

RESULTS
OF
ATTITUDE QUESTIONNAIRE

PEAT PROGRAM
February 25, 1976

For Information Call:

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JAN 23 1985

INTRODUCTION

Midwest Research Institute (MRI) in cooperation with the Upper Great Lakes Regional Commission and the Minnesota Department of Natural Resources presented a series of Information Seminars in several northern Minnesota communities during the second week in January, 1976.

The purpose of these seminars, which were part of the Technology Transfer portion of the Peat Program currently being carried out by MRI, was to report on the status of European peat harvesting and combustion technology and to present a preliminary evaluation of the potential environmental impacts that might be expected as a result of a large-scale peat development in Minnesota.

In November of 1975 a list of potential locations for the Information Seminars was drawn up and, after consultation with DNR personnel and those State legislators who participated in the Technical Study Trip to Europe, four northern Minnesota communities were chosen as sites for the seminars: Baudette, Big Falls, Blackduck, Grand Rapids. Final arrangements with local officials were made in December and the seminars were scheduled for four consecutive evenings in January:

Baudette	Monday, January 12	7:30 PM
	Lake-of-the-Woods County Courthouse	
Big Falls	Tuesday, January 13	7:30 PM
	Big Falls Town Hall	
Blackduck	Wednesday, January 14	7:30 PM
	Blackduck High School	
Grand Rapids	Thursday, January 15	7:30 PM
	Itasca Community College (Davies Theatre)	

News releases announcing the Information Seminars were sent to papers in International Falls, Baudette, Grand Rapids, Northome, Little Fork, Bemidji, Eveleth and Cloquet, and similar releases were sent to twelve

northern Minnesota radio stations and to KCMT-TV in Alexandria, KNMT-TV in Walker, and WDIO-TV in Duluth. In addition, MRI prepared a brochure describing the seminars and announcing their dates, times and locations. More than 600 of these brochures were distributed via local officials and members of the Peat Program Advisory Committee. Brochures were also sent to Regional Development Commission representatives, State legislators whose districts might be affected by peat development, and to appropriate staff in the State agencies.

Because the Information Seminars provided an excellent opportunity not only to dispense information but to solicit the attitudes of local people toward the prospect of a large-scale peat development in their area, a questionnaire was prepared to be distributed at the meetings. The results of the questionnaire are presented in this document.

At each seminar the questionnaire was distributed during the break between the formal presentation and the discussion period. A total of 192 people filled out the questionnaire: Baudette (46), Big Falls (38), Blackduck (83) and Grand Rapids (25). Not everyone attending the seminars completed a questionnaire. Some left early. Some did not bother to fill one out. A few blank questionnaires were carried away from the meetings, filled out elsewhere, and returned by mail to MRI. Because this procedure was considered non-standard and because the results from this batch of questionnaires were conspicuously out of line with the results as a whole, these absentee responses were not included in the results which are presented in the following tables. A sample of the actual questionnaire form precedes the tabulated results. The eight tables present the results of the "check-off" portion of the 192 questionnaires.

TABULATED RESULTS

Peat Program
 Citizen Response Document
 Baudette, Big Falls, Blackduck, Grand Rapids
 January 12-15, 1976

We need your help. It is important to our evaluation of peat development in Minnesota that we learn what people in this area think about a large-scale effort such as the proposed Minnegasco peat harvesting and gasification operation.

By completing this short questionnaire, you will help us better understand local concerns and will assist us in making your feelings known to State policy makers.

A peat harvesting and gasification operation in your area would:	Strongly Agree	Agree	Slightly Agree	No Opinion	Slightly Disagree	Disagree	Strongly Disagree
1. Seriously damage the area's wildlife							
2. Seriously damage the area's water quality							
3. Seriously damage the area's air quality							
4. Seriously threaten your personal health							
5. Badly hurt your job/business							
6. Adversely affect your present way of life							
7. Adversely affect your community							

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What do you think might be the most serious problem created by a peat harvesting and gasification operation?

What do you think might be the most important benefit created by a peat harvesting and gasification operation?

What do you think would be the "best use" of Minnesota peatlands?

