

BUILDING A CONSTITUENCY OF FOREST
PRODUCTIVITY ADVOCATES
*WHAT DO WE KNOW ABOUT MINNESOTA'S
NATURAL RESOURCE PRIORITIES?*

KATHRYN FERNHOLZ

DR. JIM BOWYER
DR. JEFF HOWE
DR. STEVE BRATKOVICH

MARCH 26, 2009



DOVETAIL PARTNERS, INC.



Building a Constituency of Forest Productivity Advocates

What do we know about Minnesotan's Natural Resource Priorities?

Introduction

In November 2008, in the midst of some of the worst economic news in a generation and after nearly ten years of lobbying and education efforts, Minnesotans approved a sales tax increase to support the environment. The revenues from the additional three-eighths of 1 percent are to be used to preserve Minnesota's natural resources and support the arts.

While many seemed surprised to see the constitutional amendment approved given the many challenges it faced, those engaged in polling Minnesotans about their natural resource priorities were less surprised by the results – because the survey data fully predicted it.

From generations of polling and public survey research, abundant information is available about what Minnesotans, Americans and specific segments of the population think when it comes to environmental issues. This information provides an insight into what policy changes and actions people are likely to support and where opportunities for engagement and creation of a “forestry constituency” may exist.

This report is part of the *Seeing the Forest AND the Trees* project of the Blandin Foundation's Vital Forests/Vital Communities initiative.¹ To support the project goals of improving the productivity of Minnesota's forests, this report shares what we know, and don't know, about the natural resource priorities of Minnesotan's and explores how knowledge from public opinion surveys can inform the creation and strengthening of a voice for Minnesota's healthy and productive forests.

Environment and Public Opinion in Minnesota

General Surveys

Research conducted by the University of Minnesota in 1969 and 1970 provides an interesting basis for a discussion about the state's environmental priorities. The research at that time attempted to gauge how the public was made aware of environmental issues, general attitudes toward those issues, how flexible the attitudes were, and specific opinions on issues involving

StarTribune Editorial
Minneapolis-St. Paul,
Minnesota
(16 Feb. 2009)

“...Receiving more votes in the state than President Obama, the amendment will increase Minnesota's sales tax three-eighths of 1 percent effective July 1 to raise revenue to preserve Minnesota's natural and artistic assets. Current estimates peg likely 2010 total revenue at \$237 million, although that figure may shrink along with the economy. It will be split four ways, with most of the funds going to the great outdoors. The Clean Water Fund and Outdoor Heritage Fund will each receive one-third, while the Parks and Trails Fund is slotted for 14.25 percent. The remaining 19.75 percent will go to the great indoors, funneled to an Arts and Cultural Heritage Fund.”

¹ For more information about this project and the initiative, see www.blandinfoundation.org

three locations: the Boundary Waters Canoe Area, the Duluth steel plant, and Silver Bay taconite port. The conclusions of the research included:

- The public primarily receives information about environmental issues from professional organizations as well as concerned public interest-groups;
- These organizations utilize their own publications and mass media coverage to carry their messages;
- Individuals may express concern about issues, but are unlikely to support drastic changes in personal behavior as there appears to be fairly widespread confidence in the ability of science and technology to address those concerns;
- Specific opinions appear to vary according to the direct consequences on the community most affected;
- There is a bias toward the status quo, meaning that simply being more informed about an issue does not necessarily mean that a person will be more favorable toward any specific new actions to address that issue;
- Environmental issues have the potential for leading to intense conflict within and between communities; and
- Attitudes on environmental issues may be fixed and resistant to influence.

One of the interesting findings of the study was that existence of “high knowledge”² didn’t correlate with support for change. The researchers found that “as persons become more informed about a new public proposal they become *more* skeptical about it” and thus appear less likely to support restrictive environmental protections (emphasis added). The data showed that local communities most impacted by a given proposal were less supportive of environmental protection, as compared to more distant communities showing stronger levels of support. The findings suggest the importance of recognizing the role of community self-interest in environmental debates and the potential for conflicts between communities with differing opinions on the level of protection that is warranted.

Around the same time, in the spring of 1970, the University of Minnesota conducted a survey in northeastern Minnesota and asked about the importance of five major issues – war, inflation, student demonstrations, civil rights, or the environment. Of those surveyed, 22 percent chose the environment as most important and only 8 percent identified the environment as the least important of these five choices.

One of the questions asked in the 1970 statewide Minnesota poll was: “Do you agree or disagree with this statement:

“Life as we know it today will be in serious trouble if nothing is done about pollution.”

Some 95% of college educated Minnesotans and 77% of grade school educated respondents agreed with this statement, the highest positive response rate and narrowest percentage spread of the seven questions asked.

