middle of 12 acres of a type 7 wetland area. Instead, the station will be located to the right of the wetland and the siding road will be rerouted to accommodate the facility. The municipal sewerage system does not presently have collector lines in this area. Extension of lines to serve this station, a quite costly undertaking, will occur even though the operational efficiency of the lines may be interfered with by the relatively high water table.

EQC significance decision:

Reasons for decision:

CASE D:

Perfect Concept Development, division of the Global Development Company, is bargaining with the representative of the state land office for the purchase of the 85 acre parcel of land presently owned by the state. Perfect Concept already owns over 40 acres of land in various parcels adjacent to the present state property. If an agreement is reached and the development company does in fact purchase the additional land, a new planned community will be located

on the site. Preliminary design plans call for 600 single-family housing units, 300 multiple-family housing units and one small convenience shopping facility called Flash Centers. Construction of this development will require the draining and filling of nearly 47 acres of wetlands, types 3, 4, and 5, and in addition, an upgrading of existing sewage collection facilities will be necessary. In fact, expansion of Old Rockford Beach's sewage treatment plant may be required to handle the additional load of Perfect Concept's development, since both storm and sanitary waste will be included.

EQC significance decision:

Reasons for decision:

CASE E:

A neighborhood shopping facility is slated for the west central portion of Old Rockford Beach on the west bank of the Beatlebite River. Rosegarden Super Stores have recently announced plans to construct a new store at 1621 Parkview Place. Rosegarden Super Stores are combined supermarket and drygood/drug stores. Also locating at the same center, but under separate management, will be a coin operated laundry, an ice cream parlor and a real estate office. The designed floor space for all shops is about 40,000 square feet and a parking lot of 250 spaces will be constructed. Storm water runoff from the buildings and parking lot will flow directly into the Beatlebite River since a suitable site for a settling basin could not be found.

EQC significance decision:

Reasons for decision:

CASE F:

After the tornado that touched down in Old Rockford Beach in 1972, all the structures in the 28 acre impact area were condemned. Since that time, all remaining portions of the structures were leveled and cleared for safety and fire hazard reasons. The Old Rockford Beach Redevelopment Committee is now prepared to take construction bids on the planned single-family residential development that will replace the lost homes. At least 235 new single-family residential units (townhouse style) are planned for the new development. Also, the municipal sewer system will have to be reconstructed to repair damages incurred during structure demolition, and to accommodate the plan of the new development. Two small potholes in the redevelopment area will be retained as storm water settling basins.

EQC significance decision:

Reasons for decision:

CASE G:

Mr. Gotu R. Fudinit has just purchased a one acre lot on the eastern shore of Spealbauch Lake from the Take the Money and Run Real Estate Company. Mr. Fudinit has contracted the C and B Building contractors to construct a single-story triplex on the lot. Mr. Fudinit himself will occupy one of the units, while his sister and his great aunt will occupy the other two units. The remainder of the land will become a common lawn with a putting green in the back yard. It is anticipated that fertilizers will be used intensively, especially in the back yard on the putting green. Since this property is located on the slope of Spealbauch Lake, relatively large amounts of fertilizer residue will pass into the lake.

EQC significance decision:

Reasons for decision:

CASE H:

The Prima Vista Apartment Union plans to construct a new luxury apartment complex on the bank of the Beatlebite River. The four-story apartment building will be built on the bluff overlooking the river near the intersection of 17th Street and Highway #64. The complex will consist of 55 high-rent units, each with an excellent view of the river and the botanical gardens on the opposite bank. There will also be a two-story parking garage with an 85-car capacity included in the development. There will be a miniature golf course on the property for the exclusive use of the development's residents. Storm water runoff will join sanitary waste water and be disposed of through the municipal sewerage system.

EQC significance decision:

Reasons for decision:

APPENDIX E

Tools for the Review of EISs

A. Introduction: Review Variables

It must be emphasized at the outset that the best general aid that can be offered to an EIS reviewer is a detailed discussion of what an EIS should include. For this reason, the reader is referred to Section V of the body of this report for a reasonably detailed account of the recommended content of an EIS. The present appendix is devoted to a discussion of further, special aids that might prove valuable in review. Such tools are offered for the personal use of individual reviewers and would play no direct role in the EIS process detailed in the body of this report. However, we believe that their use might well lead to better EIS review and the submission of sounder written commentary in response to draft EISs than might otherwise be expected.

The usefulness of special techniques for reviewing EISs is complicated by a number of variables relating to such review: the technical competence and general capabilities of the reviewer; the nature of the action and the specific EIS to be reviewed; the time available for review; the purpose of the review; and the reviewer's idiosyncracies.

EIS reviewers may vary dramatically with respect to their technical competence and general capabilities. A single EIS, for example, might be reviewed by: an air quality specialist who knows next to nothing about demography, economics, and fauna; a planner specializing in land use and demography, but with barely a passing acquaintance with air quality, water quality, and flora; a biologist who knows nothing about noise pollution and utilities and public services; a group of citizens with a strong general educational background, but without special expertise with respect to any environmental category; a group of citizens to be directly affected by the action in question who lack a high school education; etc. The point is obvious: no review technique(s) will be equally useful to reviewers with an endless variety of technical competences and general capabilities.

The vast differences among projects, and consequently among EISs, similarly helps to render useful review aids difficult to provide. One project might have a very significant effect on air quality and regional climate and hardly any impact at all on other aspects of the environment; while a second will have noticeable impact only on transportation, traffic congestion, and noise pollution; and a third will significantly impact only water quality and hydrology. In each case it is very specific review guideposts that are needed, and the review aids of greatest use in one case would be practically useless in the others.

The availability of time for EIS review will also play a significant part in the appropriateness of review techniques. It might be argued theoretically that completely adequate, detailed review demands the same amount of time as the

preparation of the statement itself. While this is almost always a practical impossibility, the variation in time that is available for review might well dictate a variation in the tools that are appropriate for review.

One of the most important variables determining the usefulness of given review techniques is the purpose of undertaking the review. An agency required by law to review an EIS may be interested in the adequacy of the whole document (its completeness and accuracy). A specialist might be asked to review the methods used to obtain and the accuracy of the air quality data. A private citizen might be interested in knowing generally how the project will affect his neighborhood without caring too much about the accuracy of the details. Another citizen might want to know only whether or not the action will affect the fishing in the Waterhole River. Different techniques might be appropriate depending upon the purpose of the review.

The final complication provides the crowning touch: two EIS reviewers reviewing the same statement, with the same amount of time, with equal technical competence and general capabilities, and with the same purpose in mind might nonetheless use the same review technique with unequal success. People simply differ in the styles of their approaches. One might find one technique most suitable and another a second.

The immense complexity of reviewer needs represented by the combination of variables discussed above dictates the need for a variety of review tools ranging from very simple to very complex. A number of EIS review tools can be offered for general use, but the review variables discussed above necessitate a few further preliminary remarks and some general assumptions.

First, it must be assumed that the reviewer has more than enough time to read the EIS. Even the simplest review tool requires some small amount of time for its application. Hopefully the reviewer will have enough time to give careful thought to the (draft) statement and prepare a written commentary on the results of his deliberation. Generally speaking, the more complicated the review tool, the more time is required for its use.

Second, it will be assumed here that the purpose of the review is a general evaluation of the adequacy of the impact statement. More specifically, the question is: is everything covered that should be covered? Specialists performing in-depth review of specific parts of an EIS should not be surprised to find no general review tool to be of use in their undertaking since evaluating the data sources for accuracy and checking the environmental analysis of such data will depend entirely upon the specific source(s) used, the availability of additional specific data, and the analysis based upon such data; fortunately, review aids for specialists should not be needed. On the other hand, any person interested enough in an action to read the EIS prepared on its behalf for the information it contains should be quite interested in whether or not the statement addresses everything it should address.

Third, no particular technical competence will be assumed in what follows, though it should be obvious that technical abilities are of great value in EIS

review. The comments relating to specialists in the previous paragraph are applicable here. On the other hand, it must be assumed that the reviewer has the general capability to effectively perform the review--no technical aid can create the ability.

Fourth, while projects vary greatly with respect to the nature of their environmental effects, possibly affecting a few environmental categories very significantly and others not at all, and while EISs will vary correspondingly, adequate EISs should address all the subjects EISs are normally expected to cover if for no other purpose than showing that the action will not affect certain categories. Consequently, EIS review techniques should provide for the evaluation of the treatment of the full range of EIS subjects. On the other hand, a good EIS review will be sensitive to the fact that a very brief treatment of some categorical topics does not necessarily indicate that the treatment is bad or inadequate.

Fifth, while nothing can be done to respond perfectly to the stylistic idiosyncracies of EIS reviewers, it is hoped that the range of tools provided below will respond to a comparable range of reviewer needs.

One further point should be made before turning to the tools themselves. An environmental impact statement is an informational document. Its fundamental purpose is to give a detailed account of the environmental impact of a proposed project. It is intended to be a neutral statement, neither for nor against the project. The review of impact statements to which the present section is directed is correspondingly to be free of bias either for or against the project in question. While bias in the preparation of the EIS may well be cited as a point of criticism, the point of review of the EIS (particularly the submission of written review comments) is not whether the project is good or bad, destructive, creative, or neutral, but rather whether or not the information relating to its environmental impact is adequately presented.

B. The Use of Checklists

One of the central problems in EIS review is simply becoming clear on what it deals with adequately and what it does not contain at all and what it addresses only inadequately. It is all too easy to find oneself immersed immediately in a complicated array of confusing facts. It is easy to ride along with a well-written, attractive document without realizing that some major environmental topics are not addressed at all and that others that should receive lengthy discussion are dismissed in a sentence or two. The most basic need of an EIS reviewer is simply the knowledge of the major subjects he should expect to find addressed in an EIS. The most basic technique for EIS review is the use of a simple checklist listing the basic topics for discussion in an EIS. Whenever the reviewer is satisfied with the adequacy of the treatment of a given topic, he checks it off his list. The technique can be used most effectively if the reviewer records the page number(s) each time he encounters a topic that is dealt with but not completely adequately, since it may be that a given topic is treated in more than one place in the EIS and the cumulative treatment is adequate. The end result of the use of this simple technique should be that in very little more time than it takes to read an impact statement, the reviewer has a clear

record before him of what has been treated adequately in the EIS and page references for the topics with the treatment of which he is not satisfied. The simple topical checklist is presented on page E-5. It will probably prove most valuable when used in evaluating EISs with relatively confusing formats. If the EIS format provided in the body of this report comes into general use, much of the reviewer's problem of discovering what the document contains and what it does not contain will be solved before review begins.

A major inadequacy of the simple topical checklist discussed above is that it provides no guidance on what subjects should be treated under each topical heading. An experienced reviewer cognizant of what constitutes an adequate treatment of each topic or an inexperienced reviewer with time only for a fairly quick overview of the EIS could use it to advantage. For the most part, however, those undertaking EIS review will find additional guidance on what the document should contain of considerable value.

The simple topical checklist can be expanded to include a variety of levels of detail on what should be addressed under each major topic. The trick is to provide a checklist which gives enough detail to be instructive without at the same time being unmanageable. With this in mind, the checklist on pages E-6 to E-12 is recommended for consideration. If reviewers opt to use such a detailed checklist, they are well advised to note that many of the subtopics listed will be inappropriate for treatment in many EISs.

SIMPLE TOPICAL CHECKLIST FOR REVIEW OF EISs

Is each of the following topics covered adequately ('Yes') or not ('No') in the EIS? (A third column ('Pp.') is provided for page references for seemingly inadequate topical treatment.)

Yes	No	Pp.	
___	___	_____	Description and Purpose of the Project
___	___	_____	Permits and Other Approvals Required on the Project
___	___	_____	Existing Conditions
___	___	_____	Project Impact
___	___	_____	Measures to Mitigate Adverse Impacts
___	___	_____	Growth Inducements Resulting from the Project
___	___	_____	Relationship to Plans, Programs, and Policies
___	___	_____	Alternatives to the Project
___	___	_____	Recipients of the Draft EIS
___	___	_____	Topography
___	___	_____	Geology and Soils
___	___	_____	Hydrology
___	___	_____	Water Quality
___	___	_____	Regional Climate
___	___	_____	Air Quality
___	___	_____	Noise Pollution
___	___	_____	Flora
___	___	_____	Fauna
___	___	_____	Land Use
___	___	_____	Demographic Characteristics
___	___	_____	Transportation and Traffic Congestion
___	___	_____	Utilities and Public Services
___	___	_____	Economic Characteristics
___	___	_____	Historic, Prehistoric, and Archaeological Features
___	___	_____	Aesthetics

EXPANDED CHECKLIST FOR REVIEW OF EISs

Is each of the following considerations covered adequately ('Yes') or not ('No'), or is it inappropriate with respect to the project in question ('NA')? (A fourth column ('Pp.') is provided for page references for seemingly inadequate topical treatment.)