Do you believe this seminar was valuable?

Please add any additional comments:

Midwest Research Institute
3100-38th Avenue South
Minneapolis, Minnesota 55406
(612) 721-6373

Male/Female _____

Occupation _____

BAUDETTE (Number)

A Peat Harvesting and Gasification
Operation in Your Area Would:

	Total Agree	Stongly Agree	Agree	Slightly Agree	No Opinion	Slightly Disagree	Disagree	Strongly Disagree	Total Disagree
1. Seriously damage the area's wildlife.	13	7	2	4	3	8	13	14	30
2. Seriously damage the area's water quality.	16	9	4	3	13	3	9	5	17
3. Seriously damage the area's air quality.	19	3	7	9	10	3	10	4	17
4. Seriously threaten your personal health.	12	3	3	6	10	2	17	5	24
5. Badly hurt your job/business.	4	1	1	2	9	1	12	20	33
6. Adversely affect your present way of life.	14	6	6	2	7	2	16	7	25
7. Adversely affect your community	14	5	5	4	8	2	16	6	24
Sum	92	34	28	30	60	21	93	56	170

BIG FALLS (Number)

A Peat Harvesting and Gasification
Operation in Your Area Would:

	Total Agree	Stongly Agree	Agree	Slightly Agree	No Opinion	Slightly Disagree	Disagree	Strongly Disagree	Total Disagree
1. Seriously damage the area's wildlife.	10	2	1	7	4	1	14	9	24
2. Seriously damage the area's water quality.	9	2	2	5	10	6	10	3	19
3. Seriously damage the area's air quality.	4	0	2	2	11	7	8	8	23
4. Seriously threaten your personal health.	2	0	0	2	6	1	18	11	30
5. Badly hurt your job/business.	1	0	0	1	7	2	8	20	30
6. Adversely affect your present way of life.	14	4	5	5	4	2	11	7	20
7. Adversely affect your community	15	5	7	3	7	1	9	6	16
Sum	55	13	17	25	49	20	78	64	162

BLACKDUCK (Number)

A Peat Harvesting and Gasification Operation in Your Area Would:		Total Agree	Stongly Agree	Agree	Slightly Agree	No Opinion	Slightly Disagree	Disagree	Strongly Disagree	Total Disagree
1.	Seriously damage the area's wildlife.	43	14	12	17	9	10	16	5	31
2.	Seriously damage the area's water quality.	39	11	13	15	23	7	13	1	21
3.	Seriously damage the area's air quality.	35	8	9	18	16	8	19	5	22
4.	Seriously threaten your personal health.	15	3	5	7	22	5	29	12	46
5.	Badly hurt your job/business.	8	3	2	3	25	3	22	25	50
6.	Adversely affect your present way of life.	44	15	18	11	6	11	16	6	33
7.	Adversely affect your community	39	15	13	11	8	7	17	12	36
Sum		223	69	72	82	109	51	132	60	249

GRAND RAPIDS (Number)

A Peat Harvesting and Gasification Operation in Your Area Would:		Total Agree	Stongly Agree	Agree	Slightly Agree	No Opinion	Slightly Disagree	Disagree	Strongly Disagree	Total Disagree
1.	Seriously damage the area's wildlife.	12	1	3	8	1	4	5	3	12
2.	Seriously damage the area's water quality.	9	2	3	4	3	5	6	2	13
3.	Seriously damage the area's air quality.	14	1	7	6	2	4	3	2	9
4.	Seriously threaten your personal health.	3	0	0	3	5	2	9	6	17
5.	Badly hurt your job/business.	0	0	0	0	3	1	10	11	22
6.	Adversely affect your present way of life.	4	0	1	3	4	3	9	5	17
7.	Adversely affect your community	6	0	1	5	4	2	8	5	15
Sum		48	4	15	29	22	21	50	34	105

BAUDETTE (Percent)

