

Missouri's 1994 Conservation Monitor: Taking the Public's Pulse

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Abstract: The Conservation Monitor was a telephone survey of 854 Missourians first conducted in 1994 by the Gallup Organization for the Missouri Department of Conservation (MDC). Objectives were to assess Missourians' opinions on the state's environment, MDC's performance, and conservation issues. Results revealed high satisfaction among Missourians with the care given their state's fish, forests, and wildlife, and more generally with the care given Missouri's natural environment. However, 28% did not know or were incorrect about MDC's responsibilities, and 40% were unable to suggest one thing the agency might do better. Missourians thought a much larger portion of the state is in public ownership than is true and perhaps assume that state and federal resource agencies in Missouri are in a stronger position to influence land management than is the case. The Conservation Monitor was repeated in 1995 and scheduled again for 1996 using the same questions to track public opinion on conservation issues.

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The Missouri Department of Conservation (MDC) prepares a strategic or long-range plan every 5 years to guide its forest, fish, and wildlife programs (Mo. Dep. Conserv. 1994). The plan outlines broad conservation objectives for Missouri and constitutes a foundation on which all of MDC's 7 divisions build their 5-year operational plans.

Accountability to the general public is a focal purpose of strategic and operational planning. MDC's 1994 budget was approximately \$100 million or \$19.23 per capita for Missouri's 5.2 million citizens (Mo. Dep. Conserv. 1995a). About \$64 million (64%) was from a one-eighth percent (0.125%) sales tax earmarked for MDC, with most of the balance from fishing and hunting license receipts and federal aid. Since its start in 1977, the conservation sales tax has generated about \$850 million for fish, forests, and wildlife in Missouri. Significant general revenue allows MDC to provide not only fishing and hunting opportunities desired by the citizenry, but conservation services of uncustomary breadth and depth (Mitchell 1980, Mo. Dep. Conserv. 1995a).

Citizen interests in fish, forest, and wildlife management help shape MDC's

strategic and operational plans (Witter et al. 1993) and come from mail and telephone polls, surveys at management areas and interpretive centers, participant observer research, public meetings, focus groups, and a toll-free telephone comment line. Citizen input helps MDC's administrators and program managers understand Missouri's market for conservation services and is used in program development and evaluation (Thorne et al. 1993).

The MDC commissioned a telephone survey of Missouri's general citizenry as part of strategic and operational planning for 1995–1999. The study was first conducted in June 1994, repeated in 1995, and scheduled again for 1996; thus its title, *Conservation Monitor*.

Methods

Content for the *Conservation Monitor* was prompted by strategic conservation issues in Missouri such as citizens' outdoor interests, perceptions of environmental quality, evaluation of MDC's performance, and opinions of selected management practices including hunting, trapping, timber harvest, and habitat restoration. The Gallup Organization was contracted to help MDC with the *Conservation Monitor*, refining questions proposed by MDC and administering the telephone survey.

A sample of 854 Missouri adults, 18 years of age and older, was stratified by gender and state region. Subjects were selected by random-digit-dialing and contacted by multiple-callbacks, in which up to 3 callbacks were made to the same number to eliminate bias favoring those easy to reach by telephone. At the 95% confidence level, the maximum expected error range for a sample of 854 respondents was $\pm 4\%$.

1994 Results

Respondent Profile and Outdoor Interests

The stereotypical respondent was middle-aged, married, white, with some college or vocational training, and an average household income of \$41,740 (SD = \$26,280). Household size averaged 2.8 people (SD = 1.5) and an average 0.9 child (SD = 1.2). Sample distributions by gender, age, education, income, and race approximated Missouri's population. A slight majority (55%) said they currently resided in the country or a small town, and even more (62%) said they grew up in such areas. Twenty percent grew up in a suburban area close to a large city, with 28% currently residing in suburbs. Eighteen percent grew up in urban areas, with 17% presently urbanites.

Forty-two percent said "yes" to "Do you or anyone in your household own rural land in Missouri." Of these, nearly all (84%) said these rural lands were used for outdoor recreation like walking or watching wildlife. About half (56%) hunted on these rural lands or allowed others to hunt. Sixty-nine percent of these private rural properties contained a pond or small lake. Three-quarters of these ponds were used for fishing by the owners or others.

Respondents named the outdoor activities they most enjoyed. Fishing (20%) was cited most. Sixty-one other activities were mentioned, from cookouts to porch-sitting to farming. Activities mentioned by 5% or more were camping (10%), gardening (10%), hunting (7%), hiking (7%), boating (5%), walking (5%), and swimming (5%). Four percent said they did not enjoy outdoor activities.