Yes	No	NA	Pp.	
				IMPACT SUMMARY
___	___	___	_____	DESCRIPTION AND PURPOSE OF THE PROJECT
___	___	___	_____	Project name, sponsor, principals, and location
___	___	___	_____	Physical, social, economic, and environmental characteristics, purposes and objectives
___	___	___	_____	Principal engineering requirements
___	___	___	_____	Material and fuel resource requirements
___	___	___	_____	Mapping of project location and boundaries
___	___	___	_____	Legal description of project lands
___	___	___	_____	Project phases (i.e., planning, acquisition, construction, development, and operation, etc.)
___	___	___	_____	Brief history of project and project area
___	___	___	_____	PERMITS AND OTHER APPROVALS REQUIRED ON THE PROJECT
___	___	___	_____	EXISTING CONDITIONS
___	___	___	_____	Interrelationship of existing conditions
___	___	___	_____	Topography
___	___	___	_____	Geology and soils
___	___	___	_____	Hydrology
___	___	___	_____	Water quality
___	___	___	_____	Regional climate
___	___	___	_____	Air quality
___	___	___	_____	Noise pollution
___	___	___	_____	Flora
___	___	___	_____	Fauna
___	___	___	_____	Land use
___	___	___	_____	Demographic characteristics

Yes	No	NA	Pp.	
___	___	___	_____	Transportation and traffic congestion
___	___	___	_____	Utilities and public services
___	___	___	_____	Economic characteristics
___	___	___	_____	Historic, prehistoric, and archaeological features
___	___	___	_____	Aesthetics
___	___	___	_____	PROJECT IMPACT
___	___	___	_____	Interrelationship of specific impacts
___	___	___	_____	Topography
___	___	___	_____	Geology and soils
___	___	___	_____	Hydrology
___	___	___	_____	Water quality
___	___	___	_____	Regional climate
___	___	___	_____	Air quality
___	___	___	_____	Noise pollution
___	___	___	_____	Flora
___	___	___	_____	Fauna
___	___	___	_____	Land use
___	___	___	_____	Demographic characteristics
___	___	___	_____	Transportation and traffic congestion
___	___	___	_____	Utilities and public services
___	___	___	_____	Economic characteristics
___	___	___	_____	Historic, prehistoric, and archaeological features
___	___	___	_____	Aesthetics
___	___	___	_____	MEASURES TO MITIGATE ADVERSE IMPACTS
___	___	___	_____	Mitigating measures proposed by project sponsor
___	___	___	_____	Possible mitigating measures not proposed by project sponsor
___	___	___	_____	Cost of mitigating measures
___	___	___	_____	GROWTH INDUCEMENTS RESULTING FROM THE PROJECT
___	___	___	_____	Population growth
___	___	___	_____	Encouragement of further development

Yes	No	NA	Pp.	
___	___	___	_____	Addition or expansion of facilities or services
___	___	___	_____	Encouragement of other activities
___	___	___	_____	Indirect and/or long-term growth inducement
___	___	___	_____	RELATIONSHIP TO PLANS, PROGRAMS, AND POLICIES
___	___	___	_____	Policies
___	___	___	_____	Regulations and standards
___	___	___	_____	General plans
___	___	___	_____	Programs
___	___	___	_____	Zoning and other regulatory laws
___	___	___	_____	Public response to the project
___	___	___	_____	ALTERNATIVES TO THE PROJECT
___	___	___	_____	Alternative project designs
___	___	___	_____	Project alternatives for the given site
___	___	___	_____	Site alternatives for the project
___	___	___	_____	No project as an alternative
___	___	___	_____	RECIPIENTS OF THE DRAFT EIS

CATEGORICAL IMPACT ANALYSIS

___	___	___	_____	TOPOGRAPHY
___	___	___	_____	Elevations
___	___	___	_____	Total relief
___	___	___	_____	Slope characteristics
___	___	___	_____	Dominant landforms
___	___	___	_____	Land sculpturing agents
___	___	___	_____	Man-made changes in topography
___	___	___	_____	GEOLOGY AND SOILS
___	___	___	_____	Geologic formations--composition and bedrock stability
___	___	___	_____	Geologic formations--mineral deposits
___	___	___	_____	Crustal movements (faulting)
___	___	___	_____	Soil classification and composition
___	___	___	_____	Soil characteristics (permeability, compactability)
___	___	___	_____	Soil stability

Yes	No	NA	Pp.	
				HYDROLOGY
				Running surface water
				Ponded surface water
				Ground water
				Domestic water supply
				WATER QUALITY
				Water systems affected
				Contaminants
				Water temperature levels
				Aesthetic qualities
				Dissolved oxygen levels
				Water contamination sources
				BOD effect from contaminants
				Special problems
				REGIONAL CLIMATE
				Temperature
				Precipitation
				Humidity
				Wind patterns and conditions
				Stability conditions
				Inversion probabilities
				AIR QUALITY
				Airshed affected
				Existing ambient air quality
				Circulation system of airshed affected
				Contaminant sources (both project and external)
				Contaminants
				Contaminant effects in relation to air quality standards
				Aesthetic qualities
				Potential adverse health conditions
				Special problems
				NOISE POLLUTION
				Existing ambient noise quality

Yes	No	NA	Pp.	
				Effects upon residential areas, schools, hospitals, rest homes and their residents, employees, and users
				Effects upon commercial and industrial areas, their employees and users
				Effects upon agricultural and recreational areas, their employees, users and resident wildlife
				Established and/or proposed noise standards and guidelines
				Health standards and parameters
				Special problems and community concerns
				FLORA
				Types
				Habitats
				Ecological role
				Conditions or elements that influence
				Unique, rare and endangered species
				Aquatic and terrestrial vegetation
				FAUNA
				Types
				Habitats
				Ecological role
				Conditions or elements that influence
				Unique, rare, and endangered species
				Migration and breeding habits
				LAND USE
				Types
				Densities
				Area and specific plans
				Special problems
				DEMOGRAPHIC CHARACTERISTICS
				Population characteristics
				Location
				Employment patterns
				Migration trends
				Growth rates and patterns
				Housing types (existing, proposed and preferred)

Yes	No	NA	Pp.	
___	___	___	_____	TRANSPORTATION AND TRAFFIC CONGESTION
___	___	___	_____	Traffic generators (origins and destinations)
___	___	___	_____	Transportation routes
___	___	___	_____	Modes of transportation
___	___	___	_____	Volumes of flow and variations
___	___	___	_____	Areas and causes of congestion
___	___	___	_____	Traffic control systems
___	___	___	_____	Special problems
___	___	___	_____	UTILITIES AND PUBLIC SERVICES
___	___	___	_____	Water
___	___	___	_____	Sewer
___	___	___	_____	Electricity
___	___	___	_____	Telephone
___	___	___	_____	Fuel
___	___	___	_____	Police
___	___	___	_____	Fire
___	___	___	_____	Schools
___	___	___	_____	Hospitals
___	___	___	_____	Governmental operation centers
___	___	___	_____	Irrigation and other special services
___	___	___	_____	Planned expansion of public services and utilities
___	___	___	_____	Expansion requirements of the project
___	___	___	_____	Sources of funding for any required expansion
___	___	___	_____	ECONOMIC CHARACTERISTICS
___	___	___	_____	Project employment
___	___	___	_____	Project funding (type and source)
___	___	___	_____	Project costs/benefits
___	___	___	_____	General area economic characteristics
___	___	___	_____	Area tax base
___	___	___	_____	Area per capita income

Yes	No	NA	Pp.	
___	___	___	_____	HISTORIC, PREHISTORIC, AND ARCHAEOLOGICAL FEATURES
___	___	___	_____	Location
___	___	___	_____	Uniqueness or rarity
___	___	___	_____	Cultural and/or educational value
___	___	___	_____	Facilities and/or techniques for preservation
___	___	___	_____	Vandalism
___	___	___	_____	Special problems
___	___	___	_____	AESTHETICS
___	___	___	_____	Visual aspects of structures (view corridors, bulk, shapes, color, design, light and shadow patterns)
___	___	___	_____	Odors and visual aspects of air quality
___	___	___	_____	Noise
___	___	___	_____	Visual aspects of water quality
___	___	___	_____	Landforms
___	___	___	_____	Flora and fauna
___	___	___	_____	Historic, prehistoric, and archaeological features

C. The Use of Matrices

One of the greatest advantages of checklists is the simplicity of their use. But simplicity may also be viewed as one of their greatest dangers. Generally speaking, EISs should be expected to be rather complex documents reflecting the complexity of the actions they analyze. Conscientious review of such statements will not be a simple task. The difference between the expanded checklist on pages E-6 to E-12 and the simple topical checklist on page E-5 consists of the addition of criteria for determination of the adequacy of topical treatment. While a variety of further criteria for review check can be supplied in a variety of ways, the most fundamental addition necessitates the move from a checklist to a matrix.

A checklist approach demands an evaluation of the treatment of the whole of a project with respect to environmental topics (or subjects under environmental topics). Far more often than not, however, a project consists of a series of sub-actions (construction and operation for a start) each of which has identifiable environmental effects. A review technique which takes the project as a whole encourages the oversight of potentially inadequate treatment of a multiplicity of categorical effects caused by consecutive sub-actions. For example, it may turn out that a reviewer will be very satisfied with an EIS's treatment of the effects of construction on air quality and fail to notice that the effects of project operation on air quality are not mentioned at all. What is needed is a breakdown of the project into sub-actions and an evaluation of the treatment of each sub-action. A basic matrix framework for review can be constructed by listing sub-actions horizontally and impact statement topics to be addressed vertically. A large number of review matrices can be generated based on this basic matrix framework, but no complete standard matrix can be provided along this line due to the fact that the breakdown of sub-actions will depend upon the specific project analyzed in the EIS. A basic breakdown should be constructible from the general project description.

Graphic Display Matrices. The simplest review matrix consists of the basic matrix framework together with a simple three-part graphic system for recording the evaluation of the EIS's treatment of each subject: one symbol to represent adequate treatment, a second to represent inadequate treatment, and a third to indicate that the subject is inappropriate with respect to the EIS in question. Most EISs (especially those prepared as recommended in the text) will contain some summary sections which are not appropriate with respect to any sub-actions since they relate specifically to the action as a whole. All such subjects can be marked out before review begins. As an example, a simple graphic display review matrix is presented on page E-14 for an EIS on an imaginary magnesium and silicon plant and mining project.[1] In addition to the breakdown of project sub-actions, a summary column is provided for evaluation of the treatment of the whole project. The subjects that can be seen to be inappropriate after matrix construction should

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[1]For the purpose of clarifying the EIS process explained in detail in the body of this report, we have invented a project consisting of a magnesium and silicon processing plant and support mine facilities proposed by Magicon, Inc., allegedly a subsidiary of American Telescope and Telegraph. We have walked this project proposal step by step through the recommended EIS process in Appendix F to this report.

BASIC GRAPHIC DISPLAY REVIEW MATRIX
FOR THE MAGICON, INC. EIS

+ = Adequate
- = Inadequate
0 = Inappropriate

		PROJECT AS A WHOLE	Clearing of Land	Construction of Plant and Support Facilities	Mining	Plant Operation	Waste Treatment	Transportation of Raw Materials and Product	Reclamation
IMPACT SUMMARY	Description and Purpose of the Project								
	Permits and Other Approvals Required on the Project								
	Existing Conditions								
	Project Impact								
	Measures to Mitigate Adverse Impacts								
	Growth Inducement Resulting from the Project								
	Relationship to Plans, Programs, and Policies								
	Alternatives to the Project								
	Recipients of the Draft EIS								
CATEGORICAL IMPACT ANALYSIS	Topography								
	Geology and Soils								
	Hydrology								
	Water Quality								
	Regional Climate								
	Air Quality								
	Noise Pollution								
	Flora								
	Fauna								
	Land Use								
	Demographic Characteristics								
	Transportation and Traffic Congestion								
	Utilities and Public Services								
	Economic Characteristics								
	Historic, Prehistoric, and Archaeological Features								
	Aesthetics								

be marked out before EIS review. One minor problem that affects the use of any matrix for review surfaces here. The boxing of space effected in a matrix makes it difficult to provide adequate space for the recording of page references for subjects that are mentioned in an EIS (perhaps in several places) but are not treated adequately in any single place.

All of the three major parts of the basic graphic display matrix--the listing of project sub-actions, the listing of EIS topics to be addressed, and the graphic symbols--can be elaborated to give considerably more detailed matrices. The possibility of the elaboration of the listings of sub-actions and EIS topics to be addressed is common to both graphic display matrices and their statistical counterparts as well and will be discussed below. But the elaboration of the graphic symbolism requires brief comment here. While graphic display matrices may be more complicated to use than the checklists discussed above, one of their advantages is nonetheless simplicity. It is obvious that the number of symbols used need not be limited to three. Reviewers may want to add further symbols to record more than the adequacy, inadequacy, or inappropriateness of treatment of EIS subjects. It should be noted in passing that it appears to be the case that more than four non-numerical symbols are difficult to portray with consistent effectiveness. If a more elaborate symbolism than the simple graphics discussed above is desired, it is recommended that numerical symbols be used. Matrices employing numerical symbols will be called "statistical matrices" here.