A Peat Harvesting and Gasification Operation in Your Area Would:	Total Agree	Stongly Agree	Agree	Slightly Agree	No Opinion	Slightly Disagree	Disagree	Strongly Disagree	Total Disagree
1. Seriously damage the area's wildlife.	28.3	15.2	4.3	8.7	6.5	17.4	28.3	30.4	65.2
2. Seriously damage the area's water quality.	34.8	19.6	8.7	6.5	28.3	6.5	19.6	10.7	37.0
3. Seriously damage the area's air quality.	41.3	6.5	15.2	19.6	21.7	6.5	21.7	8.7	37.0
4. Seriously threaten your personal health.	26.1	6.5	6.5	13.0	21.7	4.3	36.6	10.7	52.2
5. Badly hurt your job/business.	8.7	2.2	2.2	4.3	19.6	2.2	26.1	43.5	71.1
6. Adversely affect your present way of life.	30.4	13.0	13.0	4.3	15.2	4.3	34.8	15.2	54.3
7. Adversely affect your community	30.4	10.7	10.7	8.7	17.4	4.3	34.8	13.0	52.2
Average	28.6	10.6	8.7	9.3	18.6	6.5	28.9	17.4	52.8

Sum of "Total Agree," "Total Disagree," and "No Opinion" might not add to exactly 100 percent due to rounding.

BIG FALLS (Percent)

A Peat Harvesting and Gasification Operation in Your Area Would:		Total Agree	Stongly Agree	Agree	Slightly Agree	No Opinion	Slightly Disagree	Disagree	Strongly Disagree	Total Disagree
1. Seriously damage the area's wildlife.		26.3	5.3	2.6	18.4	10.5	2.6	36.8	23.7	63.2
2. Seriously damage the area's water quality.		23.7	5.3	5.3	13.2	26.3	15.8	26.3	7.9	50.0
3. Seriously damage the area's air quality.		10.5	0.0	5.3	5.3	28.9	18.4	21.2	21.2	60.5
4. Seriously threaten your personal health.		5.3	0.0	0.0	5.3	15.8	2.6	47.4	28.9	78.9
5. Badly hurt your job/business.		2.6	0.0	0.0	2.6	18.4	5.3	21.2	52.6	78.9
6. Adversely affect your present way of life.		36.8	10.5	13.2	13.2	10.5	5.3	28.9	18.4	52.6
7. Adversely affect your community		39.5	13.2	18.4	7.9	18.4	2.6	23.7	15.8	42.1
Average		20.7	4.9	6.4	9.4	18.4	7.5	29.3	24.1	60.9

"Total Agree," "Total Disagree," and "No Opinion" might not add to exactly 100 percent due to rounding.

BLACKDUCK (Percent)

A Peat Harvesting and Gasification Operation in Your Area Would:	Total Agree	Stongly Agree	Agree	Slightly Agree	No Opinion	Slightly Disagree	Disagree	Strongly Disagree	Total Disagree
1. Seriously damage the area's wildlife.	51.8	16.7	14.6	20.5	10.8	12.0	19.3	6.0	37.3
2. Seriously damage the area's water quality.	47.0	13.3	15.7	18.1	27.7	8.4	15.7	1.2	25.3
3. Seriously damage the area's air quality.	42.2	9.6	10.8	21.7	19.3	9.6	22.9	6.0	38.6
4. Seriously threaten your personal health.	18.1	3.6	6.0	8.4	26.5	6.0	34.9	14.5	55.4
5. Badly hurt your job/business.	9.6	3.6	2.4	3.6	30.1	3.6	26.5	30.1	60.2
6. Adversely affect your present way of life.	53.0	18.1	21.7	13.3	7.2	13.2	19.3	7.2	39.8
7. Adversely affect your community	47.0	18.1	15.6	13.3	9.6	8.4	20.5	14.5	43.2
Average	38.4	11.9	12.4	14.1	18.8	8.8	22.7	10.3	42.6

Sum of "Total Agree," "Total Disagree," and "No Opinion" might not add to exactly 100 percent due to rounding.