² The study defined “high” knowledge as being able to recall two or more facts, accurately, about the issue.

Surveys Regarding Trails, Lakes, and Outdoor Recreation

Between 1996 and 1998 the Minnesota Department of Natural Resources (DNR) conducted surveys to gain an understating of summer trail use on the established trail routes in the state.³ Besides monitoring the number of trail users and the intensity of trail use⁴, the survey identified what made the trails appealing for summer recreation. The leading trail characteristic identified in response to the question “What do you like most about this trail?” was the natural setting and quiet surroundings (scenery/wildlife/beauty). For all of the trails surveyed in 1997 and 1998, between 85% and 96% of trail users identified the trail scenery and wildlife viewing opportunities as a primary source of enjoyment. Between 78% and 90% of the users on each trail also indicated being “satisfied” or “very satisfied” with the “management of vegetation in the trail corridor.”⁵

In 1998 the University of Minnesota and Minnesota Department of Natural Resources teamed up to conduct a survey of public perceptions regarding the impacts, use, and future management of Minnesota’s lakes. The purpose of the survey was to help inform public policy discussion and engage public support for management programs. The survey found that 77% of Minnesotans use the state’s lakes at least once per year.⁶ More than 60% of respondents checked “strongly agree” when presented with the statement that “Minnesota lakes must be taken care of so that we can pass them along to future generations for their enjoyment”. This percentage increased to 79% when considering only those who reported using lakes more than 30 days per year.

Of most direct relevance to forestry practices, the survey included questions related to the condition of natural shoreline vegetation, condition of land near the shore, and condition of land away from the shore. Nearly 80% perceive natural shoreline vegetation as “about right” and some 60% saw the condition of land near and away from shore as “good” to “excellent”; including 60 to 70% of lake users perceiving conditions as having “remained about the same” over the previous ten years. In a list of 17 possible factors perceived by respondents as impacting water quality (Table 1), timber harvesting was ranked second to last in terms of magnitude of impact with less than 20% of statewide respondents indicating timber harvesting as having “great” or “moderate” impact on worsening water quality perceptions. However, timber harvesting was ranked 4th of the top 5 factors contributing to worsening water quality by respondents from the northeast region of the state. Among respondents who perceived worsening scenic quality about a third of respondents identified timber harvesting as having “great” or “moderate” impact.

³ Surveys included the Douglas, Gateway, Luce Line, Heartland, Root River, Glacial Lakes, Paul Bunyan segment, and Sakatah Singing Hill trails.

⁴ Trail use was reported in terms of “user hours.” One user hour is one person using the trail for one hour. Two people using the trail for one hour is two user hours. Similarly, two people using the trail for four hours is eight user hours. This approach allows for combining and comparing activities of different duration. The study found that during summer months, the 9 trails surveyed have 896,373 total user hours.

⁵ Between 0% and 8% (average of 4%) stated they were “dissatisfied” or “very dissatisfied” with the “management of vegetation in the trail corridor.”

⁶ In the survey, lake use is defined as, “any on-water activity like fishing, boating or any other activity that is enhanced by the presence of lakes, such as camping, sightseeing, or living in a shoreland home.”

Table 1
Top Factors Perceived as Impacting Water Quality by Region
(factors ranked on the percent of 'great' plus 'moderate' impact responses)

Northwest Region		Northeast Region	
Rank	Factor	Rank	Factor
1	Septic systems around the lake	1	Septic systems around the lake
2	Agricultural fertilizers and chemicals	2	Lawn fertilizer and chemicals
3	Exhaust and fuel leakage from motorized watercraft	3	Exhaust and fuel leakage from motorized watercraft
4	Lawn fertilizer and chemicals	4	Timber harvesting
5	Soil erosion from farms and fields	5	Urban, road, or parking lot runoff
South Region		Central Region	
Rank	Factor	Rank	Factor
1	Agricultural fertilizers and chemicals	1	Septic systems around the lake
2	Lawn fertilizer and chemicals	2	Lawn fertilizer and chemicals
3	Septic systems around the lake	3	Exhaust and fuel leakage from motorized watercraft
4	Soil erosion from farms and fields	4	Aquatic plant (weed) removal
5	Livestock manure	5	Shoreline vegetation removal
Metro Region			
Rank	Factor		
1	Lawn fertilizer and chemicals		
2	Urban, road, or parking lot runoff		
3	Exhaust and fuel leakage from motorized watercraft		
4	Exotic species invasions (such as Eurasian watermilfoil)		
5	Soil erosion from farms and fields		

Source: Anderson, K. A., et al (1999).