Basic Statistical Matrices. The most obvious purpose in increasing the number of symbols in a review matrix is the introduction of a grading system more complex than simply "adequate" or "inadequate" (or inappropriate). For a variety of reasons a reviewer may be interested in identifying those parts of an EIS that are handled particularly well, as opposed to those that are handled satisfactorily or poorly. Theoretically, the introduction of numbers for such evaluation should make possible the construction of grading scales with as many evaluative gradations as are desired. There is no theoretical block to evaluations on a scale of 1 to 2, or 1 to 10, or 1 to 1,000,000. There are practical limits, however. For example, there is considerable psychological evidence to indicate that people cannot consistently distinguish among more than seven categories along a single judgmental axis. The following 1 to 7 grading scale with its rough English equivalents can be recommended as presenting what there is reason to believe is a maximally fine set of distinctions along the single judgmental axis: general quality of treatment of matrix subject:

7 = Excellent
6 = Very good
5 = Good
4 = Average
3 = Fair
2 = Poor
1 = Very poor

Using this grading scale, '0' can be reserved to signify that the given subject is not addressed at all in the EIS, and 'X' can be used to mark out those boxes that are inappropriate. (Both judgments are of a nature different from the evaluation of general quality of treatment.)

Since the only difference between graphic display matrices and basic statistical matrices is the symbolism of the matrix entries, the same range of matrix frameworks (rows and columns) can be used for both. The same will hold true for what may be called "complete statistical matrices".

Complete Statistical Matrices. The factor that sets this group of matrices apart from others is their provision for a numerical summary of individual review evaluations. The introduction of numerical symbolism brings with it the temptation to juggle the numbered entries. There may appear to be some advantage, for example, in adding the numbers in the EIS topic rows (e.g., air quality) to come up with an "average" rating of the treatment of that topic. Similarly, it may seem advantageous to sum the numbers for a particular project sub-action for an "average" rating. Complete summation of all the number entries might even give something like a total evaluation of the EIS (more likely to be of value if averaged per entry).

While such numerical operations may have the advantage of averaging out minor errors in judgment, they present several potential disadvantages as well, and their use is not encouraged. (1) They inadvertantly rate each category as of equal importance, unless category weighting is provided. Because of this, the very structuring of matrix parameters may draw attention away from questions of crucial importance in an EIS. (2) They tend to obscure a small number of significant inadequacies if most listings in a row or column are relatively high. (3) They tend to obscure the primary point of EIS review, which is to evaluate whether or not an EIS has performed its function of presenting adequately everything that it should present. It is of no help whatever to say that an EIS which presents half of what it should deal with excellently (7) and the other half only very poorly (1) and an EIS which deals in an average way (4) with every subject are "equally adequate". A lengthy review critique may be appropriate in the first case, while no review comment may be appropriate in the second.

Additional Matrix Elaborations. There are a great many additional possibilities for matrix elaboration equally applicable to graphic display matrices, basic statistical matrices, and complete statistical matrices.

The most obvious elaboration is the expansion of the entries on the vertical axis to include the major subjects to be addressed under each EIS topical heading, analogous to the expansion of the simple topical checklist as presented on pages E-6 to E-12. Such a matrix can be constructed very simply by providing a breakdown of sub-actions on the horizontal axis (in addition to a whole-project column) and listing all checklist entries on pages E-6 to E-12 along the vertical axis.

A further elaboration relates to the breakdown of a project into sub-actions. Almost any given breakdown may be seen to be arbitrary, and sub-actions which seem to be the simplest action units can almost always be broken down still further into sub-sub-actions. The sub-action breakdown may be as elaborate as a reviewer pleases. The point is to provide units that are easily manageable.

All the review tools discussed up to this point treat the relation between the project (or a sub-action) and an environmental category (or subject under a

category) as a single, simple unit to be evaluated for adequate coverage. For example, a matrix box might represent the relationship between plant construction and areas and causes of (traffic) congestion. An EIS reviewer might be satisfied with the EIS's presentation of the immediate impact of plant construction on traffic congestion in the project area without realizing that there is a strong possibility of a secondary effect at some distance from the project site that is not treated at all. A matrix expansion providing a breakdown of relations into primary, secondary, and tertiary can be accomplished in several ways. Since all sub-actions of a project are unlikely to have secondary or tertiary relations with the environmental topics (or topical subjects), and for the purpose of maintaining the manageability of the matrix, it is recommended that those desiring to use a relational breakdown introduce it by adding several columns for secondary and tertiary relations and reserving the breakdown of the project into sub-actions for consideration of primary relations. The sub-actions that do have secondary or tertiary relations can be filled in as appropriate as review proceeds. A further potentially useful matrix expansion along the same lines can be accomplished by the addition of columns for measures to mitigate adverse impacts. While mitigating measures will be inappropriate with respect to many EIS topical subjects, their adequate presentation in an EIS may be important enough to merit a place for checking their treatment in an expanded matrix.

Since it is extremely difficult to present such matrix expansions clearly in a descriptive discussion, an example of one page of a matrix, expanded as described in the previous paragraph, is provided on page E-18 for use in review of the Magicon, Inc. EIS. The entire matrix can be constructed readily by simply listing along the vertical axis of the matrix the topics and subjects to be addressed under each topic as they appear on the checklist on pages E-6 to E-12. Since the breakdown of an action into sub-actions will differ with individual projects and since the methodology of matrix construction should be obvious from the single-page example, it does not appear useful to construct the entire matrix here. The possibilities for the construction of review matrices are effectively endless. A wide variety can be constructed readily according to individual taste from the suggestions in the present section. The construction of a useful matrix will always amount to a compromise between the simplicity of its use and the comprehensiveness of its guidance on what an EIS should be expected to include.

ONE PAGE OF AN EXPANDED STATISTICAL REVIEW MATRIX FOR THE MAGICON, INC. EIS

7 = Excellent
6 = Very good
5 = Good
4 = Average
3 = Fair
2 = Poor
1 = Very poor
0 = Not addressed
X = Inappropriate

	PROJECT AS A WHOLE	PRIMARY RELATIONS								SECONDARY RELATIONS			TERTIARY RELATIONS		MITIGATING MEASURES		
		Clearing of Land	Construction of Plant and Support Facilities	Mining	Plant Operation	Waste Treatment	Transportation of Raw Materials and Product	Reclamation									
TOPOGRAPHY																	
Elevations																	
Total Relief																	
Slope characteristics																	
Dominant landforms																	
Land sculpturing agents																	
Man-made changes in topography																	
GEOLOGY AND SOILS																	
Geologic formations--composition and bedrock stability																	
Geologic formations--mineral deposits																	
Crustal movements (faulting)																	
Soil classification and composition																	
Soil characteristics (permeability, compactability)																	
Soil stability																	
HYDROLOGY																	
Running surface water																	
Ponded surface water																	
Ground water																	
Domestic water supply																	

D. Supplementary Review Aids

The effectiveness of EIS review will depend on the time and attention devoted to the task, the general capabilities of the reviewer, and the technical competence of the reviewer. While little can be offered by way of aid with respect to the first two factors, technical competence is a matter of learning and a matter of degrees. While reviewers are not expected to be experts for the most part, the layman can increase his expertise (and consequently his review effectiveness) by application to the task.

Detailed familiarity with Section V of the body of this report and sections B and C of the present appendix provides a good beginning for the development of review expertise. They will not provide the reviewer with the ability to identify air quality or water quality figures that are ridiculous, however. Nor will they provide guidance on what kinds of effects should be expected from common types of sub-actions.

Developing a feel for the reasonability of the data presented in the EIS can be expedited to some degree. Specific methodologies for the production of EIS data can be examined at the office of the responsible official for the EIS in question. Comparing the data in a given EIS with that to be found in EISs on similar types of actions or on actions in the same general area is likely to be instructive. Some feel for data reasonability will develop naturally with experience at reviewing impact statements. Lay and professional reviewers alike should make it a point to develop some expertise in the evaluation of environmental data. The task will be generally instructive as well as helpful in review.

Reviewers would find it extremely useful if they could be presented with a detailed analysis of the effects that should generally be expected from a wide range of common sub-actions. Though environmental specialists have been attempting for quite some time to tie together the common denominators of the relations between action (and sub-action) types and their environmental impacts, such study is still pretty much in its infancy and no comprehensive source can be provided. The best product on the subject to date appears to be the results of Jens C. Sorenson in "A Framework for Identification and Control of Resource Degradation and Conflict in the Multiple Use of the Coastal Zone" (Master's thesis published by the Department of Landscape Architecture, College of Environmental Design, University of California, Berkeley; June, 1971). As the title suggests, Sorenson's work is directed to a fairly specific subject and is not intended to be comprehensive. The document is lengthy and fairly technical and cannot be dealt with in depth here. Briefly, Sorenson provides a breakdown of several project (and other action) types into sub-actions and identifies expected primary, secondary, and tertiary effects (using a terminology different from that used here). A place is also provided for common measures to mitigate expected adverse impacts. Reviewers might find the Sorenson thesis instructive.

APPENDIX F

AN EXAMPLE OF PROCESSING A PROJECT PROPOSAL UNDER THE RECOMMENDED EIS SYSTEM

Introduction

While every effort has been made to make clear the details of our recommendation on an EIS system to be operated under MEPA in Section V of this report, we feel that an example of processing a project proposal under the recommended system will provide a useful new perspective.

It must be noted at the outset that the example project presented in the pages that follow is intended to have no relation to any existing or proposed project. It has been designed to provide a proposal which obviously has the potential to result in significant environmental effects in order that it may be safely assumed that an environmental impact statement would be required. Details of the project and its environmental effects have been provided as necessary to make the example complete.

The nature of the project itself appears to us to dictate that either the Department of Natural Resources or the Pollution Control Agency would be the responsible agency under MEPA. While it is necessary for the sake of the example to have the Environmental Quality Council select one of these agencies as the responsible agency, we would like to emphasize that the EQC's selection of DNR here should not be taken as a recommendation that DNR should be selected over PCA in such cases. The matter is moot. It should be emphasized even more strongly that DNR's processing of the example project as described here is not intended to represent the actual decision making processes of DNR in any way. Specifically, while the proposed project will quite clearly have the potential to result in significant environmental effects, we have decided, for purposes of illustration, to include an appeal on one decision. The appeal that is easiest to handle by way of example is appeal of the significance decision. For this reason, we have built the case such that the initial significance decision finds the project not to have the potential to result in significant environmental effects. Having assumed an initial decision of non-significance, we built several misunderstandings on the part of the project proposer's interpretive comments in the Environmental Clearance Worksheet and DNR's written support for its initial significance decision should not be taken as system models. They have been included to show how misunderstandings might arise and to point out why they are misunderstandings. The appeal of the initial significance decision and the results of the appeal serve to get the whole process back on the right track. Again, the whole presentation is for the purpose of exemplifying a variety of possibilities for the actual working of the recommended system, and the initial declaration of non-significance is included only as a triggering mechanism for an example of the appeal process.

The processing of the example project will be presented in two parts. The first will include descriptive text up through the decision on the appeal of the declaration of non-significance and the forms relevant to the project up to that point. The second will begin on p. F-25 with text describing a new significance decision (a declaration of significance) and will include a discussion of the rest of the process and the forms relevant to environmentally significant projects.

THE MAGICON MAGNESIUM AND SILICON PROCESSING FACILITY

A. A Negative Declaration

Magicon, Inc., a subsidiary of American Telescope and Telegraph, intends to construct facilities to engage in a mining and processing operation that will produce magnesium and silicon. The proposed location of the site is in the Okee River Valley of Jerome County, Minnesota, about 1/2 mile west of the small town of Moody between Sandusky and Yellow Springs. Surface mining of ore for the processing operation will be conducted on approximately the northern two-thirds of the 1500-acre site over a period of at least 45 years. The processing facilities will be located on the remaining southerly acreage. The operation will produce about 2200 tons of magnesium and silicon per year. After plant and mine operation is completed, reclamation of the exhausted mining sites will begin. Reclamation plans include backfilling the pits with waste products and the original overburden, followed by replanting with natural vegetation or a return to agricultural uses. The associated deep water well can be used for irrigation in agriculture.

Project planning on the part of Magicon, Inc. requires the drilling of preliminary test wells to check the deep ground water supply potential. Applications to drill these wells were filed with the Minnesota Department of Natural Resources. Concurrently, an application for a rezoning of the project site was filed with Jerome County. These concurrent actions initiated the EIS process. Since the project is clearly not exempt, MEPA mandates that a decision on the environmental significance of the project's impacts must be made by the responsible agency. The first task, then, is the identification of the responsible agency.

In order to determine who the responsible agency under MEPA would be for this project, DNR constructed an initial list of the major agencies that would become involved and the jurisdictional responsibilities of each. The list of permits and other approvals for the Magicon project were determined to be as follows:

Department of Natural Resources

- County Highway Construction Permit
- Water Appropriation and Use - Ground
- Water Appropriation and Use - Surface
- Permit to Drain and Divert Water to Facilitate Mining
- Surface Mining Permit[1]
- Reclamation Permit

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[1]Though there is no permit required for the mining of magnesium and silicon, there probably would be if there were magnesium and silicon mining in the state. We postulate such DNR responsibility here.