GRAND RAPIDS (Percent)

A Peat Harvesting and Gasification Operation in Your Area Would:		Total Agree	Stongly Agree	Agree	Slightly Agree	No Opinion	Slightly Disagree	Disagree	Strongly Disagree	Total Disagree
1.	Seriously damage the area's wildlife.	48.0	4.0	12.0	32.0	4.0	16.0	20.0	12.0	48.0
2.	Seriously damage the area's water quality.	36.0	8.0	12.0	16.0	12.0	20.0	24.0	8.0	52.0
3.	Seriously damage the area's air quality.	56.0	4.0	28.0	24.0	8.0	16.0	12.0	8.0	36.0
4.	Seriously threaten your personal health.	12.0	0.0	0.0	12.0	20.0	8.0	36.0	24.0	68.0
5.	Badly hurt your job/business.	0.0	0.0	0.0	0.0	12.0	4.0	40.0	44.0	88.0
6.	Adversely affect your present way of life.	16.0	0.0	4.0	12.0	16.0	12.0	36.0	20.0	68.0
7.	Adversely affect your community	24.0	0.0	4.0	20.0	16.0	8.0	32.0	20.0	60.0
Average		27.4	2.3	8.6	16.6	12.6	12.0	28.6	21.7	60.0

Sum of "Total Agree", "Total Disagree", and
"No Opinion" might not add to exactly 100
percent due to rounding.

PRELIMINARY DISCUSSION OF RESULTS

Quantitative Responses (First Page)

It is important to note, before any comment is made about the results of the questionnaire, that no effort was made, and indeed no effort could be made under the circumstances, to control the make-up of the sample. Whether or not the 192 people who filled out the questionnaire at the four seminars were, as a group, representative of the population in those areas most likely to be affected by peat development has not been determined. Indications are that they were not entirely representative.

The largest number of questionnaires (83) was obtained at the Blackduck seminar and the smallest number (25) at the Grand Rapids seminar. The Blackduck questionnaires represent, in fact, almost half of the total sample (192) and therefore carried almost as much weight in the final results as the questionnaires from the other three locations combined. It is important to remember this because the respondents at the Blackduck meeting showed, as a group, more concern for the environmental impacts of peat development, and more concern for the impact on their community and way of life, than did the respondents at the other three seminars.

A comparison of the results from the four locations will reveal several significant differences and several significant similarities.

The differences will be found mostly in the responses to the environmental statements (1-3) and "way-of-life" statements (6-7). The respondents at Blackduck, for example, were as a group in general agreement with statements 6 and 7 by margins of 53.0/39.8 to 47.0/43.4 respectively. At the other three seminars, the respondents were in general disagreement with the same two statements by an average margin of 29.2/57.0 for statement 6 and 32.2/50.4 for statement 7.

The differences in the responses to the environmental statements (1-3) are more complicated. The respondents at Blackduck were in agreement with all three statements by margins of 51.8/37.3, 47.0/25.3, and 42.2/38.6 respectively. The respondents at Big Falls were in disagreement with those same three statements by margins of 26.3/63.2, 23.7/50.0, and 10.5/60.5 respectively. The respondents at both Baudette and Grand Rapids were split in their response to this group of statements (see percent response tables for Baudette and Grand Rapids).

Despite these differences, the results reveal some similarities between the responses at the four locations. At all four seminars the largest number of "disagree" responses were entered, as might be expected, in response to statement 5, and the second largest number were entered in response to statement 4. At Blackduck these were the only statements which elicited a majority in disagreement.

In the case of three of the seven statements--1, 6, and 7--the respondents at all four seminars appear to have made up their minds more emphatically than in the case of the remaining four statements. The percent "No Opinion" response to these three statements is on the average about half that of the average "No Opinion" response to the remaining four statements (11.3/22.8). Thus, while 20 to 30 percent of the 192 respondents expressed "No Opinion" about the impact of a large-scale peat development on water quality, air quality, their personal health, and their job/business, more than 90 percent of the respondents had made up their minds, one way or the other, about the effect of such a development on wildlife, on their own way of life, and on their communities.