Subjects described the biggest obstacles to their households' enjoyment of outdoor recreation. Eighty-four different deterrents were identified, from bugs and ticks to the state's humidity to busy family schedules. A plurality said lack of time (38%) was a deterrent, with 12% saying lack of nearby areas or opportunities. Despite these obstacles, 82% agreed with the statement, "In your family, outdoor traditions like fishing, hunting, or other outdoor skills are being passed along."

Respondents indicated how much conservation information they received (lots, some, or none) from each of 9 possible sources. The most frequent source for "lots" of conservation information was the *Missouri Conservationist* magazine (27%). Other sources providing "lots" of information were visits to MDC nature centers or other offices (15%), Missouri Outdoors television show (14%), MDC's fishing report in newspapers or on the radio (13%), television news (11%), MDC materials children get in schools (10%), local newspapers (10%), radio (6%), and videotapes (5%). Eighty-seven percent agreed with the statement, "If you want information about Missouri's fish, forests, and wildlife, you know where to get it."

Perceptions of Environmental Quality

Thirty-seven percent of respondents classified themselves "environmentalists." An additional 33% called themselves "strong environmentalists," 27% said they were "not environmentalists," and 3% were unsure.

Citizens' perceptions of Missouri's environmental quality were evaluated relative to other social concerns. Respondents expressed satisfaction or dissatisfaction with each of 8 aspects of life in Missouri today. More Missourians (82%) were satisfied with "the way Missouri takes care of its fish, forests, and wildlife" than with any of the other 7 aspects. Satisfaction was consistently high among environmentalists (83%), strong environmentalists (82%), and non-environmentalists (81%).

Most were satisfied with the way Missouri takes care of its environment, state

Table 1. Missourians' satisfaction with specific aspects of life in the state at the time of the 1996 Conservation Monitor Survey.

Life in Missouri	% Satisfied	% Dissatisfied	% Don't know
The way Missouri takes care of its forests, fish, and wildlife	82	9	9
The way Missouri takes care of its environment	69	22	9
State of the Missouri family	61	27	12
Quality of education in Missouri	58	33	9
State of the Missouri economy	58	34	8
Opportunities for Missouri's next generation	48	44	8
Missouri's success in caring for its poor and needy	46	42	12
How safe Missouri citizens feel from crime	43	50	7

of the Missouri family, quality of education, and state of Missouri's economy. Fewer respondents were satisfied with the opportunity for the next generation of Missourians to live better than their parents, the success of Missouri in caring for its poor and needy, and keeping Missourians safe from crime. Degree of satisfaction varied only slightly among environmentalists, strong environmentalists, and non-environmentalists.

MDC's Performance

Subjects were asked what first came to mind when they thought of MDC. This request was early in the interview, and not prefaced by any cues about MDC's responsibilities, except an introductory remark by the interviewer that the survey dealt with the respondent's outdoor interests. Eighteen percent said "don't know," and 10% gave answers unrelated to MDC's fish, forest, and wildlife mandate. Nineteen percent mentioned "wildlife." Another 19% said "fishing," "fish stocking," "lake management," or other water-oriented words. Still another 19% said "game wardens," "law enforcement," "catching poachers," "hunter education," or answers about regulation or education. Fifteen percent mentioned "park management," "forests," or related land management terms.

Respondents completed the thought, "One thing I wish the Department of Conservation would do to better serve Missourians is . . .". About 40% were unable to answer. Among suggestions were providing more public lands, better land management or more education, and cleaning up water pollution, with other answers ranging widely from scheduling a longer deer season to reducing regulations to stopping timber harvest.

Respondents were asked whether MDC was doing an excellent, good, fair, or poor job for "you and your family," "your community," and "the state of Missouri." Respondents rated service to "family," "community," and "state" in near equal percentages, with about half rating MDC's performance "good," an additional 15% "excellent," about 25% "fair," and few saying "poor." Respondents who said they lived in the country were more likely to evaluate MDC's performance as "excellent" (23%) for "you and your family" than those in town and suburban settings (16%), and much more so than urban Missourians (7%). Respondents who called themselves "environmentalists" were more likely to say MDC was doing an excellent job (20%) for their families than non-environmentalists (9%). Seventy-eight percent of respondents agreed with the summary statement, "Missouri is making good progress in protecting its wild animal and plant species."

Opinions on resource harvest and land management.

Five different motives for hunting were presented to respondents for their approval or disapproval. Nearly all approved of hunting for food (88%), with majorities approving of hunting to be with friends and family (59%), to experience Missouri traditions and folkways (59%), and for the experience of being outdoors (56%). Less than a majority (44%) approved of hunting for "an exceptional animal, like a deer that is older, larger, and has bigger antlers."

