

Building Consensus on Timber Harvesting in Minnesota: A Decision Case Study

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ABSTRACT

Forest and natural resources policy development is often a contentious process. This decision case presents a dilemma, faced by a natural resources planner in Minnesota, regarding implementation of the recommendations of an environmental impact statement that had broad implications for forestry in the state. A study had been conducted in response to environmental and conservation group concerns about the effects of increased timber harvesting on a variety of resources, such as wildlife and water quality. The study, which cost nearly \$1 million, found that current and increased levels of harvesting would be sustainable, when accompanied by appropriate mitigation strategies. However, the study made few program recommendations on how to implement the mitigation strategies. Therefore, the state needed a process to develop a range of policies and programs to implement the report's findings and recommendations. Through this case, students will gain an understanding of the difficulties that natural resource managers face in balancing technical recommendations with the conflicting preferences of stakeholder groups. The case study also provides an opportunity for students to examine alternate processes to gain stakeholder support for potentially contentious environmental policies and programs.

THE development of forest resource policies and programs is an increasingly complicated and contentious process. Demands for a variety of forest outputs such as recreational opportunities, wood fiber, and environmental services have grown. The finite ability of forests to provide these resources has resulted in conflicts over which resources should be produced, and how they should be produced. At the same time, the public is increasingly demanding a voice in how forested lands, both public and private, are managed. Finally, scientific research has suggested complex relationships between the various forest resources; however, many of the relationships are not yet fully understood nor are they universally accepted. This case illustrates some of the issues and difficulties created by these factors. It does so in the context of a dilemma about how to implement the recommendations of a study of the effects of increased timber harvesting in Minnesota.

THE CASE

In March 1994, the state of Minnesota was faced with a politically charged issue—how should the findings and recommendations of a 4-yr study on timber harvesting and for-

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est management in Minnesota be implemented? The development of the study had been driven largely by state law. However, now that the study was complete, its findings and recommendations had no force of law and little political support. Given the high level of contention associated with the formulation of forestry policy, should the wide-ranging recommendations be converted into implemented laws, policies, or incentive programs, and if so, how? The 4-yr process of completing the study had already strained relations among the various groups concerned about Minnesota's forests. Memories of the spotted owl controversy in the Pacific Northwest were fresh—and many were concerned that a similar political gridlock over forestry issues might occur in Minnesota.

Finding a solution to this dilemma was the primary responsibility of one person, Dr. Wanda Carter, who was a planner with Minnesota's environmental policy board, the Minnesota Environmental Quality Board (EQB). However, Dr. Carter was unsure how to proceed. In Minnesota, recently proposed forestry legislation had failed because the various interests, including forest industry and environmental groups, had not been able to garner enough broad-based support to have their bills passed. Wanda Carter knew that it was a critical time for forestry in Minnesota, and a critical time for her career. The Generic Environmental Impact Statement (GEIS) Study on Timber Harvesting and Forest Management in Minnesota was commissioned by the EQB in response to growing concern over environmental impacts associated with expanded timber harvesting activity. The study, which she had administered, had cost nearly \$1 million and was developed from the contributions of 60 researchers—one of the largest environmental efforts in the state in the previous 20 yr. Given the attention the study had received in the media and with many interest groups, expectations for progress were high. She knew that many people would link the outcomes of the study with her managerial and political skills. Further, to implement the study results, she would be moving to a new position in the Minnesota Department of Natural Resources (DNR). Positive study outcomes would likely secure a good start for this phase of her career.

Context

Forests and timber harvesting were becoming increasingly important issues in Minnesota. Minnesota had nearly 6.7 million ha (16.7 million acres) of forest, approximately 44% of which was privately owned. These private owners included more than 100 000 small private woodlot owners, as well as several large forest industry companies. However, most debate about timber harvesting had occurred over harvesting on public lands, including federal, state, and county lands.

Abbreviations: DNR, Department of Natural Resources; EQB, Environmental Quality Board; GEIS, generic environmental impact statement.