A closer look at a break-down of the response scale will reveal another important fact. The respondents who disagree with the statements in the questionnaire tend to do so more emphatically than those who agree with the same statements. This is especially true in the case of statement 4 concerning the impact of peat development on the respondent's personal health:

A peat harvesting and gasification operation in your area would:	Strongly Agree	Agree	Slightly Agree	No Opinion	Slightly Disagree	Disagree	Strongly Disagree
4. Seriously threaten your personal health.	3.1	4.2	9.4	22.4	5.2	38.0	17.7

The split here between "Total Agree" and "Total Disagree" is 21.5/78.5. But when the responses are weighted (slight agree/disagree = 1, agree/disagree = 2, and strong agree/disagree = 3), the split widens and shifts even more decidedly in the direction of disagreement (16.8/83.2). The same is true, to a lesser degree, with the response to the environmental statements 1-3:

A peat harvesting and gasification operation in your area would:	Strongly Agree	Agree	Slightly Agree	No Opinion	Slightly Disagree	Disagree	Strongly Disagree
1. Seriously damage the area's wildlife.							
2. Seriously damage the area's water quality.	10.4	11.3	17.0	18.2	11.3	21.9	10.6
3. Seriously damage the area's air quality							

The average split here between "Total Agree" and "Total Disagree" is 46.8/53.2. But when the responses are weighted, the split widens somewhat and shifts slightly more in the direction of disagreement (44.8/55.2).

A Summary of the results of the 192 questionnaires also shows that, when taken together, the plurality of all respondents is in disagreement with all the statements except statement 2, which concerns the impact of peat development on water quality:

* SUMMARY (Percent)	Total Agree	No Opinion	Total Disagree
A peat harvesting and gasification operation in your area would:			
1. Seriously damage the area's wildlife.	40.6	8.9	50.5
2. Seriously damage the area's water quality.	38.0	25.5	36.5
3. Seriously damage the area's air quality.	37.5	20.3	42.2
4. Seriously threaten your personal health.	16.7	22.4	60.9
5. Badly hurt your job/business	6.8	22.9	70.3
6. Adversely affect your present way of life.	39.6	10.9	49.4
7. Adversely affect your community	38.5	14.1	47.4

* 192 respondents

When the complete results are tallied, moreover, it becomes apparent that the "Total Agree" and "Total Disagree" responses to statements 1, 2, 3, 6, and 7 are separated by no more than 10 percentage points and, in one case, by less than 2 percentage points. This narrow spread seems to indicate that these five issues remain highly controversial, with proponents and opponents almost equally divided. The spread is considerably wider (40-60 percentage points) in the case of statements 4 and 5, indicating that these two issues are presently much less hotly debated.

Qualitative Response (Second Page)

The second page of the questionnaire solicited more open-ended responses to four questions:

1. What do you think might be the most serious problem created by a peat harvesting and gasification operation?
2. What do you think might be the most important benefit created by a peat harvesting and gasification operation?
3. What do you think would be the "best use" of Minnesota peatlands?
4. Do you believe this seminar was valuable?

In tabulating the responses it was found that many respondents supplied more than one response to questions 1 and 2. All such responses were taken into account in the final tabulations although this procedure gave a disproportionate weight to those questionnaires which supplied more than was specified.

The responses to question 1 were grouped into five major clusters: environmental problems, life-style problems, population problems, service problems, and "no problem". The results, which are summarized below by location, indicate that the threat to the environment is considered the most serious problem by most respondents:

MOST SERIOUS PROBLEM (Percent)	Baudette	Big Falls	Blackduck	Grand Rapids	Total
Environmental	69.4	32.7	42.1	52.0	46.3
Life-style	4.1	9.1	13.2	20.0	11.1
Population	2.0	14.5	21.9	16.0	15.6
Service	0.0	25.5	9.6	4.0	10.7
Other	10.2	7.3	7.0	4.0	7.17
No Problem	14.3	10.9	6.1	4.0	8.6

The environmental cluster can be broken down into six sub-problems---air pollution, water pollution, ground water table lowering, wildlife, flooding, and the problem of reclamation, which was regarded as essentially an environmental concern. The breakdown of the environmental cluster for the total sample is presented below as a percent of total responses:

ENVIRONMENTAL PROBLEMS
(Percent)

Air pollution	10.2
Water pollution	9.8
Ground Water	6.1
Wildlife	7.8
Flooding	1.2
Reclamation	5.3
Environmental problem (not specified)	5.7 5.7
No Problem	8.6

The breakdown indicates that air and water pollution are considered the most serious environmental threats, with wildlife destruction, ground water lowering, reclamation, and flooding coming in third, fourth, fifth, and sixth, respectively. A significant portion of the respondents (8.6 percent) believes there will be no problem of any kind.