Pollution Control Agency

Water Quality Permit for Construction and Operation of a Disposal System - Self-contained
Water Quality Permit for Construction and Operation of a Liquid Storage Facility
National Pollution Discharge Elimination System (NPDES) Permit
Certification for Compliance with PCA Regulations for the Issuance of Federal Permits
Air Quality Installation Permit
Air Quality Operating Permit
Open Burning Permit
Solid Waste Permit for Construction and Operation of a Solid Waste Disposal System

Jerome County

Rezone
Building Permit
Health and Sanitation Permit
Solid Waste Disposal Permit
Shoreland Management Special Use Permit
Flood Plain Management Enforcement

A brief check with the EQC rules and regulations governing the EIS process had made it clear that the project was of statewide concern since it belonged to one of the classes of projects declared there to be of statewide concern: "construction of a new metallic mineral processing or metal extraction facility, including, but not limited to, smelting and hydrometallurgical operations." Hence, it was obvious that some state agency would be the responsible agency for this project. DNR contacted PCA to notify the agency of the project proposal and double-check permit and other approval responsibilities. While it is to be hoped that in most cases the agency which will act as the responsible agency under MEPA can be mutually agreed upon by those legally responsible for the project, it turned out in the case at hand that the issue could not be decided in this way. All parties agreed that the responsible agency should be either DNR or PCA, but agreement could not be reached on which of these two agencies should be given the responsibility. The case was submitted to the Environmental Quality Council for a determination.

The EQC evaluated the various actions and responsibilities of the two agencies involved and determined that the key regulatory responsibilities with respect to construction and operation of the project as a whole were DNR responsibilities relating to surface and ground water appropriation and use and the surface mining permit, and PCA responsibilities relating to air quality control. Further, the reclamation permit control was judged to give DNR control over the post-operational environment of the project site. Because it was determined that DNR had more comprehensive control over the project than PCA, the EQC declared DNR the responsible agency under MEPA and charged PCA with an active support role

as necessary.[1]

The Department of Natural Resources assumed responsibility and immediately requested from Magicon, Inc. whatever information on the proposed magnesium and silicon processing facility was readily available. To provide a useful structure for the information to be received, DNR decided to use the Environmental Clearance Worksheet and asked that Magicon submit their information in that form. The Worksheet was completed by Harvey Occletree, the director of development for Magicon, and returned to DNR's District 83 Supervisor, E. N. Virons, who was handling the project.[2] Supervisor Virons was quite impressed with the care and detail with which the form had been completed and decided that no further research would be needed for the making of the significance decision. It should be noted that the Supervisor was new to the State of Minnesota and had had no previous experience working with an EIS process. Both he and Harvey Occletree were suffering under some misunderstandings at this point in the process, the most serious being that reclamation some 45 years away would make the interim effects non-significant.

Based upon the information contained in the Worksheet, the Supervisor decided that the proposed project did not have the potential to result in significant environmental effects. He subsequently prepared a declaration of non-significance, and to support that declaration, he had a District 83 staff member (M. I. Conscientious) fill out the "Environmental Evaluation Matrix" the Supervisor had invented for the analysis of environmental impact. Supervisor Virons sent copies of the two-page declaration of non-significance to other DNR supervisors for their critique and to the Minnesota Environmental Quality Council, Regional Development Commission #14 (in whose jurisdiction the project was to take place), Jerome County, Adelaide County, PCA, the Department of Health, and the Department of Highways, all of which he thought would probably have some interest in the proposed project. A copy of the declaration of non-significance was also included in the significance decision notebook in the central DNR office. The original Negative Declaration (including the two-page declaration of non-significance and the matrix supporting it) remained on file with the Environmental Clearance Worksheet.[3]

A couple of days after the filing of the Negative Declaration and at the request of Magicon, Inc., Supervisor Virons published notice[4] of the significance decision in the Jerome Juggernaut in order to trigger the statute of limitations

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[1]We emphasize again that this is offered as an example of the process only. We are not recommending that DNR's responsibilities in such cases should be judged to be more comprehensive than PCA's, but only that the subject for discussion should be the comprehensiveness of control. We are forced to choose a responsible agency between the two here for the purpose of completing the example.

[2]The completed Environmental Clearance Worksheet appears as pages F-6 to F-14 of the present appendix.

[3]The completed Negative Declaration appears as pages F-15 to F-22 of the present appendix.

[4]The completed press release appears as page F-23 of the present appendix.

on appeal of the decision. On the day of newspaper publication of the notice, he completed the requirements for triggering the statute by sending a copy of the notice to: (1) the EQC, Regional Development Commission #14, Jerome County, Adelaide County, PCA, the Department of Health, and the Department of Highways; and (2) all owners of property abutting the property which was the site of the proposed project.

The Jerome County Commissioners were horrified to receive notice that DNR had declared the proposed project not to have the potential to result in significant environmental effects. They knew that the project was unquestionably the most environmentally significant proposal to be presented in the county in this century. Receiving notice that the statute of limitations had been triggered by public notification of the decision, the commissioners immediately requested from DNR a copy of the written support for the decision and notified DNR of their intention to appeal the decision. DNR responded by sending the commissioners a copy of the Environmental Evaluation Matrix. After careful study of the Matrix, the commissioners were more than concerned. While they were sure that the project would affect the environment in a significant way, they felt that the Matrix did not provide sufficient factual information on which to base any significance decision. They were also upset by some of the assumptions relating to environmental significance which came through clearly in the language of the "narrative statement" which was part of the Matrix. Consequently, the Jerome County Commissioners filed an appeal of the declaration of non-significance with the Environmental Management Hearings Board.[1]

The Environmental Management Hearings Board, upon receiving the appeal form, requested that a copy of the Negative Declaration be sent to them, together with any additional support material then on file with the Department of Natural Resources. DNR responded with a copy of both the Negative Declaration and the Environmental Clearance Worksheet prepared by Magicon, Inc. Three weeks later the Board found in favor of the appellants. The significance decision was remanded to DNR for further research, the Matrix being declared to be inadequate support for the original decision. The Board made clear that neither economic and social benefits nor long-term reclamation were directly relevant in determining whether or not a proposed project has the potential to result in significant environmental effects. It further recommended that DNR review the significance guidelines circulated in scenario form by the EQC for statewide application and pursue some of the information contained in the Environmental Clearance Worksheet in greater detail.[2]

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[1]The completed appeal form appears as page F-24 of the present appendix.

[2]The textual explanation is resumed on page F-25, following the forms relating to the declaration of non-significance and its appeal.

ENVIRONMENTAL CLEARANCE WORKSHEET

This form provides the basis for the initial evaluation and determination of environmental significance for public and private proposed projects except those that are exempt in accordance with state law. The responsible official will evaluate the proposed project with the aid of the following information and make a determination as to whether or not an environmental impact statement will be required.

Name of Project Sponsor Magicon, Inc.

Address of Project Sponsor 1501 Magno Building, Crystal City, Minnesota 57003

Phone of Project Sponsor 218-553-4545 or _____

Name of Project Magicon Magnesium and Silicon Processing Facility

MEPA Identification Number XXX-000

I. PROJECT DESCRIPTION

A. Project Location:

½ mile due west of Moody, Minnesota, in the Okee River Valley in central Jerome County.

B. Brief Project Description: The project consists of the construction of facilities for the mining and processing of magnesium and silicon. The site is a single 1500-acre parcel: 500 acres for the plant and 1000 acres for the mining. The facility is expected to operate for 45 years and produce a total of about 2200 tons of magnesium and silicon annually. Mine sites will be reclaimed by backfilling and revegetation after ore extraction.

C. Operating Characteristics:

1. Residential projects (not including transient accommodations)

a. size, number, nature, and address of structures
NA

b. anticipated number of occupants at normal full occupancy
NA

c. anticipated number of autos and parking spaces
NA

d. access and proximity to major roads and transportation facilities

NA

2. Non-residential projects

a. size and number of structures

The plant site would contain 20 industrial and office buildings comprising about 4.5 million square feet.

b. number of people to be employed

During construction, 250 to 310 persons will be employed normally with up to 460 during the mid-1976 peak. During operation, phase I employment will peak out at about 250 persons and phase II employment will peak out at about 350.

c. types of equipment and/or machines to be employed

Open pit mining equipment will include power shovels, trucks, rail cars, self-loading pans, drilling and blasting equipment, rock crushers, rail-truck hoppers, pneumatic and belt conveyors, and silicon and ferro-silicon furnaces.

d. number of parking spaces required and traffic generated

300 to 400 carparks will be available during construction and after construction for workers and visitors. Finished products will be shipped by rail and trucks. The modal mixture is unpredictable at present due to unknown rail scheduling of other activities.

e. types of materials processed, packaged or stored

Dolomite, quartzite, and silica will be mined, and anthracite, pitch and high-grade quartzite will be used in processing.

f. access to major roads, rail, water or air facilities

The major highway is U.S. 203 from Aron's Landing to Canada. The major state highways include 641, 102, and 273. Rail service is provided by a BNRR branch line from Crystal Creek to Elvendorf, which has no scheduled passenger service. There are no commercial air facilities and no navigable water bodies in the immediate area. Adelaide County Airport is about two and a half hours away.

g. transportation modes to be used by employees and customers

Automobiles will be predominant, although special bussing of workers may develop from Sandusky and Yellow Springs. Customers most likely will rent autos from Adelaide County Airport (a two and a half hour drive) or charter small planes from the Airport. Magicon, Inc. may supply private air service direct from the Airport to the plant.

h. transportation modes used for raw materials and products

By far the largest proportion of raw materials will be traded on-site. Additional raw materials will arrive by rail and truck. Finished products will be shipped by truck to Aron's Landing for rail distribution or be moved directly by rail.

i. transportation or disposal of waste products (solids, liquids, gases)

During construction, diking will contain surface water on the site, and after construction all water drainage will be transported via storm sewers to a containment reservoir for sedimentation treatment. Domestic sewage during construction will be handled by self-contained units and septic tank systems. After construction, domestic sewage will be treated on site; sludge is to [cont. on page F-11]

D. Description of the Project Area:

1. Amount of land involved in the project and current use of such land

The project totals 1500 acres: 500 for the plant site and 1000 additional acres for the mining operation. Present land use is as follows: pasture, 750 acres; hay, 375 acres; light stand of timber, 210 acres; heavy stand of timber, 145 acres; and roads and 12 farmsteads, 20 acres.

2. Consistency of project with zoning and planning policies

The plans are currently inconsistent with county zoning, which indicates agriculture. However, it is generally consistent with the economic policies of the BICO Economic Development District.

3. Uses of adjacent parcels

Immediately adjacent parcels are land uses in generally similar proportions to those of the site itself. Moody lies approximately one-half mile east of the site and contains approximately 79 persons, over 50% of whom are retired.

4. Natural hazards in the project area; e.g., drainage problems, high water table, flooding

Flooding occurs regularly to some extent, although this has not been serious since some flood control work completed in 1959. There is a perennial shortage of surface water, and ground water supplies are currently used to their limits unless deep wells are used. Much of the soil has poor drainage quality.

5. Proximity to public facilities; e.g., schools, hospitals, churches, parks, fire stations

Schools of Yellow Springs and Sandusky serve the area. The nearest churches are in Yellow Springs (5 different kinds) and Sandusky (14 different kinds). Hospitals are available in Yellow Springs (10 miles) and Sandusky (14 miles) via U.S. route 203. Both towns have a lot of fire fighting equipment, and limited rural volunteer equipment exists in the area.

6. Availability of utilities; e.g., water, sewer, electricity, gas, telephone

Existing wells can handle the current peak loads in the area. However, the Moody water supply is least strong. Water is impounded from Moody Creek, but it is insufficient in dry periods and rationing is necessary. Moody has no sewer system and is pushing the limits of individual systems. Currently supplies of electricity and gas are in harmony with user demands. Telephone service is available in the area.

7. Natural and man-made aspects of the site and adjacent parcels

The site is typical of Okee Valley floor farm land. The Okee River flows through the eastern portion of the site. Moody contains numerous houses, a gas station, two taverns, and a post office-store. The site contains 12 farmsteads occupied by 42 persons. Eight farmsteads are owned and four are leased.

II. ANTICIPATED ITEMS OF IMPACT

A. The Natural Environment:	YES OR NO	OFFICIAL USE ONLY
1. Will the project have an effect on the topographic expression, relief, or elevation of the project area?	Yes	
2. Will the project produce any changes in subsurface geology or surface soils, or would geological or soil instability affect project construction?	Yes	
3. Will the project have an effect on the location, condition, quality or quantity of the area's surface (running or ponded) waters or ground waters?	Yes	
4. Will the project affect natural drainage characteristics?	Yes	
5. Will the project create any changes in the regional climate (temperature, rainfall, humidity, etc.) or the quality of the air?	Yes	
6. Will the project result in the emission or discharge of air or water pollutants?	Yes	
7. Will the project produce objectionable noise, vibration, light, or odor?	Yes	
8. Will the project result in the discharge of waste heat or water vapor or interfere with the ability of sunlight to reach the earth's surface?	Yes	
9. Will the project displace, destroy or otherwise interfere with the normal growth of any plants (trees, shrubs, grasses, weeds)?	Yes	
10. Will the project displace, destroy or otherwise interfere with the normal lives of any land, water or flying animals, especially rare or endangered species?	Yes	
11. Could the project affect any natural systems or process (including, but not limited to, ecosystems, plant communities, animal habitation, and lakes and streams)?	Yes	

	YES OR NO	OFFICIAL USE ONLY
12. Are any of the natural features in the project area unique; that is, not found in other parts of the region?	No	
13. Will the project use or produce any hazardous materials such as pesticides or radioactive wastes?	No	
14. Will the project result in a drain on any natural resource, particularly in terms of energy consumption?	Yes	
15. If any of the above questions concerning the natural environment were answered with a "yes" (indicating some impacts are anticipated), describe those impacts using the best available data, and indicate whether or not they are believed significant. Use additional pages, if necessary, to provide complete answers.		