SIERRA CLUB
North Star Chapter

February 1, 1989

Commissioner
Joseph Alexander
Department of Natural Resources
500 Lafayette Rd.
St. Paul, MN 55155

Dear Commissioner Alexander:

The growing list of wood products firms which have announced plans to locate or expand operations in Minnesota has caught our attention and has generated a number of environmental concerns.

A recent Minnesota-Department of Natural Resources document, entitled "Mitigation of the Environmental Impacts of Expanded Timber Harvest in Minnesota" projects an annual clearcut of 6,000,000 cords by 1995. This would double the harvests in Minnesota from 1975 and require clearcuts of 300,000-350,000 acres of timberland. Much of the increased harvest will be centered on aspen trees for use in both paper pulp and waferboard products.

We recognize that there may be serious environmental problems under such an aggressive harvesting program. To date, no Environmental Impact Statement (EIS) exists which would examine the environmental effects of large scale aspen harvests in Minnesota. We feel the following questions need to be addressed, they include:

- 1) What level of new road construction and reconstruction is necessary to access the additional cords of aspen?
- 2) In light of the lack of any comprehensive biological surveys, how will the increased roading program effect wildlife species sensitive to further habitat fragmentation? i.e. wolves, warblers or endangered plant species.
- 3) What measures will the DNR take to control off-road vehicle use on these forest access roads?
- 4) What are the long-term impacts on forest sails and understory vegetation associated with mechanized harvesting?
- 5) Will forest soils be depleted of nutrients by repeated aspen clearcuts?
- 6) How will increased road building and clearcuts impact the water quality of our lakes and rivers?
- 7) What are the long-term effects of regenerating major portions of the forest to an aspen monoculture?
- 8) How will the increased timber cutting effect the long-term biological diversity of the forests?
- 9) Does the DNR support the planting of non-native hybrid aspen on public lands? If so, what are the potential drawbacks of establishing fast growing hybrid aspen on the aesthetic or visual quality of the forests, forest soils and water resources?
- 10) How will the increased harvest levels affect the tourist economy?
- 11) How will DNR staffing levels be adjusted to monitor timber sales, reforestation protection of wildlife, soil, water and recreational resources?

To reiterate our concerns. The growing tendency to provide year-round timber access roads for harvesting negatively impacts forest soils leading to increased erosion and compaction problems. In addition, the intensity of aspen cutting necessary to satisfy the timber industry will likely lead to decreases in species and community diversity. The harvesting scheme of short rotational clearcutting and subsequent regeneration to aspen may jeopardize attempts to provide a diverse and biologically sound forest.

Multiple-use and sustained-yield forestry must account for all the needs of the people of Minnesota, both tangible commodities, as well as their needs for recreation, a healthy, viable set of wildlife populations, habitats and plant communities. The time has come for the DNR to provide data on these questions, before any large scale road building and aspen clearcutting begins.

We look forward to hearing from you on this at your earliest convenience.

Sincerely,
Gene Christenson
Chair-North Star Chapter
Sierra Club

The volume of timber harvested in Minnesota had increased from 5.1 million m³ in 1980 to an estimated 8.9 million m³ in 1990. Future expansions totaling approximately 2.2 million additional m³ per year were possible by the year 2000.

The forest products industry was expanding, and had become the second largest manufacturing industry in the state. In 1988, Minnesota's forestry and forest products sectors provided 54 000 jobs (2% of the state total) and \$2.2 billion of personal income (4% of the state total). In addition, the forest industry was projected to make \$2.2 billion in capital investments in Minnesota between 1991 and 1995. Forests resources were also important to the health of the state's growing tourism and recreation industries—more than 25% of the state's travel and tourism industry employment was in the forested regions of the state.

The Study

In Minnesota, a generic environmental impact statement is different from other environmental impact statements in several respects. A typical environmental impact statement for a wood products mill expansion focuses on the expansion of a single mill. Minnesota is unusual in that the Minnesota Environmental Policy Act also recognizes the use of a *generic* environmental impact statement. A generic environmental impact statement is different in that: (i) there is a focus on cumulative impacts of many separate, but related, activities (such as the construction or expansion of several woods products mills in different parts of the state), (ii) the policy recommendations that are developed have no force of law, and (iii) it is a long-range environmental planning document.