Lake users were also asked about 17 possible solutions for addressing problems with lake water quality, including solutions categorized as education, management, regulation/enforcement and incentives. Respondents were asked to select as many of the 17 choices as they thought might be effective. None of the four categories of solutions emerged as a clear preference and each of the 17 proposed solutions had more than 50% support from respondents. The top responses related to **regulatory solutions** included:

- 72% supported stricter controls on exotic species
- 68% supported stricter septic system regulations
- 66% supported motorboat size and speed limits
- 60% supported more enforcement of existing shoreland protection laws
- 58% supported stricter zoning regulations, including protection of shoreland trees and shrubs.

In terms of **education programs**:

- 79% supported programs targeting shoreline property owners and farmers
- 54% supported programs for loggers and foresters

Regarding **management strategies**, 68% supported increasing protection for fish habitat. A majority of lake users supported incentive programs, including recognition awards for shore land property owners who minimize impacts, financial incentives for environmentally-sound shore land management, and technical assistance with erosion control.

In 2000 the Minnesota DNR conducted a survey focused on “awareness and satisfaction.” This was one of a series of surveys conducted for the purpose of gauging the agency’s performance; previous surveys had been made in 1992 and 1996. The data in Table 2 shows the statements survey respondents agreed and disagreed with most. The results from the surveys repeated in multiple years found that the public continued to be most satisfied with the DNR’s maintenance of campgrounds, the procedures for getting a license or permit, the management of state recreation trails, and how helpful and knowledgeable DNR employees are. The areas of dissatisfaction included trash being dumped along lakeshores and rivers; inadequate protection of lakes and rivers from agricultural, animal and human waste; and communications about natural resource laws and regulations. The top five DNR activities, ranked as “important” or “very important” by at least 80% of the respondents, included protection of lakes and rivers from agricultural, animal and human waste, reducing trash dumped along lakeshores and rivers, education about firearm safety, preventing the spread of Eurasian water milfoil, and maintaining the balance between the use and preservation of natural resources.

Table 2
Minnesota DNR 2000 Awareness and Satisfaction Survey Results

Those statements that survey respondents agree with most:

- 1) State-owned lands that are used for outdoor recreation or sustainable natural resource management should be kept in state ownership,
- 2) Certain wetlands other than lakes should be protected in Minnesota,
- 3) The DNR should prohibit the construction and use of permanent deer stands on all state-owned lands,
- 4) Everyone who operates motor boats should have an operator’s license,
- 5) The lottery process, which is used to issue permits for hunting moose, bear, antlerless deer and turkey are administered fairly.

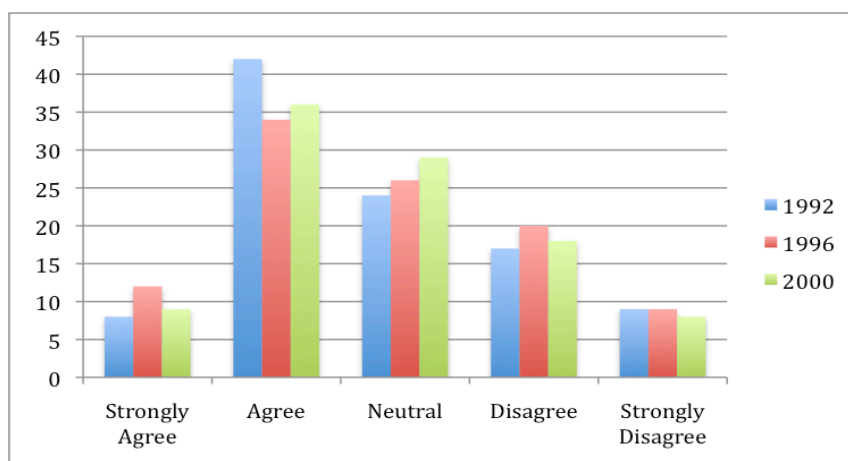
Those statements that survey respondents disagree most:

- 1) The DNR should establish more sites on public land for motorized off-road vehicle recreation,
- 2) Zoning and environmental restrictions on the use of private land should be lessened,
- 3) Recreation equipment should be taxed to help fund natural resource projects and activities,
- 4) The DNR should have a more active role in regulating urban development,
- 5) The DNR should give more authority to local governments such as counties, cities, and townships to manage and protect natural resources, and
- 6) More waters should be designated for catch and release fishing only.

Source: MDNR, Awareness and Satisfaction Survey Results, June 2000

Each of the surveys in the series included the statement, “The DNR should manage forests to help meet consumer demand for forest products”; results (Figure 1, next page) show a slight downward trend in support for this statement, with a shift toward more neutral views. For instance, whereas in 1992 50 percent of respondents agreed or strongly agreed with this statement, this percentage was 44 percent in both the 1996 and 2000 surveys. Those expressing a neutral view of this statement increased from 24 percent of respondents in 1992 to 29 percent in 2000.