1. It is anticipated that little or no alteration of the topographic expression will result from construction of the plant. However, during operation of the adjacent surface mine, topography will be altered. It will be returned as close as possible to the original condition during reclamation, and this impact is not considered significant in the long run.

2. Bedrock geology must be altered by the surface mining in order to extract the raw materials. For all intents and purposes, the soils covering both the plant and mine sites will be displaced, altered, or covered during project construction and operation. However, reclamation should restore the soils over the surface mine site to productive conditions, and no long-term significant adverse impact is anticipated.

3. Storm runoff will be diverted to a storm lake for storage. Two deep wells are expected to remove about 2,000 gallons of water per minute from deep ground supplies, without creating major problems.

4. No water courses will be altered. However, limited effect on surface drainage will be evident as portions will be intercepted or rerouted at the project site.

[II.A. cont.]

5. Any changes in climatic conditions resulting from plant or mine operations are presently unknown. It is expected, however, that plant emissions will cause minor periodic air pollution episodes.

6. Particulate emissions, the greatest potential problem, will be controlled by means of highly efficient baghouse filters and radiant coolers. This, it is felt, will effectively mitigate any substantial impact. Water pollutants will be almost non-existent because of an on-site domestic sewage plant and a slag pond with re-use and recycling of the water. Slag will be re-used in reclamation.

7. Plant and mine operation, along with ore transportation, can be expected to produce some additional noise in the valley. Whether objectionable or not is not known. In any case, a ten-foot high dike surrounding the plant and mine should greatly reduce operation noise levels. As for vibration, light, and odor, no objectionable occurrence is expected.

8. The plant site will interfere with the ability of sunlight to reach the surface of the earth it covers, but the highest building will be only 60 feet high, and sunlight blockage will not affect any vegetation.

9. All major plant life on the project site will be disrupted or destroyed. However, reclamation procedures after ore extraction will re-establish natural vegetation at the mine sites, rendering the ultimate impact non-significant.

10. All major animal life will be forced to relocate outside the project area. Here too, it is anticipated that many species will return to the sites after reclamation is completed. No rare or endangered species frequent the site.

11. As described above, the plant and animal communities on the project lands would be disturbed or displaced. Once again, this does not represent a substantial loss to the county-wide ecosystems. The animals, being mobile, would merely be forced to find homes elsewhere, and the vegetation would eventually be restored. The relocation of animals might substantially affect the ecosystemic balance of neighboring areas for a short time until the absorption is completely effected.

14. It is anticipated that approximately 166.8 million tons of raw ore will be extracted, producing slightly less than 13 million tons of magnesium and silicon during the years of operation. In addition, the following fuels will be consumed: 3.5×10^{11} cubic feet of natural gas, 1.75×10^{8} gallons of fuel oil, 2.0 million tons of coal, and 6.25 million megawatts of firmly committed electricity.

[I.C.2.i. cont.] be sold or used in reclamation; and liquid will recharge the ground water system after adequate treatment. Solid waste of production will be disposed of on site, sold, or re-used in the process. Domestic wastes will be handled by a local commercial sanitary garbage system in the area. Heated water used in cooling furnaces will be cooled by cooling towers. Slag quenching water will be re-used after "settling out" occurs in a slag pond.

B. The Human Environment:	YES OR NO	OFFICIAL USE ONLY
1. Will the project impact any existing transportation system or create additional traffic congestion?	Yes	
2. Will the project cause the relocation of human beings, either directly or indirectly?	Yes	
3. Will the project create the need, or add to the need, for expanded utilities or public services?	Yes	
4. Will the project affect land use in adjacent areas?	Yes	
5. Will the project involve any lands that may have a particular historic, pre-historic, or archaeological significance?	No	
6. Will the project tend to induce growth in nearby areas?	Yes	
7. Will the project add to or detract from the aesthetic qualities of the area?	Yes	
8. Will the project add to or detract from recreational opportunities in the project area?	Yes	
9. If any of the above questions concerning the human environment were answered with a "yes" (indicating some impacts are anticipated), describe those impacts using the best available data, and indicate whether or not they are believed significant. Use additional pages, if necessary, to provide complete answers.		

1. Some additional traffic congestion potential can be expected from employee transit. Added rail traffic will exist but should create no significant impacts. Truck shipments of refined products will cause minor inconveniences due to noise in communities nearby and slowing of traffic on numerous long grades on two-lane roads.

2. The 42 residents now living on 12 farmsteads will have to relocate. Numerous management personnel will relocate to the area to oversee operations of the plant. Some per-

sons may immigrate to the area in anticipation of jobs. Some 250 to 300 construction workers possessing skills not available in the local labor market will relocate during construction. It is estimated that about one-third of such construction workers will bring families with them.

3. Plant operation will require the extension of electrical, telephone, and natural gas transmission lines. Fuel oil supplies will also be greatly increased. Utility providers will have to respond to noteworthy increases in supplies of fuels and energy, but adequate utilities can be provided.

4. Agriculture may well exist as an adjacent use for years. However, historically, such plants as this inspire supportive facilities by other companies, which may lead to long-range changes in adjacent land use. This can be discouraged, as desired, by the adoption of rigid policies to discourage such peripheral development. The concept of farmlettes (2-5 acre homes) may become popular for well-paid management persons.

6. The immigration of employees, their families and some necessary support services will be a direct effect of project implementation. As mentioned above, the project may tend to induce large-scale supportive facilities, which might tend to induce further growth, but this may be controlled as desired by local authorities.

7. The visual attractiveness of the project area's natural character will be somewhat impacted by the addition of an industrial complex, but to soften such an impact a ten-foot high flood protection dike surrounding the plant and mine sites will be planted with trees and grasses to reduce the visual intrusion.

8. The location of an industrial facility in a natural rural area can be expected to detract from the recreation potential. An existing nearby ski resort may benefit from the increased revenues allowing for capital investments and improvements, however. This resort is also a major area night attraction with a full restaurant, cocktail lounge, and condominiums. Solitary recreation such as hiking, backpacking, cross country skiing, hunting, and fishing will be impinged upon by any development, but considering the large amount of open space in this part of the state, such an impact is minor.

C. Will the project have any environmental effects which have not been discussed under A or B above? No. If so, describe below and indicate whether or not they are believed significant. Use additional pages, if necessary, to provide a complete answer.

OFFICIAL USE ONLY

III. I hereby certify that the information furnished in this environmental clearance worksheet is true and correct to the best of my knowledge and belief.

Harvey Occletree
Name of Applicant

Director of Development, Magicon, Inc.
Title

Signature of Applicant

October 10, 1975
Date filed

William F. Planter
Received by Initials

Chief Filer
Position

Department of Natural Resources
Agency

NEGATIVE
(POSITIVE/NEGATIVE) DECLARATION ON ENVIRONMENTAL SIGNIFICANCE

Project title Magicon Magnesium and Silicon Processing Facility

MEPA identification number XXX-000

Project sponsor Magicon, Inc.

Type(s) of environment affected Pasture land, cultivated land, and timber land.

Governmental agencies which can reasonably be expected to have jurisdiction over or other interest in the proposed project and to whom this sheet is being sent:

Minnesota Environmental Quality Council
Regional Development Commission #14
Jerome County
Adelaide County
Pollution Control Agency
Department of Health
Department of Highways

Description of environmental setting:

The site of the proposed project is 1500 acres of primarily farm land, broken down more specifically as follows: pasture land, 750 acres; hay, 375 acres; light stand of timber, 210 acres; heavy stand of timber, 145 acres; and roads and 12 farmsteads, 20 acres. The setting is about ½ mile due west of Moody, Minnesota, in the Okee River Valley in central Jerome County. The Okee River flows through the eastern portion of the site. Flooding occurs regularly to some extent, although this has not been a serious problem since flood work was completed in 1959. There is a perennial shortage of surface water, and ground water supplies are currently used to their limits unless deep wells are used. Much of the soil has poor drainage quality. Neither air pollution nor water pollution is currently a problem in the area.

Project description:

The project consists of about 500 acres of plant facilities for the processing of magnesium and silicon, and about 1000 acres from which high grade dolomite and silica is to be surface mined. The plant is expected to operate for about 45 years, producing about 2200 tons of magnesium and silicon per year. Mine sites are to be reclaimed by backfilling and revegetation after ore extraction.

The project described on the previous page is hereby declared not to have [to have/not to have] the potential for a significant effect on the environment. Therefore, an environmental impact statement is not [is/is not] required under Minnesota Statutes, Section 116D.04, Subdivision 1. This decision is based on the information presented on the following page(s), which I hereby declare to be correct and sufficient for a decision on the potential significance of the environmental effects of the proposed project.

Reason(s) for the decision:

The project will produce mostly minor impacts upon the environment. There will be a moderate detrimental impact on bedrock geology due to the extraction of dolomite and silica. However, the social and economic benefits derived from this ore is considered to override such an impact.

Moderate detrimental impacts can also be expected on land animals and hunting due to the displacement of a fairly large number of wintering deer and other area game animals. It is assumed, however, that these animals will be absorbed by the surrounding habitat, thereby checking the potential severity of this impact.

Generally speaking, the biological conditions (flora and fauna) are the conditions most seriously impacted by the project. Most of the impacts should be minor, and both beneficial and detrimental. Reclamation of the surface mining site is expected to eliminate all or most negative impacts caused by site preparation (timber clear cutting and slash burning) and mine operation. The project as a whole is therefore considered to be environmentally non-significant, having only minor long-range impacts.

Acting official E. N. Virons

Position District 83 Supervisor

Agency Department of Natural Resources

Address 421 West Dart, Sandusky, Minn. 57002

Phone 490-5050

Date October 21, 1975

Signature

ENVIRONMENTAL EVALUATION MATRIX

In order to determine whether or not a proposed project has the potential to result in significant environmental effects, agency raters shall complete this form as follows:

1. Break down the proposed project into the major sub-actions which it comprises and list the sub-actions as column headings under "Proposed Actions".

2. Under each proposed action that has been identified, place a diagonal slash in each square opposite each existing characteristic or condition that will be affected by that action.

3. Above every slash, place a '+' if the effect is beneficial or a '-' if the effect is detrimental.

4. Below the slash, place a 1, 2, or 3 to represent the magnitude of the impact: 1 for a minor effect; 2 for a moderate effect; or 3 for a major effect. Assignment of numerical weights to magnitude of impact should be based on factual data rather than personal preference. It should be as nearly as possible free from personal bias.

5. Upon completion of the matrix, the rater(s) will make a narrative statement commenting on the impacts of the project as identified. Any rating of -2 or -3 should have a short discussion in the narrative. Add additional pages if needed.

ENVIRONMENTAL EVALUATION MATRIX

Application No. XXX-000

Project Title Magicon Magnesium and Silicon Processing Facility

Area Moody, Jerome County, Minnesota

District 83

Subdivision IV

Sec. 23 and 24 T. 7N R. SE W.M.

EXISTING CHARACTERISTICS AND CONDITIONS OF THE ENVIRONMENT

Proposed Actions

		Surface Mining	Mine Rehabilitation	Timber Harvest	Open Burning	Dike Construction	Storm Lake Construction	Plant Construction	Magnesium/Silicon Product.
PHYSICAL AND CHEMICAL CHARACTERISTICS	1. EARTH								
	a. Mineral resources	+/1							
	b. Bed Rock Geology	-/2							
	c. Soils	-/1	+/1	-/1		-/1	-/1		
	d. Land form	-/1	+/1			+/1			
	e. Surficial Geology	-/1						-/1	
	f. Unique physical features								
	g.								
	2. WATER								
	a. Surface	-/1	+/1	-/1		-/1	-/1		
	b. Ocean								
	c. Underground			-/1			-/1		
	d. Quality			-/1			-/1		
	e. Temperature								
	f. Recharge			-/1					
	g. Snow, ice and permafrost								
	h.								
	3. ATMOSPHERE								
	a. Quality (gases, particulates)	-/1			-/1	-/1	-/1	-/1	-/1
	b. Climate (micro, macro)								
	c. Temperature								
	d.								
	4. PROCESSES								
	a. Floods								
	b. Erosion	-/1	+/1	-/1		+/1			
	c. Deposition (sedimentation, precipitation)	-/1	+/1	-/1			-/1		
	d. Solution								
	e. Sorption (ion exchange, complexing)								
	f. Compaction and setting		-/1		-/1				
	g. Stability (slides, slumps)								
	h. Stress-strain (earthquake)								
	i. Air movements								
	j.								

ENVIRONMENTAL EVALUATION MATRIX

Application No. XXX-000

Project Title Magicon Magnesium and Silicon Processing Facility

Area Moody, Jerome County, Minnesota

District 83

Subdivision IV

Sec. 23 and 24 T. 7N R. SE W.M.