While the DNR was aware of the projected increase in timber harvesting, it was hampered in analyzing the effects of the increased harvest by outdated forest inventory data and a lack of information assessing the impact of harvesting on nontimber forest resources. The issue of increased timber harvesting had simmered within the state for several years. One of the first signs that the issue had reached a critical point was a letter from the North Star Chapter of the Sierra Club to the DNR dated 1 Feb. 1989 (Exhibit 1). This letter questioned the anticipated expansion of forest industry within the state. Eventually, a citizen petition, signed by 400 individuals, was presented to the EQB in July of 1989. This petition was developed through the efforts of environmental activists from northern Minnesota. The petition, entitled "A citizen petition for a comprehensive study of forestry impacts on the environment of central and northern Minnesota," specifically requested that "the Environmental Quality Board conduct a generic environmental impact statement on the resultant environmental effects of unprecedented timber harvesting in central and northern Minnesota."

Initially, several organizations argued against conducting a GEIS. The forest products industry opposed the GEIS study, claiming that it was unnecessary. However, in November 1989, representatives of the industry reversed their position and called for a GEIS. "Our previous position was that a generic environmental impact was not necessary," stated Wayne Brandt, executive vice president of Minnesota Forest Industries, an organization that represents many forest products firms in the state. "But we don't have any fear

Exhibit 1. North Star Chapter of the Sierra Club letter to the Minnesota Department of Natural Resources.

(of the study) because we don't feel there are any significant environmental impacts from forest management in Minnesota" (Rebuffoni, 1989).

The only other major interest that opposed the study was the DNR, which had hoped to resolve the issue through negotiations. The commissioner of the DNR, Joseph Alexander stated, "I don't disagree with the questions they [the petitioners] ask, but they seem to be asked with the assumption that we don't have the answers. We do. I think [the negotiations] can be done through the committee we are setting up" (Laszewski, 1989).

After approximately 8 h of deliberation over three meetings, the EQB concluded that the nine criteria for conducting a GEIS identified in Minnesota Rules, part 4410.3800, subpart 5, were substantially satisfied, and that there was broad support for conducting the study. On 21 Dec. 1989, the EQB ordered preparation of the Timber Harvesting GEIS.

Editorials from around the state applauded the decision to conduct the study. The Rochester, MN, Post-Bulletin said, "A full-scale, objective, and credible study is needed" (Rochester Post-Bulletin, 1989). In a headline of an editorial, the Duluth News-Tribune stated "Timber study must be made" (Duluth News-Tribune, 1990).

The EQB hired Jaakko Pöyry Consulting, an international forestry consulting firm, to prepare the GEIS. Many of the processes and procedures necessary to conduct the study were described in state law and administrative rules. Complying with the various mandates and the direction of the EQB required a substantial amount of analysis (approximately 8000 pages). To gain access to expertise within Minnesota, Jaakko Pöyry Consulting subcontracted much of the analysis to the faculty of the College of Natural Resources, University of Minnesota. In total, some 60 scientists representing a variety of disciplines worked on preparing the GEIS.

The GEIS found that timber harvesting has both beneficial and adverse impacts. Some of the beneficial effects were:

- The economic contribution of the forest products and associated industry to the state
- The creation of wildlife habitat for certain species and of recreational opportunities
- The minimization of risk of insect and disease outbreaks
- The use of forest management is a tool to achieve a desired future condition of the forest

Adverse impacts of timber harvesting on the state's forests were also found. Among these were:

- Depletion of nutrients in forest soils
- Reduction of habitat for certain wildlife species
- Reduction of aesthetic values
- Reduction of biological diversity
- Creation of potential threats to rare and endangered plant species
- Creation of a potential negative impact on tourism

Ultimately, Jaakko Pöyry Consulting concluded that the current level of timber harvesting was creating impacts, but that harvesting could be sustained at current or higher levels if two conditions were met: (i) the adverse impacts were

effectively mitigated, and (ii) Minnesota did not experience appreciable changes in forest-land availability. Some examples of specific practices and activities to mitigate or eliminate the impacts considered in the study included:

- Reduce the area of forest that is converted to nonforest land uses
- Maintain patches of intact forest in areas of mixed land use
- Monitor the age class and covertype structure of the state's forests and forest patterns across the landscape
- Manage a proportion of the state's forest stands under extended rotation forestry guidelines
- Develop landscape-based road and trail plans
- Retain or redistribute slash within the harvest site (decreases soil nutrient loss)
- Modify the time of equipment operation to minimize soil compaction (e.g., harvest in winter)
- Modify silvicultural systems to maintain key habitat components (e.g., retain mast trees, cavity trees, and conifer inclusions, and use uneven-aged management where appropriate)
- Have an organization maintain a list of known cultural and historical resources that exist in forested areas

Before its public release, an independent peer review was conducted on the draft Timber Harvesting GEIS. After this peer review, the EQB established a 90-d public comment period on the draft. Six public information meetings were held during this period. In total, more than 800 people attended the six meetings, and 119 individuals commented at the meetings. More than 1300 letters with comments were received during the public comment period. The EQB identified all substantive comments that had been received and forwarded them to Jaakko Pöyry Consulting for its response.

The draft text of the proposed final GEIS was substantially revised by the consultant in response to specific comments. As with the draft GEIS, copies of the proposed final GEIS were made available for public review in libraries around the state, the regional offices of the DNR, and the EQB office.

The EQB unanimously approved the final GEIS on 21 Apr. 1994 (Exhibit 2). Prominent individuals spoke in positive ways of the study, but most were looking ahead to the future. Wayne Brandt of Minnesota Forest Industries stated, "What the [study] shows is that there's not a need for a revolution in logging and forest management, but rather a continued evolution." Don Arnosti, Minnesota director of the National Audubon Society, stated that the study was a "reasonably good start." However, he also stated that "this is just a report." The Minnesota Commissioner of Natural Resources, head of the DNR, called the report, "a very positive conclusion for the future of Minnesota's forest management" but he too acknowledged that "admittedly, there are many issues to be resolved to everyone's satisfaction" (Meersman, 1994).

In the Laws of Minnesota, 1992, Chapter 513, Article 4, Section 11, it is stated: "...upon completion of the study (GEIS), responsibility for analyzing and implementing study recommendations is transferred to the Department of Natural Resources under Minnesota Statutes, Section

15.039..." This law transferred both the authority for and personnel (including Dr. Carter) required to implement the GEIS recommendations from the EQB to the DNR, at the time the EQB approved the final GEIS. Given this legislative directive, the DNR was the agency with primary responsibility for administering the GEIS implementation process and the recipient of its outcomes. The EQB would continue to monitor the GEIS implementation process through periodic briefings as well as through direct participation in the process.

The Problem

To many observers, completion of the study provided a window of opportunity to forestall the type of conflict seen in the Pacific Northwest over the spotted owl; to others, completion of the study created uncertainty about the promulgation of new forest practice regulations. Quite possibly, the results of the study could lead to major changes in the way forestry was practiced in Minnesota. However, whereas the study had produced solid technical work, there were unfulfilled expectations about the implementation of the recommendations and findings. For instance, segments of the state's forestry community were becoming increasingly aware that, as a technical document, the GEIS was not going to solve the many contentious value and political differences that existed over the use and management of Minnesota's forests. Providing technical information was one thing; incorporating differing sets of values into agreed to and effective policies was another. There was also uncertainty about the benefits of continuing searches for certainty about the consequences of using and managing the state's forests. Dr. Carter felt that the benefits produced by greater and greater investments in information gathering and analysis were beginning to wane.

There were other concerns, too. Failure to effectively implement the GEIS could spoil an otherwise successful effort in preparing the report. Also, there were substantial negative political implications; failure to implement the GEIS after

investing nearly \$1 million in technical analysis could pose major problems among those who had supported the investment. Conflicts among long-time adversaries might again surface, legal entanglements were a very real possibility, and a series of legislative proposals and actions developed and fostered by opposing interest groups might result in poorly designed and potentially ineffective forest resource policies and programs.