Figure 1
Survey responses in 1992, 1996, and 2000 to the statement:
“The DNR should manage forests to help meet consumer demand for forest products.”



Source: Minnesota Department of Natural Resources, Awareness and Satisfaction Survey Results, June 2000

Another Minnesota DNR survey, this in 2001, surveyed state park visitors to understand their interests and needs (Table 2). The research found that most state park visitors are Minnesota residents (84%) and the Twin Cities region contributes fewer visitors than is proportional with its population. While representing about 54% of the state's population, only 43% of state park visitors are from the Metropolitan area. Parks also attract fewer Hispanic and non-white residents than is proportional to census data (12% of population versus 4% of visitors). In terms of age, the parks draw fewer young and old adults while attracting more children and middle aged adults. A majority (56%) of state park visitors from Minnesota have completed college, compared with 27 percent of the general population. The income levels of state park visitors from Minnesota tend to be more middle-income than the overall population. There are fewer lower-income park visitors than in the general population, and about the same proportion of higher-income visitors as in the general population. See Table 3 on the following page for additional information.

Table 3

Park visitors from MN compared with the general MN population
(MN population data from the 2000 U.S. Census)

	Park visitors (percent)	MN population (percent)
<u>Region of origin</u>		
Northwest	9	8
Northeast	7	7
Central	13	12
Southwest	16	10
Southeast	13	9
Metro	<u>43</u>	<u>54</u>
Total percent	100	100
<u>Age</u>		
Children (<13)	27	19
Teens (13-18)	11	9
Adults (19-29)	7	15
Adults (30-39)	15	16
Adults (40-49)	20	16
Adults (50-59)	10	11
Adults (60+)	<u>10</u>	<u>16</u>
Total percent	100	100
<u>Gender</u>		
Male	47	50
Female	<u>53</u>	<u>51</u>
Total percent	100	100
<u>Race and ethnicity</u>		
White, Non-Hispanic	96	88
Non-white and/or Hispanic	<u>4</u>	<u>12</u>
Total percent	100	100
<u>Education (for people 25 years or older)</u>		
Some high school	1	12
High school graduate (includes equivalency)	11	29
Vocational/technical school, associate degree, or some college	32	32
Graduated from college	29	19
Some postgraduate study, including postgraduate degrees	<u>27</u>	<u>8</u>
Total percent	100	100
<u>Household income</u>		
Less than \$10,000	2	7
\$10,000 to \$19,999	3	11
\$20,000 to \$29,999	8	12
\$30,000 to \$39,999	14	12
\$40,000 to \$49,999	13	11
\$50,000 to \$74,999	29	22
\$75,000 to \$99,999	17	12
\$100,000 or more	<u>14</u>	<u>13</u>
Total percent	100	100

Source: Minnesota Department of Natural Resources. December 2002.

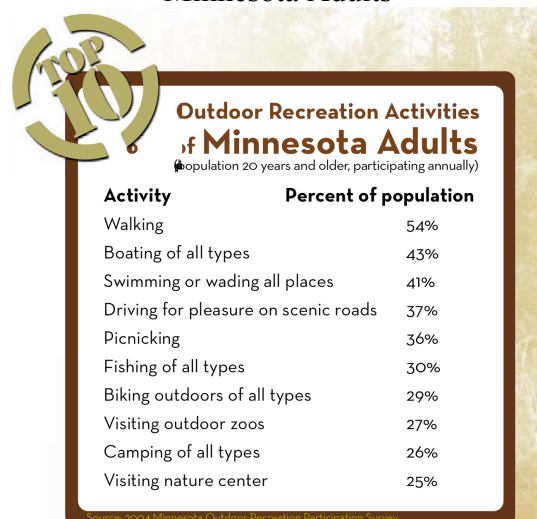
The survey also found that the leading activities were hiking, sightseeing and nature observation, with 76% of visitors and 86% of campers⁷ participating in at least one of these basic activities. Nearly 30 percent of all park visitors and nearly half of campers engage in some form of water recreation during their visit. The large majority of visitors reported they were “completely satisfied” with their visit (77% of visitors), with most of the rest indicating, “mostly satisfied”. Many of the most important items identified as needed for an enjoyable visit were natural landscape features, including “beauty of the park”, “a natural setting for the park”, and “lakes and rivers in the park”. A full 80% of visitors believe experiencing “natural scenery” is “very important” for an enjoyable visit and 86% felt this experience was “fully attained”. As in the survey about Minnesota’s lakes, similar attachments to legacy were identified when looking at Minnesota’s state parks. Visitors expressed a desire to pass on the parks to future generations. Over half of visitors (55%) “Strongly agreed” that “it is very important that my children and my children’s children will be able to visit this park.”