EXISTING CHARACTERISTICS AND CONDITIONS OF THE ENVIRONMENT

Proposed Actions

			Surface Mining	Mine Rehabilitation	Timber Harvest	Open Burning	Dike Construction	Storm Lake Construction	Plant Construction	Magnesium/Silicon Product.
BIOLOGICAL CONDITIONS	1. FLORA	a. Trees	-/1	+/1	-/1					
		b. Shrubs	-/1	+/1	-/1	-/1				
		c. Grass	-/1	+/1	-/1	-/1				
		d. Crops	-/1							
		e. Microflora	-/1	+/1	-/1	-/1				
		f. Aquatic plants								
		g. Endangered species								
		h.								
	2. FAUNA	a. Birds	-/1	+/1	-/1					
		b. Land animals including reptiles	-/2	+/1	-/2					
		c. Fish and shellfish								
		d. Benthic organisms								
		e. Insects	-/1	+/1	-/1	-/1				
		f. Microfauna	-/1	+/1	-/1	-/1				
		g. Endangered species								
		h. Barriers								
		i. Corridors								
		j.								
	OTHERS	a.								
		b.								

ENVIRONMENTAL EVALUATION MATRIX

Application No. XXX-000

Project Title Magicon Magnesium and Silicon Processing Facility

Area Moody, Jerome County, Minnesota

District 83

Subdivision IV

Sec. 23 and 24 T. 7N R. SE W.M.

EXISTING CHARACTERISTICS AND CONDITIONS OF THE ENVIRONMENT

Proposed Actions

		Surface Mining	Mine Rehabilitation	Timber Harvest	Open Burning	Dike Construction	Storm Lake Construction	Plant Construction	Magnesium/Silicon Product
CULTURAL FACTORS	1. LAND USE								
	a. Wilderness and open spaces	-/1	+/1	-/1	-/1	-/1	-/1	-/1	
	b. Wetlands								
	c. Forestry	-/1	+/1	+/1	-/1	-/1	-/1	-/1	
	d. Grazing	-/1	+/1		-/1	-/1	-/1	-/1	
	e. Agriculture	-/1			-/1	-/1	-/1	-/1	
	f. Residential								
	g. Commercial								
	h. Industrial								+/2
	i. Mining and quarrying	+/1		+/1					
	j.								
	2. RECREATION								
	a. Hunting	-/2	+/1	-/2					
	b. Fishing	-/1		-/1		-/1		-/1	+/1
	c. Boating								
	d. Swimming								
	e. Camping and hiking	-/1	+/1	-/1					
	f. Picnicking								
	g. Resorts								+/2
	h.								
	3. AESTHETICS AND HUMAN INTEREST								
	a. Scenic views and vistas	-/1	+/1	-/1	-/1	+/1	-/1	-/1	
	b. Wilderness qualities	-/1	+/1	-/1	-/1	-/1	-/1	-/1	
	c. Open space qualities	-/1	+/1	-/1	-/1	-/1	-/1		
	d. Landscape design	-/1	+/1	-/1					
	e. Unique physical features								
	f. Parks and reserves								
	g. Monuments								
	h. Rare and unique species or ecosystems								
	i. Historical or archaeological sites and objects								
	j.								

ENVIRONMENTAL EVALUATION MATRIX

Application No. XXX-000

Project Title Magicon Magnesium and Silicon Processing Facility

Area Moody, Jerome County, Minnesota

District 83

Subdivision IV

Sec. 23 and 24 T. 7N R. SE W.M.

Proposed Actions

EXISTING CHARACTERISTICS AND CONDITIONS OF THE ENVIRONMENT		Surface Mining	Mine Rehabilitation	Timber Harvest	Open Burning	Dike Construction	Storm Lake Construction	Plant Construction	Magnesium/Silicon Product
4. CULTURAL STATUS	a. Cultural patterns (life style)								
	b. Health and safety								
	c. Employment	+/1		+/1		+/1	+/1	+/2	+/2
	d. Population density	-/1	-/1	-/1	-/1	-/1	-/1	-/1	-/1
	e.								
5. MAN-MADE FACILITIES AND ACTIVITIES	a. Structures							-/1	
	b. Transportation network (movement access)								-/1
	c. Utility networks								-/1
	d. Waste disposal		+/1		+/1				-/1
	e. Barriers								
	f. Corridors								
	g.								
ECOLOGICAL RELATIONSHIPS SUCH AS:	a. Salinization of water resources								
	b. Eutrophication								
	c. Disease-insect vectors								
	d. Food chains								
	e. Salinization of surficial material								
	f. Brush encroachment								
	g. Other								
OTHERS	a.								
	b.								

NARRATIVE STATEMENT

The clearing of Magicon lands and the preparation for operation of surface mines will produce mostly minor impacts upon the environment. The evaluation matrix indicates a moderate detrimental impact (-2) on bedrock geology due to the extraction of dolomite and silica. However, the social and economic benefits derived from this ore is considered to override such an impact.

Moderate detrimental (-2) impacts are also registered for land animals and hunting due to the displacement of a fairly large number of deer and other area game animals. It is assumed, however, that these animals will be absorbed by the surrounding habitat, thereby checking the potential severity of this impact.

Generally speaking, the biological conditions (flora and fauna) are the conditions most seriously impacted by the project. The impacts registered are mostly minor, and both beneficial and detrimental. Reclamation of the surface mining site is expected to eliminate all or most negative impacts caused by site preparation (timber clear cutting and slash burning) and mine operation. The project as a whole is therefore considered to be environmentally non-significant, having only minor long-range impacts.

Rater M. I. Conscientious

Rater _____

MEPA PRESS RELEASE

NEWS RELEASE FOR: October 25, 1975

SUBJECT OF RELEASE: Declaration of Non-significance--Magicon, Inc. Magnesium and Silicon Processing Facility

CONTENT OF RELEASE:

The 1500-acre magnesium and silicon processing plant and support mine facilities proposed by Magicon, Inc. in the Okee River Valley near Moody, Jerome County, Minnesota, has been assessed by E. N. Virons, District 83 Supervisor, Minnesota Department of Natural Resources, and was determined not to have the potential to result in significant environmental effects. Therefore, an environmental impact statement is not required on this project. The information on which this decision was based may be examined at the office of E. N. Virons, 421 West Dart, Sandusky, Minnesota 57002; 490-5050. Any appeal of the decision or of the fulfillment of the procedural requirements leading to the decision must be filed with the Environmental Management Hearings Board by December 24, 1975.

MEDIA RELEASED TO:

Jerome Juggernaut

Authorized by E. N. Virons

Position District 83 Supervisor

Agency Minnesota Department of Natural Resources

Date October 23, 1975

Signature _____

AN APPEAL TO THE ENVIRONMENTAL MANAGEMENT HEARINGS BOARD

Project title Magicon Magnesium and Silicon Processing Facility

MEPA identification number XXX-000

Responsible agency Department of Natural Resources

Decision appealed Declaration of non-significance

Date initiating the appeal period October 25, 1975

Appellant Jerome County Commissioners on behalf of Jerome County

Address Jerome County Courthouse, 862 S. Regal, Sandusky, Minnesota 57002

Grounds for appeal:

The Environmental Evaluation Matrix submitted as support for the above-named decision is itself a series of evaluative judgments. It cannot be determined from the information provided whether any '+', '-', '1', or '2' is a reasonable evaluation of the impact to which it refers. Essentially, the Matrix provides no factual information useful in evaluating the significance decision and the decision is inadequately supported.

Further, a brief review of the environmental impacts themselves would make it abundantly clear that the project in question has the potential to result in significant environmental effects. The language of the "Narrative Statement" indicates an obvious misunderstanding on the part of DNR with respect to what counts as an environmentally significant impact. The statement points to "the social and economic benefits derived from this ore" as "overriding" adverse environmental effects. Such benefits should play no mitigative role in the determination of environmental significance. The statement also points to reclamation as ensuring only minor long-range impacts. While reclamation may produce this result in the end, the forty-some-odd years before it begins will witness a massive change in the existing environment.

Date of appeal November 3, 1975

Signature of appellant _____

B. The EIS Process

Supervisor Virons received word of the decision of the Environmental Management Hearings Board and immediately set to work investigating in greater detail the information presented to him by Magicon, Inc. One of the potential problems noted on the Environmental Clearance Worksheet was the short-term effect of the processing facility on the area's fauna. The Supervisor went carefully through the information on fauna on the proposed project site and in the adjacent areas that was contained in DNR files. He also contacted the federal district forest ranger for the region. It was discovered that there were 600 to 800 wintering deer which used the project area and that, contrary to the prediction of Magicon, Inc., the deer could not be absorbed by the adjacent lands, which were already supporting a wintering deer population at near maximum capacity. It became apparent that most of these deer would be lost to the regional game population during the first winter of project construction. The Supervisor had also familiarized himself with the significance guidelines put out by the EQC in scenario form, and one of the scenarios presented a case declared significant because of the loss of similar game that was numerically smaller than in the Magicon case. Supervisor Virons realized that the identification of this single significant impact on the environment was sufficient for a decision that the project had the potential to result in significant environmental effects.

The Supervisor immediately drafted a Positive Declaration, including a declaration of significance and a brief description of the project's effect on wintering deer as support material.[1] The original of the Declaration was filed in the Supervisor's project file, and copies of the two-page declaration of significance were sent to the EQC, Regional Development Commission #14, Jerome County, Adelaide County, PCA, the Department of Health, and the Department of Highways. A copy of the declaration of significance was also included in the significance decision notebook in the central DNR office to replace the previous declaration of non-significance on the project. EQC staff included notice of the declaration of significance in the next publication of the MEPA Monitor.

At this point the Supervisor called Magicon, Inc. in for consultation. Having heard the information discovered and having been apprised of the recommended decision of the EQC in the significance guidelines scenario book, Magicon agreed that the project would have a significant environmental effect. Supervisor Virons investigated the DNR staff workload for the following three or four months and contacted PCA to request technical assistance. It was agreed among DNR, PCA, and Magicon, Inc. that DNR would prepare the EIS in-house with substantial aid from PCA. A cost was negotiated for the preparation of the draft and final statement and a fee set for the publication of notice of the availability of the documents. DNR and PCA staffs were set to work. Magicon opted not to give public notice of the significance decision to put the statute of limitations on appeal of the decision into effect, reasoning that it was extremely unlikely that anyone would appeal the declaration of significance and that any such appeal would fail in any case in view of the previous Appeals Board decision.

The draft EIS was prepared over the next three months. It was circulated for review to the EQC, Regional Development Commission #14, Jerome County

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[1] The completed Positive Declaration appears as pages F-27 to F-29 of the present appendix.

Adelaide County, PCA, the Department of Health, the Department of Highways, all other agencies with jurisdiction by law and/or special expertise with respect to the impacts involved, all appropriate federal, state, and local agencies which are authorized to develop and enforce environmental standards, and all other public bodies which had requested a copy. Copies were also sent to the Minnesota Public Interest Research Group, the Sierra Club, and other public interest groups. Magicon, Inc. received several copies and others were placed in Supervisor Virons' office to be available for public inspection.

Immediately after the distribution of the draft statement, the Supervisor issued a press release announcing its availability.[1] A copy of this release was mailed to all owners of property abutting the property which was the site of the proposed project on the same day the newspaper announcement appeared. EQC staff included notice of the availability of the draft EIS in the next issue of the MEPA Monitor.

Since no agency requested a fifteen-day extension for comment on the draft EIS, the review period closed thirty days after the newspaper notice was published. As the review comments began to arrive, they were assembled, assessed, and used to make specific corrections in the draft EIS. Finally, after the review period closed, the Supervisor decided that no substantial revision of the draft would be necessary. A Supplement to the Draft was prepared, including all the review comments, a section indicating corrections to the draft where necessary, and DNR's responses to the comments received in review. The draft EIS and the Supplement to the Draft EIS constituted the final EIS.

Copies of the final statement were filed with the EQC, Regional Development Commission #14, the State Planning Agency, and all other draft review agencies and private groups which had requested a copy of the final statement. Since most of these agencies and groups had already received a copy of the draft statement, the Supplement to the Draft EIS was all that needed to be sent in most cases. Copies were also given to Magicon, Inc. and placed on file in Supervisor Virons' office for public inspection. A press release announcing the availability of the final EIS and initiating the sixty-day appeal period was issued, and copies of the newspaper announcement were mailed on the date of publication to all owners of property abutting the property which was the site of the proposed project.[2] EQC staff included notice of the availability of the final EIS in the next issue of the MEPA Monitor. No appeal was filed in the ensuing sixty days on the grounds of EIS inadequacy or procedural noncompliance with MEPA.

While the EIS process came to an end at this point, the final EIS was used by all agencies with jurisdiction by law over the proposed project as an informational tool for balanced decision making.

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[1]The completed press release appears as page F-30 of the present appendix.

[2]The completed press release appears as page F-31 of the present appendix.

POSITIVE

DECLARATION ON ENVIRONMENTAL SIGNIFICANCE

(POSITIVE/NEGATIVE)

Project title Magicon Magnesium and Silicon Processing Facility

MEPA identification number XXX-000

Project sponsor Magicon, Inc.

Type(s) of environment affected Pasture land, cultivated land, and timber land.

Governmental agencies which can reasonably be expected to have jurisdiction over or other interest in the proposed project and to whom this sheet is being sent:

Minnesota Environmental Quality Council
Regional Development Commission #14
Jerome County
Pollution Control Agency
Adelaide County
Department of Health
Department of Highways

Description of environmental setting:

The site of the proposed project is 1500 acres of primarily farm land, broken down more specifically as follows: pasture land, 750 acres; hay, 375 acres; light stand of timber, 210 acres; heavy stand of timber, 145 acres; and roads and 12 farmsteads, 20 acres. The setting is about ½ mile due west of Moody, Minnesota, in the Okee River Valley in central Jerome County. The Okee River flows through the eastern portion of the site. Flooding occurs regularly to some extent, although this has not been a serious problem since flood work was completed in 1959. There is a perennial shortage of surface water, and ground water supplies are currently used to their limits unless deep wells are used. Much of the soil has poor drainage quality. Neither air pollution nor water pollution is currently a problem in the area.