Despite the statutory direction giving DNR implementation responsibility, Dr. Carter was faced with a series of difficult decisions. Even if the implementation responsibility was transferred to the DNR, how should the many recommendations in the GEIS be converted into the laws, guidelines, regulations, and perhaps incentive programs necessary to implement the recommendations? Up until this point, state law had largely directed the process of preparing the GEIS. However, state law was silent on how to implement the results of the study. Also, this was the first GEIS in Minnesota, and there was a lack of a clearly prescribed process for converting the GEIS recommendations into public policy. Further, support for implementation was uncertain because the recommendations did not have the explicit backing of any constituent groups, having been primarily developed by Jaakko Pöyry Consulting. There was concern that the consultant was not universally accepted by all segments of Minnesota's forest resource community, particular some vocal environmental activists. Finally, whereas Dr. Carter and many experts felt that the final GEIS contained a wealth of technical data, Dr. Carter also believed the policy and program recommendations contained in the GEIS were incomplete and often sketchy (Exhibit 3). For instance, only 28 of an estimated 8000 pages were devoted to potential policies and programs. How could more attention be given to the policy recommendations, while at the same time crafting a politically acceptable solution?

Dr. Carter saw several alternatives. One option was for the DNR to develop bills, based on the GEIS recommendations, that would hopefully be enacted into law. Another option was to work with specific groups who would likely

Timber study gives good report and a warning

By Tom Meersman
Staff Writer

State officials Thursday approved the results of Minnesota's most comprehensive environmental study, an 800-page document on forests and timber harvesting in the state. The study, which cost nearly \$1 million and took three years to complete, involved more than 60 researchers.

It was originally requested almost five years ago by a group of northern Minnesota environmentalists who feared that expansion of the pulp and paper industries would result in too many trees being cut. The report estimated that there will be more than enough fiber from

trees during the next few decades, but it also warned that the amount of timber already being cut may be affecting ecosystems, including wildlife habitat, bird populations and the diversity of forests.

Wayne Brandt, executive vice president of Minnesota Forest Industries, a trade group, said the study provides a "tremendous amount of information" and highlights areas in which further research is needed, such as interrelationships between wildlife species, the health of songbird populations and the quality of forest soil. "What the (study) shows is that there's not a need for a revolution in logging and forest management, but rather

a continued evolution," Brandt said. The system doesn't need additional governmental regulations, he said, and is constantly improving its environmental practices.

Don Arnosti, Minnesota director of the National Audubon Society, called the study "a reasonably good start." He said some sections of the report provide such valuable information about environmental concerns as the effect of timber harvesting on soil nutrients and water quality. But Arnosti was disappointed with other elements of the study, including its unsuccessful attempt to quantify the impact of increased logging on tourism and resort businesses. "This is just a

report," he said, and added that it won't mean a great deal unless it leads to specific changes in logging and forest practices.

The Environmental Quality Board approved the document unanimously yesterday, and Chairman Bob Dunn said the result "exceeded my hopes" on what proved to be "an extremely complicated and controversial matter."

Natural Resources Commissioner Rod Sando called it "a very positive conclusion for the future of Minnesota's forest management," but said, "admittedly, there are many issues yet to be resolved to everyone's satisfaction."

Exhibit 2. Minneapolis Star Tribune article on GEIS study approval. (Reprinted with permission of the Star Tribune, Minneapolis-St. Paul.)

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- Certification or licensing programs for loggers, forest operators, and foresters.
 - Statistically sound monitoring of landowner compliance with voluntary forest practice guidelines (these guidelines protected water quality during timber harvesting). If compliance falls below a specified threshold, mandatory compliance rules should then be considered.
 - Wood purchasing industries will be encouraged to adopt a forest operators/loggers Code of Practices that is congruent with voluntary forest practice guidelines. The Code of Practices would then be introduced into all forest operators/loggers contracts to ensure statewide compliance.
 - The state should work with its own agencies and department, the counties and the USDA- Forest Service to develop financial and technical assistance and incentives programs for private landowners, operators, and loggers to encourage adherence to the voluntary forest practice guidelines.
 - Monitor the age class and covertype structure of the state's forests.
 - Complete an inventory of the state's biodiversity features, and conduct an inventory of old growth forests across all ownerships.
 - Upgrade and maintain a listing of known archaeological, historical, and traditional use sites in the state.
 - Develop and fund a research program to investigate the effects of timber harvesting and forest management activities on the tourism and travel industry in Minnesota.
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Exhibit 3. Selected programmatic recommendations from the GEIS.