In 2004, the Minnesota DNR conducted a statewide survey of outdoor recreation participation. This survey was the first of the general population in roughly 20 years. Based on survey results, Minnesota has greater boating and fishing participation by its residents than any other state; 54% of Minnesota’s adults reported that they participated in walking as a recreation activity, while 43% engaged in boating, and 41% swimming and wading (Table 4). To maintain our current level of recreation access, an additional 15,000 acres of regional park and trail land will be needed in the metropolitan area alone to meet the needs of the growing population.

In the 2004 survey a majority (57%) of Minnesotans indicated that outdoor recreation is a “very important” part of their life and another 25% indicated that it is “moderately important.” Constraints to participating in outdoor recreation identified in surveys included lack of available leisure time, outdoor pests and insects, cost of travel and equipment, and lack of a companion with whom to share the experience.

⁷ Approximately 14% of visitors are campers.

Table 4
Outdoor Recreation Activities of
Minnesota Adults



Activity	Percent of population
Walking	54%
Boating of all types	43%
Swimming or wading all places	41%
Driving for pleasure on scenic roads	37%
Picnicking	36%
Fishing of all types	30%
Biking outdoors of all types	29%
Visiting outdoor zoos	27%
Camping of all types	26%
Visiting nature center	25%

Source: 2004 Minnesota Outdoor Recreation Participation Survey

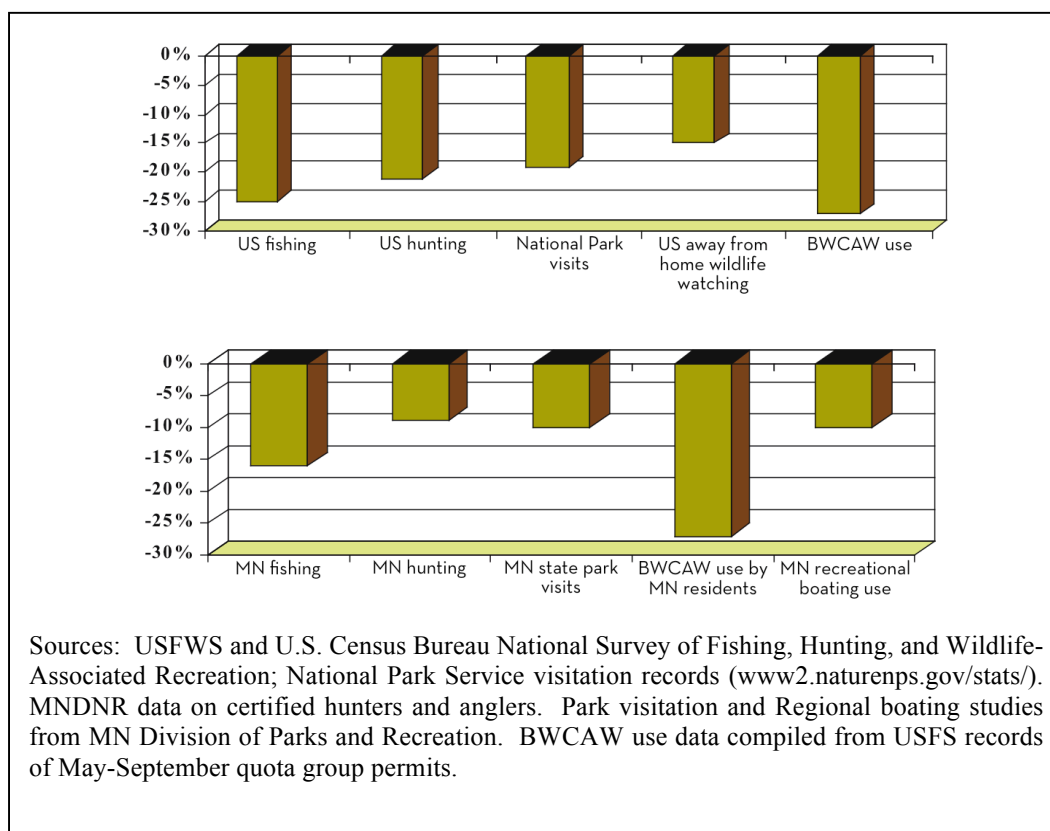
Top 10 outdoor recreation activities

Some of Minnesota's popular activities, like walking, are within a 30-minute drive of many participants' homes. Others, like driving and camping, are popular tourist activities. Minnesota has more boating and fishing participation than any other state.