The responses to question 2 had to be grouped into more classes than the responses to question 1 due to the diversity of the responses to question 2. The benefits of a large-scale peat development are tabulated below by location:

MOST IMPORTANT BENEFIT (Percent)	Baudette	Big Falls	Blackduck	Grand Rapids	Total
Economy	25.5	16.4	20.2	22.6	20.6
Employment	32.7	35.8	33.7	12.9	31.5
Energy	12.7	20.9	21.2	45.2	22.2
Agriculture	10.9	4.5	2.9	6.5	5.4
Forest/Wilderness	0.0	1.5	3.8	0.0	1.9
Tax base	1.8	11.9	3.8	0.0	5.1
Use of Wasteland	10.9	4.5	2.9	0.0	4.7
Other	0.0	4.5	6.7	6.5	5.1
No benefit	5.5	0.0	4.8	3.2	3.5

By far the three most important benefits in the eyes of the respondents at all four seminars are in the areas of employment, economy, and energy

production. Moreover, since "employment", "economy", and "tax base" are terms which could easily be subsummed under the rubric of economic benefits, it could be said that almost 60 percent of the respondents believed that the economic benefits of peat development were the most important. Energy production comes in a somewhat distant second to these economic benefits.

Responses to question 3 concerning the "best use" of Minnesota's peatlands are presented below by locations:

BEST USE (Percent)	Baudette	Big Falls	Black- duck	Grand Rapids	Total
Energy	27.7	34.7	21.7	26.3	26.7
Agriculture	18.0	18.7	21.7	13.2	18.8
Horticulture	11.5	8.2	2.3	18.4	8.3
Forestry	13.1	10.2	9.8	13.2	11.3
Multiple Use	4.9	6.1	5.4	10.5	6.3
Limited Development	4.9	2.0	5.4	15.8	6.3
No Development	4.9	6.1	13.0	2.6	7.9
Don't Know	3.3	2.0	7.6	0.0	4.2
Other	11.5	12.2	13.0	0.0	10.3

A look at the responses concerning best use will reveal that energy production leads all the other categories of use by a substantial margin. Agriculture and forestry surpass horticulture in the area of non-energy use. It is worth pointing out that the respondents at all four meetings chose some use of the State's peatlands over "No Development" by margins ranging from 66.3/13.0 to 97.4/2.6, the average margin being 77.7 in favor of some development and 7.9 percent in favor of no development.

The results for question 4 and the biographical data, finally, are summarized below:

WAS THE SEMINAR VALUABLE?
(Percent)

Yes	Somewhat	No	Too Long	Too Technical	Other
82.2	5.4	2.0	5.4	2.0	2.5

Sex (Percent)	Baudette	Big Falls	Blackduck	Grand Rapids	Total
Male	88.9	71.1	81.8	95.7	83.1
Female	11.1	28.9	18.2	4.3	16.9

OCCUPATION (Percent)	Baudette	Big Falls	Blackduck	Grand Rapids	Total
Government (Elected)	2.2	4.9	0.0	0.0	1.6
Professional	15.6	14.6	32.9	47.8	26.6
Manager/Business	8.9	24.4	12.7	8.7	13.8
Service	4.4	4.9	7.6	8.7	6.4
Rural	51.1	19.5	20.3	13.0	26.6
Labor/Clerical/Sales	8.9	19.5	7.6	0.0	9.6
Housewife	2.2	7.3	7.6	4.3	4.8
Retired	4.4	4.9	5.1	4.3	5.6
Miscellaneous	2.2	0.0	5.1	13.0	4.3
Unemployed	0.0	0.0	1.3	0.0	1.0