Project description:

The project consists of about 500 acres of plant facilities for the processing of magnesium and silicon, and about 1000 acres from which high grade dolomite and silica is to be surface mined. The plant is expected to operate for about 45 years, producing about 2200 tons of magnesium and silicon per year. Mine sites are to be reclaimed by backfilling and revegetation after ore extraction.

The project described on the previous page is hereby declared to have [to have/not to have] the potential for a significant effect on the environment. Therefore, an environmental impact statement is [is/is not] required under Minnesota Statutes, Section 116D.04, Subdivision 1. This decision is based on the information presented on the following page(s), which I hereby declare to be correct and sufficient for a decision on the potential significance of the environmental effects of the proposed project.

Reason(s) for the decision:

The project would result in the loss of 600-800 wintering deer from the regional game population. It is clear that this environmental impact is significant. (Scenario I.D. 6 of the EQC significance guidelines recommends that a loss of similar game that is numerically smaller than that anticipated here be declared a significant environmental effect.)

Acting official E. N. Virons

Position District 83 Supervisor

Agency Department of Natural Resources

Address 421 West Dart, Sandusky, Minnesota 57002

Phone 490-5050

Date October 21, 1975

Signature

POTENTIAL IMPACT ON WILDLIFE

After a careful review of the information on file with the Department of Natural Resoruces and checking with the federal district forest ranger for the general area, it was realized that 600-800 wintering deer would be displaced by the Magicon project during the first winter of the construction phase. Further research made it clear that these animals would not be absorbed into the land adjacent to the site, since it is already supporting a wintering deer population at near maximum capacity. This means that all deer that depend entirely or partially on this habitat would be lost to the regional game population.

MEPA PRESS RELEASE

NEWS RELEASE FOR: March 15, 1976

SUBJECT OF RELEASE: Availability of Draft EIS--Magicon, Inc. Magnesium and Silicon Processing Facility

CONTENT OF RELEASE:

The draft environmental impact statement for the 1500-acre magnesium and silicon processing plant and support mine facilities proposed by Magicon, Inc. in the Okee River Valley near Moody, Jerome County, Minnesota, has been completed by the Minnesota Department of Natural Resources. This statement is available for public inspection at the office of E. N. Virons, DNR District 83 Supervisor, 421 West Dart, Sandusky, Minnesota 57002; 490-5050. Personal copies may be obtained at a cost of $4.75. Specific comments of review, if sent to the above address before April 14, 1976, will be considered during preparation of the final environmental impact statement.

MEDIA RELEASED TO:

Jerome Juggernaut

Authorized by E. N. Virons

Position District 83 Supervisor

Agency Minnesota Department of Natural Resources

Date March 13, 1976

Signature _____

MEPA PRESS RELEASE

NEWS RELEASE FOR: May 8, 1976

SUBJECT OF RELEASE: Availability of Final EIS--Magicon, Inc. Magnesium and Silicon Processing Facility

CONTENT OF RELEASE:

The final environmental impact statement for the 1500-acre magnesium and silicon processing plant and support mine facilities proposed by Magicon, Inc. in the Okee River Valley near Moody, Jerome County, Minnesota, has been completed by the Minnesota Department of Natural Resources. This statement is available for public inspection at the office of E. N. Virons, DNR District 83 Supervisor, 421 West Dart, Sandusky, Minnesota 57002; 490-5050. Personal copies may be obtained at a cost of $5.50. Any appeal of the adequacy of the final statement or of the fulfillment of the procedural requirements leading to the impact statement must be filed with the Environmental Management Hearings Board by July 7, 1976. For further information, contact the office of the Supervisor.

MEDIA RELEASED TO:
Jerome Juggernaut

Authorized by E. N. Virons

Position District 83 Supervisor

Agency Minnesota Department of Natural Resources

Date May 6, 1976

Signature _____

APPENDIX G

Toward Implementation Of The EIS Process At The Local Government Level

Introduction

As emphasized in the text, the recommended EIS process presented in this report has been designed primarily for the guidance of interagency coordination under MEPA. We have not made any recommendation on the in-house functioning of any specific local MEPA system even though we are strongly recommending the requirement of ordinances implementing MEPA in all governmental jurisdictions above 25,000 population. In fact, the recommended EQC certification process, allowing the possibility of variance from the state guidelines, should leave substantial parts of local EIS systems to the discretion of local government officials. The reason for not recommending general in-house procedures is patently obvious: the variation in structure and sophistication among state agencies and local governments renders such general recommendations relatively useless.

At the same time, we recognize that some kind of guidance would be helpful to local officials. The present appendix offers three examples of local implementation and operation of an EIS system, each geared to a particular kind of local situation. In these examples, we are not attempting to put limits on what local governments may try to undertake but are rather trying to present some varied models of how local governmental systems might be put together.

It should be noted that there are two very obvious local governmental situations which have not been addressed in the examples presented. First, all of the examples are given in terms of cities. It was our feeling that the actual implementation of MEPA may be more closely akin to planning capability than to whether the governmental body implementing it is a city or a county (or a township for that matter). In addition to planning capabilities, we felt the next most important parameter is probably the location of the governmental body and its size relative to that location. Consequently, we have attempted to present a medium-sized community located in an out-state area, a small municipality located in an out-state area, and moderately large, rapidly developing community located in the Twin Cities metropolitan area. And second, no large city (or county which has as a nucleus a large city) such as Minneapolis, St. Paul or Duluth, has been dealt with in example form. It is our general feeling that these communities will most likely have the knowledge and sophistication to quite easily grasp the general details of the proposed MEPA system and will be able to apply it to their own needs with relatively few problems. Also, the complexity of these governmental units is such that a short, general example would probably prove to be useless to them since their complex governmental systems will require special implementing procedures reflecting specific complexities.

Finally, it is assumed in what follows that the details of the system recommended in Section V accurately describe the EIS system to be put into effect in new rules and regulations adopted by the EQC in mid-1975.

A. A Medium-sized City In An Out-state Area

(1) The Setting

This city contains approximately 41,000 persons with suburbs (both incorporated and unincorporated) totalling about 11,000 additional persons. The community serves as a regional distribution center and is located on a major navigable waterway as well as at the intersection of two major rail lines. Its hinterland is about 65% open pasture or cultivated land, about 25% forested area, and about 10% man-developed. The governmental structure is a weak mayor-council form with a planning commission set up as an advisory body to the council. The mayor has no more power than any other council member.

The planning commission serves to advise the council on issues relating to land use and other common planning functions. There is an established land use and comprehensive planning program, supported by a zoning ordinance and various subdivision regulations. Planning activities are coordinated with two adjacent counties and are reported to the area's regional development commission (RDC) which coordinates all planning activities of jurisdictions in its region. The planning commission's staff consists of a director, a senior planner, an associate planner, an aid and two secretaries. Normal planning activities since 1973 have been further burdened with local implementation of the Shoreland Management Program as applicable to the river passing through the heart of the city.

The planning function is separate from the Public Works Department. However, the Public Works Department houses the building division, which, in addition to the traditional inspection enforcement functions, undertakes zoning enforcement and a system of occupancy permits. Overall coordination is achieved through established, informal communication procedures between heads and at formal weekly luncheon meetings with the mayor and council members.

(2) Establishment of the Local MEPA Management System

This particular city through the efforts of its Planning Department, Public Works Department, Legal Department, and the City Council have put together what they believe to be a workable EIS system for their government and one which adequately implements the Minnesota Environmental Policy Act. The system is substantially in accordance with the proposals outlined in Section IV and V. They subsequently submitted their system to the Environmental Quality Council for certification. They also sought financial aid and assistance in implementing their proposed MEPA-EIS system from the EQC and the State Planning Agency under the Local Planning Grant Program. They requested the maximum grant available, $5,000. Sixty days after the submission of their local ordinance and EIS implementation program to EQC, they received certification and a block grant of $5,000 to offset part of the salary of the senior planner, the individual who will oversee implementation of the program at the local level.

Their proposed program accepts the state's system of class exemptions without adding any further exemptions immediately. They did structure into their ordinance a mechanism which allows them to add exemptions in the

future, however. They are cognizant that any exemption addition would have to be approved by the EQC. This particular city feels that this type of mechanism allows them the flexibility to alter their program slightly as they actually work with it without having to go through a total recertification effort by the EQC.

For the purpose of administering the day-to-day MEPA functions, the City Council has designated the practical responsibility for handling MEPA to its planning director. The planning director has in turn hired a senior planner whose qualifications encompass a background relating to and a knowledge of the impact statement program. Private projects which come before the city which are not automatically exempt would thus come to the Planning Department at some point in time for a determination of significance by the senior planner. The decision on the environmental significance of any public projects, particularly those which originate in the Public Works Department, is made by the department in the city which is proposing the project with the advice of the Planning Department and particularly the senior planner.

The work load produced by the local implementation of MEPA was not enough to require the hiring of any additional planning staff people. The senior planner found that he could easily incorporate the normal day-to-day activities into his present work schedule. The planning director gave the senior planner the new title of Environmental Coordinator.

In setting up its MEPA system, the city decided to pass on the cost of the preparation of the draft (and the printing costs of final) environmental impact statements to the project proposer. If the project which requires an EIS is a private project, the fee for preparation is negotiated between the Environmental Coordinator representing the city and the project proposer. The Environmental Coordinator may elect to do the EIS with his own staff, request the RDC for assistance (in which case the RDC would receive part of the monies for preparation), or contract it to a consultant or college group. If the project which requires the EIS is a public project, the agency proposing the project either completes the EIS, pays for the Environmental Coordinator to do the statement, or contracts with an outside group to prepare the draft. In any case, whether the EIS be public or private, the public agency responsible for the EIS takes the responsibility for preparing the final statement. The only other fee the city has set up as chargeable either to the project or the project proposer is a "public notification fee". This is a set fee of $40 which covers the cost of preparing any required notices and the cost of actual publication in the local county newspaper. The city has opted to use the Environmental Clearance Worksheet (ECW) but there is no fee associated with it. However, the ECW is to be completed by the project proposer, and consequently the cost of actually preparing it is paid for by the project proposer.

(3) Operation Under the MEPA Management System

Under the locally implemented MEPA program as adopted by the city council, a private project proposal is received through the usual departmental channels for whatever permit action or regulatory measures must be

taken. The department which receives the project proposal checks it with the adopted class exemption list to see if the project is exempt or non-exempt. By far the largest percentage of the proposals which come before the departments are found to be exempt. If exempt, the project progresses through the normal approval/disapproval channels. If the project is not exempt, the department which makes the judgment gives the project proposer an ECW to fill out and return to the Environmental Coordinator in the planning department. The Environmental Coordinator, after receiving and evaluating the ECW to determine that sufficient information is available to make a determination of significance, consults with the department where the project is being processed and renders a significance decision. In some instances, he may find the project to be of statewide concern and would immediately send whatever information he had to the appropriate state agency (or agencies). If the project is not of statewide concern and is found to be non-significant, the regular permit, variance, or regulatory process is resumed. If it is found to be a project having the potential to significantly affect the environment, an EIS is required. At this point the Environmental Coordinator collects the public notification fee of $40.00 and immediately sits down to negotiate the fee and method which will be used for the preparation of the EIS. If any outside body or agency is involved in the preparation of the EIS, it will take part in the fee negotiation session. If it is decided to have a consultant prepare the draft statement, the city may immediately select a consultant or it may decide to put the contract out to bid.

In the case of public projects the department which is proposing the project first determines if it is exempted from the EIS requirement. If it is not exempt, the department contacts the Environmental Coordinator in the Planning Department and notifies him that a project is being proposed which is not exempt and for which an Environmental Clearance Worksheet is being prepared. Once the ECW is completed, the department and the Environmental Coordinator jointly determine whether or not the project has the potential to result in significant environmental effects. If it is found to be significant, the proposing department and the Environmental Coordinator determine who will complete the EIS. In most cases, the proposing department completes the draft EIS while the Environmental Coordinator takes over the preparation of the final EIS with support from the proposing department. All notices are handled through the proposing department as per an instruction sheet on how to process public notices that was sent out to all city departments by the Environmental Coordinator. It has been determined that if a departmental project is ever appealed on the grounds of noncompliance with MEPA, the proposing department along with the City Prosecuting Attorney would handle the appeal for the city.

(4) The Production and Processing of EISs

Whenever an EIS is undertaken, whether it is completed totally in-house (by the Environmental Coordinator, planning staff, or another city department), or with the RDC assisting, or farmed out to a consultant or college, the responsibility for the processing and contents of the EIS remains that of the city. Most of the draft impact statements are produced within a one-to three-month time schedule. After preparation, it is

circulated to the various agencies and groups delineated on the review list prepared by the Environmental Coordinator with the assistance of EQC staff. Included on the city's review list is the State Planning Agency, the EQC, the appropriate regional development commission (which is also the A-95 review agency), state and federal agencies with jurisdiction by law or special expertise or which may have a special interest in the project, local and affected neighboring agencies and governments, special environmental interest groups in the city, and the public library. Public notification of draft EIS availability is also given. At the end of an established 30-day review period, the final EIS is prepared with the comments from review agencies and appropriate corrections included. The final EIS, which is generally completed within two weeks of the end of the review period, is then filed with the above-mentioned agencies which received a copy of the draft. Public notification is given as required by law.