*Source: Minnesota's State Comprehensive
Outdoor Recreation Plan, 2008-2012*

Despite the seemingly high level of outdoor recreation interests in Minnesota, findings for both Minnesota and the United States as a whole show a substantial decline in all areas over the period 1996-2006 (Figure 2). In all areas but one, the decline in outdoor activity was less severe in Minnesota than for the nation as a whole. Nonetheless, recorded reductions in recreational boating (-10 percent in Minnesota), fishing (-27 percent and -18 percent for the U.S. and Minnesota respectively), hunting (-23 and -11), national park/state park visits (-21 and -12), and visits to the Boundary Waters Canoe Area Wilderness (-29 and -30) may signal a fundamental change in the participation of Americans in nature-based recreation.

Figure 2
Indicators of U.S. and Minnesota Trends in Nature-Based Recreation, 1996-2006
(Per-capita change in number of participants or visitation/use)



Recent Statewide Information

In 2008, the *Minnesota Statewide Conservation and Preservation Plan*⁸ was completed. The process for completing this plan included a number of opportunities for public engagement. At public forums participants were invited to “vote” for the recommendations they felt were most critical to their region. At a forum held in southern Minnesota (City of Mankato), the top three recommendations related to Land and Aquatic Habitat were: 1) Restore land, wetland and wetland associated watersheds; 2) Protect priority land habitats; and 3) Improve understanding of groundwater resources. There was also strong support for the Land Use Practices recommendation to “support local and regional conservation-based community planning including planning for agricultural land.” Three other forums were held in western (Morris), north-central (Grand Rapids), and urban (St. Paul) areas of the state. A total of 99 people attended the events. At the forum in the western region the Land and Aquatic Habitat recommendation receiving the most votes was “restore and rehabilitate wetlands”; in Grand Rapids and St. Paul the recommendation to “improve connectivity of/access to outdoor recreation areas” was a top vote getter - ranking #1 in Grand Rapids and a close second in St. Paul. The top recommendation at the St. Paul forum was to “keep water on the landscape.”

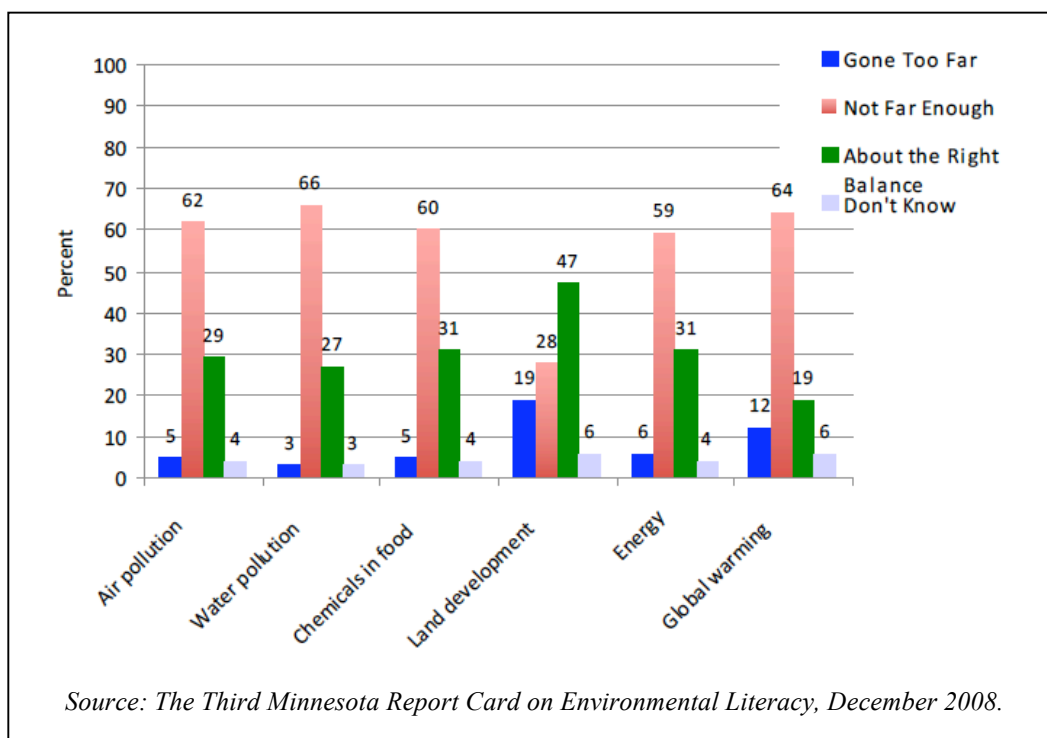
There were several forestry related recommendations that received a few votes in Grand Rapids (a more forested part of the state) but received zero votes in Morris or St. Paul. These recommendations included “support the use of fire to increase forest health and biodiversity”, “create deer exclusion pilot projects in every ecological subsection”, “promote collective/cooperative management of forestlands at the landscape level”, “assess and improve sustainable forestry best management practices”, and “establish state leadership on natural resources and land use”.