Over two-thirds (69%) agreed with the statement, "Trapping is okay as long as

it is regulated.” Support for regulated trapping was stronger among males (78%) than females (61%) and country dwellers (79%) than urbanites (56%), but support varied only slightly by region of the state, education, and whether or not respondents classified themselves as environmentalists.

A bare majority (53%) approved of “cutting trees in Missouri to make lumber, furniture, and other wood products.” Approval of timber harvest was higher for males (63%) than females (44%), white Missourians (55%) than minority Missourians (26%), “non-environmentalists” (64%) than “environmentalists” (48%), and those approving of hunting for food (55%) than disapproving (35%). Seventy-eight percent agreed that “the amount of forested land in Missouri is shrinking.” This perception was especially high in suburban dwellers (87%) and those who disapproved of cutting Missouri trees for wood products (87%).

Habitat and wildlife restoration, or what might be called biodiversity initiatives, were supported by Missourians. Seventy-seven percent agreed that MDC “. . . should make an effort to restore animals that once lived or currently are very rare in Missouri, for example, the black bear.” Only 23% agreed that “Missouri’s wetlands and marsh areas should be drained for better uses.” Eighty-nine percent agreed, “It is important to re-establish Missouri prairies where we can,” but only 33% agreed that using fire to manage forests and prairies was a good idea.

Missourians generally supported strategies for biodiversity, but were unfamiliar with the actual word; only 30% agreed with the statement, “You understand what the term biodiversity means.” Equally unfamiliar was the ownership distribution of public and private land in Missouri. Thirty-nine percent agreed with and 32% said “don’t know” to “about half of Missouri land is owned by public agencies,” whereas actual public ownership totals 7%.

Management Implications

The 1994 Conservation Monitor revealed high satisfaction among Missourians with the care given their state’s fish, forests, and wildlife, and more generally with the care given Missouri’s natural environment. State voters played a unique role in underwriting environmental quality through the 0.125% conservation sales tax and through an equally unusual 0.10% sales tax earmarked for park programs and soil conservation administered by the Missouri Department of Natural Resources (Anon. 1995). Both taxes were initiated by citizen petitions and approved by a majority vote of Missourians. Citizens justifiably hold high expectations for conservation of the state’s natural integrity.

Not so encouraging was the 28% who did not know or who were incorrect about MDC’s responsibilities, and the 40% lacking enough understanding to suggest one thing MDC might do better. A strategic goal for MDC is to reduce the proportion of the citizenry with no knowledge of the organization. Because all Missourians help underwrite MDC programs, all should have the opportunity to experience conservation benefits. At the operational level, a powerful tool for achieving wider recognition

of conservation is the *Missouri Conservationist* magazine, the source of "lots" of conservation information for most Missourians. The magazine is free to Missouri adults requesting it and is sent to about 400,000 (21%) of Missouri's 1.9 million households. An informational strategy under consideration is a one-time mailing of the magazine to every Missouri household, with opportunity for recipients to subscribe. Another strategy used a magazine mailing directed at African-American Missourians (Witter et al. 1993). The MDC's 4 nature centers in St. Louis, Kansas City, Springfield, and Jefferson City—the second most common source of "lots" of conservation information—also play an innovative role in MDC's strategic and operational initiatives to reach Missourians (Mo. Dep. Conserv. 1992a; Wallace and Witter 1991).

Admittedly, there is a group to which MDC's services may never appeal. The 1994 *Conservation Monitor* indicated 4% of respondents were simply uninterested in outdoor activities. An earlier survey of Missouri's general public (Witter 1992) suggested that 20% of Missourians were uninterested in MDC's services. However, an MDC commitment to serve Missourians beyond the traditional and familiar is prerequisite to a vigorous and innovative conservation program.

The 8 favorite outdoor activities named most often by Missourians in the *Conservation Monitor* include 7 that MDC can accent in operational plans: fishing; camping; gardening, by distributing information on butterfly gardens, wildlife plantings, and by annually distributing over 4 million tree seedlings for farm and residential plantings; hunting; hiking; boating, in support of fishing; and walking. Swimming, the eighth activity, is deemed outside MDC's constitutional mandate for fish, forest, and wildlife management, and usually is not authorized at MDC areas.