develop their own bills to address the recommendations most important to them. A coalition of environmental groups had already proposed some specific recommendations (Exhibit 4). These groups felt strongly that there be no delay in changing the way forestry was practiced. Forest industry perspectives and suggestions were more modest (Exhibit 5). Industry was concerned about the costs of the GEIS recommendations, and their effect on the timber supply. A third option was to work to create a consensus among a broad-base group of stakeholders and have this group negotiate and formulate bills that propose enacting a package of policies and programs. No matter which path was chosen, any of the proposed policies and programs would

Selected from the *Citizen's Guide to the G.E.I.S.*, prepared by the National Audubon Society, the Minnesota Center for Environmental Advocacy, the Minnesota Public Interest Research Group, and the Sierra Club-North Star Chapter.

- To maintain some interior forest species and their habitat, such as old growth forest and the red-shouldered hawk, preserve blocks of undisturbed forest. Interior forest characteristics can be maintained if 300-foot buffer strips surround the entire stand.
 - Vastly reduce cutting techniques that remove all trees at once (clearcutting).
 - Prohibit clearcutting in riparian zones.
 - Voluntary use of [forest practice guidelines] may not be enough to safeguard fish and water quality if logging increases.
 - Reduce new forest road construction so that it is balanced by permanent forest road closures. "No net gain of forest roads."
 - Elevate importance of recreation in forest planning.
 - Management changes can only help to the extent that they are implemented across all forest land managers; private, county, state, and federal.
 - No future expansions of Minnesota pulp and paper mills should be permitted unless they utilize recycled pulp.
 - Investments must be made in forest management to encourage more pine in our forests. Younger stands of white and red pine should not be clearcut. Any logging of these stands should be of selected trees only, leaving others to reach greater ages of maturity.
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Exhibit 4. Selected excerpts of environmental group coalition recommendations.

have to be enacted into law by the state legislature and governor. Minnesota does not have the initiative process, in which citizens can vote to enact laws without any involvement of the legislature or governor.

If the alternative of having a group of stakeholders negotiate a package of policies and programs was selected, then two issues that Wanda Carter would have to address were: (i) which stakeholders to include, and (ii) the short time frame available to craft new policies and programs.

Stakeholders. To Dr. Carter and the DNR leadership, a critical element in implementing the recommendations would be generating input from a broad-based group of stakeholders. Broad stakeholder involvement and consensus had not led to the GEIS recommendations; however, these stakeholders would have strong opinions regarding appropriate programs to implement the recommendations. Furthermore, forming an effective coalition of stakeholders might provide an opportunity to take another look at the recommendations suggested by the GEIS. Various stakeholders might have alternative recommendations for policies, programs, and procedures to reduce the adverse impacts identified in the GEIS. Ideally, these stakeholders might review various means by which the GEIS recommendations could be implemented and recommend to the DNR a package of policy and program options to submit as bills to the legislature. Therefore, Dr. Carter drew up a list of organizations that could be represented in such as coalition (Exhibit 6) and she prepared a tentative budget for convening the stakeholders (Exhibit 7).

Projected Timelines. One of Dr. Carter's greatest concerns was the amount of time available to negotiate and formulate the bills proposing the new policies and programs. Although background research had begun, the process of formulating these bills could not start in earnest until the final GEIS had been approved by the EQB. The development of bills had to be complete by the end of 1994, to be considered in the 1995 legislative session. Therefore, time constraints dictated a maximum 6-mo negotiation and bill formulation process—a short time frame to develop a viable package of comprehensive policy and program recommendations. Failure to act quickly could delay action for 2 yr because of Minnesota's biennial legislative process, in which funding for new programs is usually only addressed every 2 yr. The next opportunity to initiate a major new pro-

Excerpted from *Understanding the Generic Environmental Impact Statement on Timber Harvesting: A resource guide to Minnesota's comprehensive forest analysis*, prepared by Minnesota Forest Industries.