Also in 2008, the *Third Minnesota Report Card on Environmental Literacy*⁹ was released. The report provides the results of a statewide survey concerning the environmental knowledge of adults in Minnesota. The results show that approximately 43% of Minnesota adults met the survey’s definition of above-average environmental knowledge by correctly answering at least five of the eight general knowledge environmental questions. Participants were also asked about how much they felt they knew about five environmental topics: environmental problems, air pollution, energy issues, water quality and global warming. Overall 42 to 44% of respondents indicated they felt they were highly knowledgeable in each of the five areas. In terms of policy implications, the survey provides some evidence to suggest Minnesotans would support additional environmental laws and regulations for some topics, with the notable exception of land development. The figure on the following page (Figure 3) shows the survey results about the appropriateness of environmental laws and regulations for specific environmental topics.

⁸ http://www.lccmr.leg.mn/statewideconservationplan/SCPP_FinalPlan.html

⁹ http://www.seek.state.mn.us/eemn_b.cfm

Figure 3
Percentage of Minnesotans who think that the environmental laws and regulations for specific environmental topics have gone too far, have not gone far enough, and have struck about the right balance



Conclusions About Minnesotan's Natural Resource Priorities

Generally speaking it can be argued the Minnesotans have fairly clear environmental priorities, including strong interest in participation in outdoor recreation and solutions that address water quality concerns, including regulatory changes. Minnesotans also have fairly strong knowledge of environmental issues. However, despite frequent polling of Minnesota residents on environmental matters and the value this data provides, few questions have been directed specifically toward gaining an understanding of the public's perception and view regarding forests outside of parks and management of multiple use areas. The little indirect information that is available suggests a softening of support for extractive management.

From a wide range of sources, a few broad conclusions can be drawn:

- Minnesotans care about the access to and the quality of the state's lakes and rivers
- Minnesotans care about leaving a natural resource legacy for future generations
- Minnesotans are generally neutral to or satisfied with current forestry practices

The success of the recent constitutional amendment, for which the education and lobbying campaigns emphasized clean water and the need to support an environmental legacy, provides evidence for the validity of these conclusions.

Despite obvious broad support for sustaining our natural resources, it is less clear how forests, and the management of forests, are viewed by Minnesotans. What, for example, do Minnesotans really know about forestry issues and opportunities? How will Minnesotans react if significant forest policy or practice changes are proposed? What personal changes are Minnesotans willing to make to reduce environmental impacts? Can local forest-based economic development initiatives garner statewide support? Does the public understand the link between clean water and healthy forests?

While there has been considerable recent activity within the forest sector to examine forestry issues and opportunities and potential shifts in management policy and intensity, there has been little communication of these discussions to the public at large or formal efforts to gauge public opinion.

As noted above, relatively little is known about what Minnesota's know and think about forests and forestry practices in the state. If forestry advocates want to champion any significant policy changes and increase the odds of success, or at least be better able to anticipate the public reaction to a given proposal, some additional public polling and opinion surveys could be beneficial. This type of information gathering may be especially appropriate for site-specific issues (e.g., new wood fired power plant in a community). Additional data might also form a basis for building a stronger constituency by helping to identify more effective messages and those concerns that can be specifically addressed through public education and awareness building. One place to start may be in exploring the development of messages linking healthy forests and clean water resources and by responding to suggestions that timber harvesting is contributing to reduced water quality. There may also be an opportunity to expand efforts to develop messaging for specific segments of the population, including Minnesotans of diverse cultures, ages and education levels.

Research demonstrates that concerns and awareness about the environment generally follow a natural social change progression from isolated interest groups to researchers and academics and on to governmental attention and finally to mass media coverage and general public concern. With this trajectory in mind and with the advent of additional public information outlets such as the Internet, the opportunities to influence public opinion through information have become increasingly disparate and competitive. This abundance of information is perhaps contributing to the potential for conflict as more people know enough about an issue to form a strong opinion, but perhaps not enough to make a well informed decision. Creating some sense of shared understanding and purpose requires the development and support of a trusted constituency. It is also possible that the next opportunity to develop a constituency will arise with the next forest-based controversy.

The challenge (and opportunity) of building a constituency around environmental issues was well stated in the 1969 and 70s research from the University:

"If widespread support for environmental control measures is to be maintained, it appears that a great deal of informational and persuasive effort on the part of the community, regional and state leaders is necessary...[and] it would seem more realistic, frequently, to argue for environmental controls on other than economic grounds..."