An example case: A private project was proposed in the city which was a 200-acre land fill operation which first came before the local building director in the Public Works Department for a grading and surface preparation permit. It was found by the building director to be non-exempt and to have the potential for significant environmental effects. The city Environmental Coordinator took on the task of preparing the EIS and a negotiated fee of $2500 was charged. Draft preparation time was five weeks. After undergoing the normal review procedures, a final impact statement was filed which included the specification of several mitigating measures to help control any potential adverse effects if the project were to be implemented. The building director decided to issue the permit but at the same time used his discretionary authority to make the permit issuance conditional upon the private project sponsor's adoption and inclusion of three mitigating measures, including dust control, surface water runoff control during construction, and reclamation measures after the project was complete. The project went ahead with the mitigating measures completed as the project was implemented.

B. A Small City

(1) The Setting

This city contains approximately 4200 persons, with an additional 900 living immediately beyond its corporate limits in a contiguous "urban" pattern. The city serves as a limited distribution center for an area extending approximately 6 miles north and south and about 15 miles east and west. A major north-south highway passes immediately adjacent to the town and a major railroad passes through the town. The hinterland is about 10% small lakes, 20% agricultural, open and pasture lands, with the remainder amounting to forested lands which produce a high commercial crop yield. The form of government is a part-time mayor-council arrangement. The Council has so far not opted to create a planning commission. Rather, the Council members act in that capacity themselves, performing planning commission duties and also acting as a board of adjustments and appeals. Located in a county without land use control mechanisms, the governing body has elected to exercise its option to zone and implement subdivision regulations for two miles beyond its corporate limits. The city clerk acts as the zoning administrator and has heretofore expended very little time in that capacity. The community has generally been in a "holding pattern" for growth. Young people are exiting on a regular basis, but just enough new forest-products-related industry has been developed in the area to offset this natural loss. More and more of the younger people are finding work in the area due primarily to this expanding forest products industry.

(2) Establishment of the Local MEPA Management System

The city has chosen to adopt by local ordinance (with little variation) the model ordinance and the state rules and regulations which were set forth by the Environmental Quality Council (EQC). The city decided to apply to the EQC and the State Planning Agency for financial aid to offset the cost of establishing their local MEPA system when they submitted the system to EQC for certification. The grant application for $5,000 was approved and the city immediately contracted with the RDC to help set up their EIS program. This city, along with three other communities in the jurisdiction of the RDC, had decided to pool their monies to pay for one full-time person on the staff of the RDC to help each of them implement its program.

A memorandum of agreement was signed between the city and the RDC by which the RDC agreed to provide through the new employee technical assistance relating to the implementation of MEPA in the city, specifically in the evaluation of ECWs and the preparation of EISs. When an EIS is required, the RDC handles the situation as a staff extension to the city but only with the city's concurrence and participation as appropriate.

An EIS would be a very rare phenomenon for this city, and for the purpose of responding daily to the MEPA ordinance the city decided to have the clerk make the appropriate decisions, utilizing their RDC person for practical and technical advice in the process. In practice, the city clerk and the RDC environmental coordinater consult on issues that are not clearly exempted and arrive at a mutually agreeable decision on the

determination of significance for all private projects. In the case of any project initiated by the city, the agency or department initiating the project makes the determination of exemption or non-exemption and consults with the city clerk and the RDC staff person if they are not clear as to the potential environmental significance of a proposed project.

Due to the small size of the community and the general lack of development activity, it is anticipated that less than half a dozen projects per year will need attention beyond the class exemption level. Of these, it is felt that it would be very rare for more than one project a year to have an EIS required. If a project is found to require an EIS, and if it is a private project, the city has taken the stand that the project proposer must pay for any impact statement and that a negotiated fee will be charged. This fee will generally be assessed by the city, which in turn will pass it on to the RDC, the agency which most likely will handle the EIS production specifics. The only other fee charged by the city will be a $25 fee for projects requiring public notice.

(3) Operation Under the MEPA Management System

Under this particular local MEPA system operation, a private project is necessarily received by either the municipal engineer or the city clerk for, respectively, a permit issuance or a zone change or variance ruling. Using the exemption system described above, the majority of projects will receive a perfunctory approval subject to appropriate regulations. Projects which cannot be immediately identified as exempt will be required to have an ECW filled out and filed. Utilizing a cooperative decision making process (previously described) between the RDC, the municipal engineer and the city clerk, a ruling is made on whether or not the project has the potential to result in a significant environmental effect. If such potential does not appear to exist, a negative declaration is prepared. This decision making process usually takes from 3 to 5 days. If a positive finding is arrived at, then an EIS is prepared and the public notification fee relating to the EIS is collected by the local government.

The environmental specialist of the RDC and either the city's engineer or clerk negotiate with the developer for an EIS fee. The RDC may then (1) choose to produce the EIS in-house, or (2) decide to contract with a consultant to undertake the EIS. In either event, the city person, the RDC environmental coordinator and the project sponsor would all be party to the negotiation.

(4) The Production and Processing of EISs

Regardless of the method arrived at to produce an EIS, the final document is legally the product of the city as the responsible agency. The production responsibility is that of the RDC. However, any appeal concerning the EIS requires the city to respond as the responsible agency.

If an EIS is deemed necessary, the draft is prepared and subsequently circulated to the agencies and groups on the review list prepared by the

RDC environmental coordinator. Included on the list is the State Planning Agency and the EQC. Others on the list include certain state and federal agencies, the local A-95 review agency (the RDC), neighboring jurisdictions, special environmental interest groups, the public library, etc. At the end of the 30-day review period[1] the final EIS is prepared by the RDC with comments, corrections and responses included. The final EIS is filed appropriately with the agencies or groups which received the draft EIS.

Under the general heading of "processing EISs" falls the review of EISs submitted officially to the city. The City Council has decided that all EISs submitted to the city for review will go to the engineer. Under the agreement with the RDC, he may consult with their environmental coordinator on technical matters that he finds problematic. Relevant remarks are prepared as necessary and his response represents the city's official response.

An example case: A project for the construction of a wood processing plant to make particle board core-wood veneer-surfaced 4' x 8' x 3/4" panels has been proposed for location in the city by XYZ Forest Industries. The site is 1/2 mile beyond the corporate limits and is a forested location. A 2-mile rail spur is needed and 200 acres will be cleared for construction. Building, grading, and burning permits are minimally required, as is a zone change from Open Space Forest to Industrial.

The project is not exempt and is found from its ECW to have a potential to result in a significant environmental effect. The RDC and city have decided a consultant should prepare the EIS. The $25.00 public notification fee is collected as described above and a contract price of $13,000 is negotiated with a consultant. The sponsor pays the city this amount and it disperses the fee to the consultant upon written directives from the RDC as the EIS progresses. Various mitigating measures put forth in the EIS are adopted as requirements necessary for the issuance of the permits and before the zone change is approved, thereby creating the most environmentally advantageous project possible.

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[1]A 15-day extension is possible upon written request of an official reviewer, as per the system proposed in this study.

C. A Medium-sized City in the Metro Area

(1) The Setting

This city contains approximately 56,000 persons and is located on the expanding fringe of the Twin City metropolitan area. It is essentially a "bedroom" community with a substantial amount of land currently in agricultural use that is a prime candidate for future residential expansion. Urban services can be made readily available, as can some public utilities and transportation facilities. The form of government is an appointed manager/weak mayor-council system. A line Planning Department serves as the planning agency with a planning commission advisory to it. The Planning Department is advisory to the governing body and the manager. A three member committee of the planning commission serves as the Board of Appeals and Adjustment.

There is an established and aggressive comprehensive planning program and the Planning Department is a willing and enthusiastic participant in and supporter of the Metropolitan Council as a regional planning agency. The planning staff consists of a Director of Community Development, a senior and an associate planner in the current planning division and a senior and two associate planners in the long-range planning division. Two planning aids and clerical help complete the planning staff. The staff must also provide planning services to a small lake and a sizable wetlands area which fall under the definitions set forth in the Shoreland Management Act.

The planning function is, of course, separated from the Public Works Department, which houses the building division. The building division is the key agency for development permits and zoning compliance, and, although not ultimately responsible for zoning enforcement, this division preliminarily checks for zoning compliance. Overall coordination of government services is achieved through informal staff management level communication and coordination and through weekly department head/city manager conferences.

(2) Establishment of the Local MEPA Management System

This particular city, through the efforts of its Planning Department, Public Works Department, legal department, the City Council, and a consulting firm knowledgeable in environmental management systems, proposed to the EQC what was felt to be a workable local MEPA management system. The Metropolitan Council staff also gave advice on and approval of the system.[1] The EQC issued its certification of approval to the system.

At the same time that the city applied for certification, it also applied for and received an EIS implementing grant under the Land Use Planning Grant program of the Office of Local and Urban Affairs. The purpose of the grant was to help provide funds to hire an additional staff

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[1] No official or binding authority exists on the part of the Metropolitan Council but its member governments agreed to advisory imput in order to ensure region-wide continuity.

planner whose duties are to help implement the local EIS system.

In setting up the local system, the city incorporated almost all of the items presented in the EQC's model local ordinance, but did significantly change the system of class exemptions. They developed a new set of class exemptions which were better tailored to the specific conditions found in the city but which also maintained the integrity and intent of the exemptions set forth by the EQC. For the purpose of day-to-day administration of the MEPA system in the city, it was decided to locate a Development Coordinator in the Building Department. This Development Coordinator actually ended up being the additional planner hired by the city with the partial aid of the EIS grant funds.

The City Council delegated the authority to make determinations of environmental significance to the Development Coordinator and the Director of Community Development. In cases where projects are not exempt, these two individuals jointly decide whether or not there exists the potential for significant environmental effects. In the case of private projects, the Development Coordinator handles all contact with the project proposer, including the handling of EIS preparation and public notifications as necessary. In the case of projects proposed by the city itself, an informal arrangement is made whereby the Director of Community Development handles the projects.

When the city established the position of Development Coordinator, it also implemented a procedural "one-stop" permit program. Consequently, at some point in time, all permits and other project approvals will pass through the Development Coordinator's hands for his determination as to whether or not the project is exempt. If the Development Coordinator finds a project to be not exempt, the city automatically requires an Environmental Clearance Worksheet. After a satisfactory ECW has been submitted to the Development Coordinator, he and the Director of Community Development determine whether or not an EIS is required.

(3) Operation Under the MEPA Management System

Under the local MEPA management system as adopted by the City Council, applications relating to private projects are received and coordinated by the Development Coordinator. Using the class exemption system adopted by the ordinance, the vast majority of projects are automatically exempted by the Coordinator. When the "one-stop" permit office was established, all permit and variance request forms were standardized to include a line which is used for the statement of exemption or non-exemption, and if exempt, the classification of exemption. Projects not exempted go through a significance determination procedure, as previously presented. If the project is found to be significant, the Development Coordinator will establish a Developer's Conference with the project proposer to jointly determine if modifications could be made to the project which would make it non-significant, or if that is not possible, then to negotiate a fee for the preparation of the draft and final EIS.

Once it is established that an impact statement is required, the monies for impact statement preparation are paid by the project proposer

to the Development Coordinator, who has been authorized in the city charter to collect such monies. He also collects a $60 public notice fee which will be necessary for the public notification of draft and final impact statement availability. The city has decided that it will be its policy to undertake the preparation of all impact statements using its own staff. Occasionally technical assistance from either the Metropolitan Council staff or a state agency staff is necessary, and very rarely a consultant is hired to solve technical problems. They have estimated that since they are under constant development pressures due to their location, they will be undertaking approximately six impact statements per year. At an extimated average cost of $8,000 per statement, they have hired two professionally qualified EIS technicians and a one half-time secretary to handle the impact statement preparation load. These individuals work with the Development Coordinator but are actually located in the Department of Community Development and work under the direction of the Director of Community Development.

(4) The Production and Processing of EISs

After completion of the draft impact statement, the Development Coordinator utilizes a list of review agencies provided by the Metropolitan Council staff. The review procedures are essentially the same as those indicated for the other two example cities with the exception that this city has a standing policy for the Development Coordinator to actually sit down with the Metropolitan Council staff to go over the impact statement and the project itself during the EIS review period. This review conference with the Metro staff assists the city in evaluating whether the project permit, variance, etc., should be approved or not, and it assists the Metro staff in helping to determine if the project is of Metropolitan significance (as per their guidelines for determining metropolitan significance).

The Development Coordinator plays one more important role in this city's EIS process. All impact statements coming from other governmental agencies for this city's review are sent to the Development Coordinator who is responsible for consulting with the appropriate city staff persons and developing the relevant review comments for the city. In actual practice, the Development Coordinator works closely with the impact statement preparation team in the Department of Community Development in performing this function. Once review comments have been prepared, the Development Coordinator submits them to the City Manager for his signature. The City Manager's signature then represents this city's official response to any impact statement review they are to undertake.