- Establishment of [extended rotation guidelines] is appropriate, but only if the substantial continued aging of forests projected in the GEIS does not occur.
 - Protection for plant species should be undertaken, but specifically for those in the threatened or endangered categories.
 - Establishment of [a landscape-based road and trail plan] would be best suited to the County Road Committees, which are currently functioning.
 - [GEIS recommendations] related to slash (limbing and topping) and retention must take into consideration resulting issues related to logger safety. Also, in some cases, slash should be removed for fire and disease prevention purposes.
 - A specific description of sensitive sites [such as nest sites, habitats, and rookeries] and the values they represent should be developed.
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Exhibit 5. Excerpts of forest industry's perspective on the GEIS.

gram would be in 1997, too late from the perspective of the environmental groups. Dr. Carter knew that now was the time to develop new policies and programs, but how should she proceed?

CASE EXHIBITS

1. Sierra Club letter to the Minnesota Department of Natural Resources.
2. Minneapolis Star Tribune article on GEIS study approval.
3. Selected programmatic recommendations made in the GEIS.
4. Environmental group coalition recommendations.
5. Excerpts of forest industry's perspective on the GEIS.
6. Potential stakeholder organizations.
7. Staffing and budget projections.

TEACHING NOTE

Case Objectives

Upon completing this case, students should have:

1. An understanding of the need to involve stakeholders in the formulation and implementation of natural resources policies and programs.
2. An understanding of the complexity and uncertainties of natural resources policy decision making.
3. An understanding of various processes for involving stakeholders in the development of natural resources policy, as well as barriers to involving stakeholders.

Uses of the Case

This decision case study was written primarily for use in natural resources and environmental policy courses. It has been used in its current form twice in a course entitled Management of Natural Resources Conflict. All the students were either seniors or graduate students. The case was used

Interests	Organizations
State land management	DNR
County land management	Minnesota Association of County Land Commissioners
Federal land management	Chippewa and Superior National Forests
Nonindustrial landowners	Minnesota Forestry Association
Forest industry	Minnesota Forest Industries
Primary manufacturing	Champion Paper
Loggers	Associated Contract Loggers
Loggers	Timber Producers Association
Environmental organizations	Center For Environmental Advocacy
Environmental organizations	Audubon Society
Environmental organizations	The Nature Conservancy
Sporting interests	Minnesota Deer Hunters Association
Secondary manufacturing	Minnesota Wood Promotion Council
Resort/tourism	Minnesota Resort Association
Labor	Wood Fiber Council
State interests	EQB
K-12 education	Minnesota Environmental Education Advisory Board
Higher education/research	University of Minnesota
Higher education/research	Natural Resources Research Institute
Forestry professionals	Society of American Foresters
Wildlife professionals	The Wildlife Society

Exhibit 6. Potential stakeholder organizations.

in a section of the course on public policy dialogues and negotiation. The students were asked to read the case before class and to think about how Dr. Carter might proceed to implement the study recommendations. The case was then debriefed in class. It is used as a complement to lecture and readings on public policy development.

The primary use of the case is to allow students to apply theoretical concepts from the lecture notes and other readings, and to stimulate discussion about how natural resources policy and programs are developed. The case focuses the student's attention on the need to involve stakeholders in the development of public policy, and generates a discussion of how such stakeholder involvement could occur. The case also has been used to discuss the use of alternative dispute resolution processes, particularly negotiation and facilitation, in natural resources policy formulation and implementation. Specific issues that have been addressed in class include: determining the number of individuals participating in the negotiation or facilitated meeting, suggesting processes for participant selection, and developing process groundrules.

Discussion Questions and Issues

There are a variety of questions that can be used in preparing for and debriefing this case. Some introductory questions that are typically used in cases such as this one are:

- What precisely is the dilemma faced by Wanda Carter?
- Who are the major stakeholders and what are their interests in this case?
- What characteristics of stakeholders are considered by public agencies when they select or ask them to participate in public planning and policy formulation processes?
- What are Wanda Carter's options?

More probing questions are presented below, along with brief comments and potential answers for each question.