Resources

Anderson, K. A., T. J. Kelly, R. M. Sushak, C. A. Hagley, D. A. Jensen, G. M. Kreag. 1999. Summary report with tables of survey responses on public perceptions of the impacts, use, and future of Minnesota lakes: Results of the 1998 Minnesota lakes survey. A joint publication by the University of Minnesota Sea Grant Program (SH 2) and Minnesota Department of Natural Resources, Office of Management and Budget Services. 89 pp.

http://files.dnr.state.mn.us/aboutdnr/reports/lake_perceptions98.pdf

American Association of Retired Persons (AARP) Bulletin Survey on Environmental Issues. Executive Summary. April 2008.

http://assets.aarp.org/rgcenter/general/bulletin_going_green.pdf

GfK Roper Yale Survey on Environmental Issues. Summer, 2008: Consumer Attitudes Toward Environmentally-Friendly Products and Eco-labeling.

<http://environment.research.yale.edu/documents/downloads/a-g/GfK-Roper-Yale-Survey.pdf>

Jacobs, L.R. and J.M. Miller. 2008. Minnesota Public Radio News and Humphrey Institute Poll. Obama Leads But Race Remains Fluid with Possible McCain Lift from Choosing Pawlenty. Center for the Study of Politics and Governance. Humphrey Institute of Public Affairs. University of Minnesota.

http://www.hhh.umn.edu/centers/cspg/pdf/HHH_MPR_August_President.pdf

Minnesota's 2008-2012 State Comprehensive Outdoor Recreation Plan. Adapting to Change. SCORP Advisory Group.

http://files.dnr.state.mn.us/aboutdnr/reports/scorp_final_3308.pdf

Minnesota Department of Natural Resources. July 2000. State Trail Use. Summary of Summer Trail Use and User Surveys Conducted in 1996, 1997, and 1998. Trails and Waterways Division & Office of Management and Budget Services.

<http://files.dnr.state.mn.us/aboutdnr/reports/trails/trailuse.pdf>

Minnesota Department of Natural Resources. December 2002. 2001 Minnesota State Park Visitor Survey Summary Report. Office of Management and Budget Services.

http://files.dnr.state.mn.us/aboutdnr/reports/parks/parkvisit_summary.pdf

Minnesota Department of Natural Resources. June 2000. Awareness and Satisfaction Survey Results. DNR- Bureau of Information, Education and Licensing.

http://files.dnr.state.mn.us/aboutdnr/reports/awareness_satisfaction.pdf

Minnesota Statewide Conservation and Preservation Plan. Revised November 1, 2008. University of Minnesota and the Legislative-Citizen Commission on Minnesota Resources.

<http://www.seek.state.mn.us/publications/reportcard2008.pdf>

The Third Minnesota Report Card on Environmental Literacy – a survey of adult environmental knowledge, attitudes and behavior. December 2008. The College of St. Catherine and the Minnesota Pollution Control Agency.

<http://www.seek.state.mn.us/publications/reportcard2008.pdf>

Tichenor, P.J., Donohue, G.A., Olien, C.N., and Bowers, J.K. 1972. Environment and Public Opinion in Minnesota. University of Minnesota. Institute of Agriculture. Department of Sociology. St. Paul, Minnesota.

<http://eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED060412>

USA Election Polls. Democrat Polls. Survey USA Poll 1/21/08. (Accessed 2 March 2009).

<http://www.usaelectionpolls.com/2008/polls/Minnesota-Obama-McCain-January-2008.html>

Washington County Community Health Assessment 2008. Water Quality.

http://www.co.washington.mn.us/client_files/documents/phe/PHE-08CHA_Water.pdf

Welle, P. G. June 2001. Multiple Benefits from Agriculture: A Survey of Public Values in Minnesota. Legislative Commission on Minnesota Resources, USDA SARE, Bemidji State University.

http://www.foodroutes.org/doclib/18/contingent_valuation_report.pdf

This report was prepared by
DOVETAIL PARTNERS, INC.

Dovetail Partners is a 501(c)(3) nonprofit organization that provides authoritative information about the impacts and trade-offs of environmental decisions, including consumption choices, land use, and policy alternatives.

FOR MORE INFORMATION OR TO REQUEST
ADDITIONAL COPIES OF THIS REPORT,
CONTACT US AT:

INFO@DOVETAILINC.ORG

WWW.DOVETAILINC.ORG

612-333-0430

© 2009 Dovetail Partners, Inc.

This Dovetail Report is made possible through the generous support of the Blandin Foundation and its Vital Forests/Vital Communities Initiative. For more information, visit <http://www.blandinfoundation.org/>.



DOVETAIL PARTNERS, INC.

528 Hennepin Ave, Suite 202

Minneapolis, MN 55403

Phone: 612-333-0430

Fax: 612-333-0432

www.dovetailinc.org