The MDC must accentuate its long-standing strategic goal of providing recreational opportunity close to Missouri urban and suburban population because lack of time and nearby areas were the most cited obstacles to Missourians' outdoor enjoyment. The *Conservation Monitor* supported findings of the 1990 decennial census that the proportion of Missourians in suburban areas and rural areas within commuting distance of metro centers is growing (Hobbs and Cleveland 1992). Urban and suburban growth often is accompanied by declines in resource values and isolation of residents from sources of natural production (Witter 1990). But opportunities are great for MDC's urban biologists to help suburbanites invite wildlife to their backyards, assist with community tree programs, manage fisheries resources in subdivision lakes, and even suggest how deer hunts might be held in closely monitored situations, assuming citizen demand exists for special hunts.

That 80% of Missourians approved of hunting for food confirms previous work in Missouri (Witter 1992). However, the *Conservation Monitor* revealed that support for hunting dropped to smaller majorities when the motives for the activity were camaraderie and tradition. Hunting for an exceptional animal, an idea perhaps more palatable to some citizens than the stark image of "trophy hunting," lacked majority support. The MDC must explain to Missouri hunters that hunting enjoys broad public tolerance, but tolerance decreases substantially if Missourians perceive that hunters are motivated for reasons that do not emphasize the quarry as food.

Nearly two-thirds of Missourians called trapping "okay" as long as it was regulated, contrasting to an earlier finding (Witter 1992) that less than a majority (42%) of Missouri adults approved of trapping. Missourians apparently trust MDC in wildlife issues and expect the agency to implement sensible and humane regulations. The MDC's governing board, the Conservation Commission, recently formalized its commitment to humane use of the state's living resources by adopting position statements on humane treatment of fish and wildlife, and on harvest of fish, forests, and wildlife (Mo. Dep. Conserv. 1992*b*).

Forest management is a mandate uncommon to fish and wildlife organizations—or fish and wildlife management is a mandate uncommon to forest agencies, depending on one's perspective (Gordon 1995). But time has proven the effectiveness of this constitutional combination of resource responsibilities in Missouri. The Conservation Monitor revealed that Missourians thought the state's forested acreage is shrinking. Recent inventories (Spencer et al. 1992) showed Missouri's forested acreage increased 8% (1.1 million acres) between 1972 and 1989 with forest land now accounting for 32% (14.0 million acres) of the state's 44 million. Only half of respondents supported cutting Missouri's timber for wood products, mirroring Americans' divided opinion about timber harvest on National Forests (Clark 1995). And only one-third of Missourians endorsed fire for forest and prairie management, likely evidencing the persuasiveness of the U.S. Forest Service's 50-year-old icon, Smokey, and his message, "Only you can prevent forest fires" (Ronk 1994). So too, a majority of Americans believe that all wildfires should be extinguished to preserve as much forest as possible (Clark 1995).

Setting of wildfires, over-harvest of timber, and associated losses of soil and wildlife were common in Missouri until the turn of the 20th-century (Palmer 1991). The MDC is using its informational and educational media to allay citizens' anxieties about the amount of forest in Missouri, inform them of the ecological benefits of controlled burns, and alert them to new management challenges, like Asian and European gypsy moths, the forest defoliators common in the eastern United States but only now arriving in Missouri (Mo. Dep. Conserv. 1994).

Many Missourians think a much larger portion of the state is in public ownership than is true and perhaps assume that state and federal resource agencies in Missouri are in a stronger position to influence land management than is the case. Because a relatively small part of Missouri is publicly owned (7%), efforts at landscape-level or ecosystem management in Missouri must be based on partnerships between the public and private sectors. The MDC is developing regional land management priorities with a 10-year horizon for each of 10 MDC administrative regions into which Missouri has been divided. These priorities are called Regional Management Guidelines (RMGs) and seek to build partnerships among private, local, state, and federal management entities to support landscape-level conservation. The RMGs rank among the most effective mechanisms for incorporating social research like the Conservation Monitor into resource planning.

Concluding Remarks

The Gallup Organization repeated the Conservation Monitor for MDC in 1995 ($N = 851$) and will conduct the survey again in 1996 using the same questions to track citizen opinions (Mo. Dep. Conserv. 1995*b*). Few differences were observed between the 1994 and 1995 survey findings, suggesting that public sentiment on most conservation topics is not as volatile as opinion on political candidates or fractious current events. However, public approval of cutting trees in Missouri to make lumber, furniture, and other wood products dropped from 53% in 1994 to 47% in 1995, providing example of one resource issue over which the public pulse may fluctuate more observably in the short term.

An inscription inside the dome of the Missouri state capitol reads, "As the structure of government gives force to public opinion, it is essential that public opinion be enlightened in proportion." The Conservation Monitor helped MDC establish benchmarks on public enlightenment and expectations regarding the state's fish, forests, and wildlife. Repeating the Conservation Monitor in coming years will help MDC track public sentiment and respond with public service.

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