Workplan staffing estimates. Project staffing needs (to be provided or funded by the DNR):

- **Project director/administrator (full-time).** Direct and oversee the GEIS implementation process.
- **Professional facilitator.** Work to help generate consensus on selecting options for implementing the GEIS recommendations.
- **One professional staff (full-time).** Provide technical and project support in assisting the project director in administering the GEIS implementation process.
- **One clerical staff (one-quarter to one-half time).** Provide project support in areas such as making meeting arrangements, as well as preparing mailings and correspondence associated with this project.

Workplan estimated budget. These costs did not include the staffing costs for DNR employees.

Policy and program option development:

- Conduct background research and surveys. (Cost: \$12 000)
- On-site visits to selected states to review existing programs, administrative structures, etc. (Cost: \$13 000).
- Convene policy/administrator expert workshop. (Cost: \$10 000)

Subtotal: \$35 000

Administration costs: \$15 000

Total: \$50 000

Exhibit 7. Staffing and budget projections.

1. What organizations and institutions could be invited to participate in the development of new policies and programs? Wanda Carter faces an important dilemma in deciding which organizations could be invited to participate in a consensus-building process. On one hand she wants to seek a broad, representative stakeholder involvement in the process. On the other hand, she may want to limit the number of parties at the table—too many groups might slow down or halt the process.

2. How should individual participants be selected? An important question that Wanda Carter will need to determine is how to select individual participants to represent themselves or to represent selected interest groups. For instance, participants might be selected by the EQB or the DNR from a pool of nominations submitted by the various stakeholder organizations. Wanda Carter might also want to consider specific criteria for selecting among potential participants, such as their knowledge of forestry issues and whether they will be able to commit a substantial amount of time to meetings.

3. How could participants not familiar with forestry issues or the GEIS become informed about these matters? What types (and how much) of policy and scientific background information could be provided to the participants? Some participants may not be familiar with forestry issues, or they may have a limited knowledge of the Timber Harvesting GEIS. Wanda Carter must decide if she wants to educate these individuals, and she must also decide how to inform them. She has a variety of alternatives, including distributing background papers to them, making oral presentations to them herself, or bringing in outside experts to focus on specific forestry issues.

4. How could conflicts among participants be resolved? If a formal group of stakeholders is convened, some mechanism (e.g., voting or consensus) must be developed to move the group beyond impasse when conflicts arise. Wanda Carter might consider institutionalizing this mechanism in groundrules. Given that a broad consensus appears to be the most desirable, she might lean toward consensus rather than voting to decide issues. However, it is likely that at some point a final decision will have to be made by individual participants whether or not to support the products of their efforts.

5. Should the participants limit their activities to discussing the policies and programs suggested by the GEIS, or should the members develop their own program ideas? It is unlikely that the participants would desire to stay within the confines of the previous recommendations. Further, a major purpose of bringing the stakeholders together would be to gather input from each of the stakeholder groups. This would have two main benefits: (i) more information would be gathered about how to structure rec-

ommended policies and programs, and (ii) more input from the stakeholder groups might increase their perceived ownership of the report, thus increasing the likelihood that broadly supported policies and programs would result.

6. If a group is convened, how could the discussion be managed? Should an independent facilitator be used to manage the discussions? Given that the work will be contentious, and many important stakeholders will participate, it might be advisable for Dr. Carter to employ a professional facilitator. Further, many of the issues will be complicated and interrelated, requiring the management skills of a professional who is experienced in group processes and dynamics. Finally, there are good reasons to choose an independent facilitator. If the DNR is a participant, a facilitator from that organization might be seen as biased.

7. What types of recommendations could the participants make? Should the recommendations be specific or broad? What should be the final product of their deliberations, if any? The participants will be expected to develop some sort of product, most likely a report of some kind. The participants might also become involved in developing and recommending bills. However, given the short time frame and the diversity of viewpoints that will likely be represented, chances are the report will be rather strategic in scope. The depth and breadth of the deliberations will be an important issue for Wanda Carter to resolve. Some of the participants will want the recommendations to be at the strategic level, while others will want to develop a detailed recommendation. If she tries to deal with too much detail, however, the group might never reach agreement. On the other hand, if she tries to keep the group focused on the strategic level, some will say the group accomplished little of substance.

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