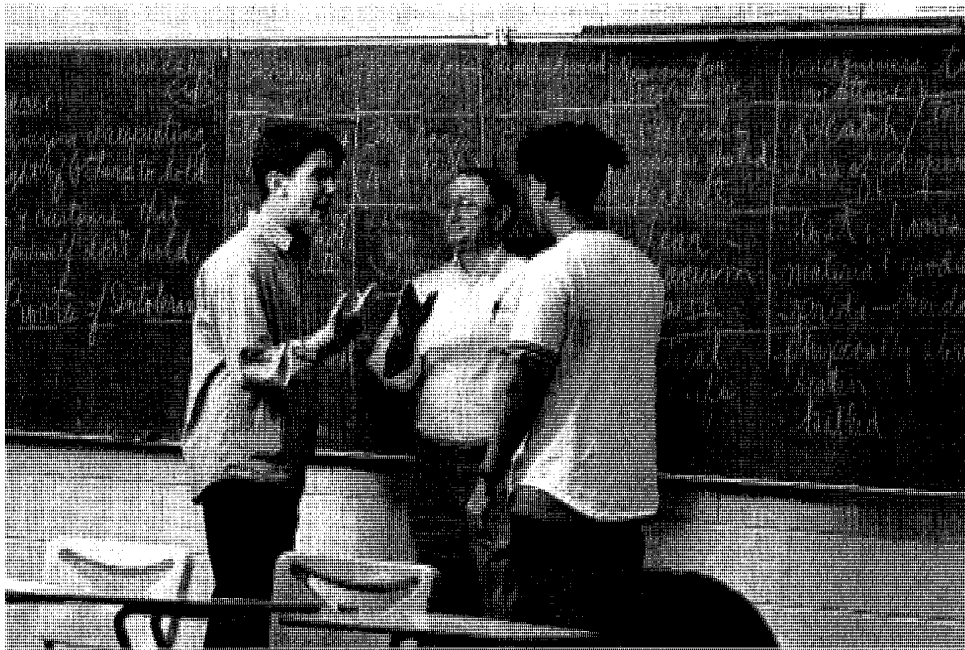


## Teaching Political Tolerance in Junior High

by Patricia Avery and John L. Sullivan with Karen Bird, Sandra Healy, and Kris Thalhammer



Clearly the American civil liberties record has deep flaws in it, especially in social and racial justice and toleration of radical political expression, and clearly the record is not as pristine as American ideals are. Yet it must also be remembered that the record would probably not be as good as it is if American ideals were not so high, for they act as a constant standard and constant challenge.

— Robert Justin Goldstein, political scientist

There is a deep and abiding paradox in the American civil liberties record. On the one hand, we enjoy some of the widest and deepest legal protections for our civil rights and liberties accorded citizens anywhere in the world. On the other hand, we have often indulged in profound abrogations of these rights and liberties for substantial segments of our society. This has included the internment of Japanese-Americans during World War II and the well-documented abuses of the McCarthy era, to name only two.

More recently, incidents of racial, ethnic, and political intolerance have increased dramatically in our society and on our college campuses. According to the Anti-Defamation League, anti-Semitic incidents rose almost 12 percent last year. During the Gulf War, Marco Lokar, an Italian who was on the Seton Hall basketball team in New York, left the country rather than face continued harassment from Americans displeased with his refusal—on religious grounds—to wear an American flag on his uniform. According to the National Gay and Lesbian Task Force, anti-gay violence is up in six major cities. And, on college campuses, conservatives charge that liberals' "politically correct" views on issues such as abortion and affirmative action dominate campus life. Michigan and Stanford, among others, have adopted codes intended to restrict certain types of speech on campus. At Michigan, the code was used against minorities' speech, but not against whites.

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The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.

A climate of intolerance for diversity of belief is being recreated in the United States. What explains this record, and how might it be improved? The research described here addresses both questions and describes a curriculum that we have been using to teach tolerance.

The quote from Goldstein suggests that one key to understanding and addressing issues of political tolerance lies in understanding and implementing more fully American democratic ideals. The American public's overwhelming support for these ideals has been well-documented. For example, when asked if they believe in free speech for everyone, about 97 percent of Americans will say yes. Similar levels of support are evidenced for abstractions such as minority rights. Americans profess a strong belief in the major premises underlying the Bill of Rights.

Yet, studies show dishearteningly little support for the impartial application of these principles to groups that express unpopular ideas. The disjunction between abstract principles and their application to real situations helps explain our historical record. It may also offer clues about how we might increase citizens' support for civil liberties.

### **Civics Instruction and Political Tolerance**

While democratic political principles are taught, they are taught as slogans rather than as applications....Children are not taught to apply these principles to actual situations. As a result...the typical American adult is not very supportive of specific applications of democratic principles....

— Michael Corbett, political scientist

One potential avenue for increasing a commitment to civil liberties for all persons, including those who espouse unpopular ideas, is through civics instruction in public secondary schools. Yet, in a recent review of the role of the school in political socialization, Michael Corbett concluded that courses in civics—as currently constituted—are not terribly effective in developing actual support for the civil liberties of unpopular groups.

Although a firm belief in democratic norms such as freedom of expression does not guarantee actual tolerance of unpopular groups and ideas, the opening quote from Goldstein suggests—and there is evidence to support his claim—that it does increase the likelihood of tolerance. This is particularly true when democratic principles are specifically connected with legal protections such as the Bill of Rights and its associated guarantees. Traditional civics curricula, however, do not often connect principles with practice. Our project was designed to discover whether or not a

new curriculum could alter the status quo. Can students learn strategies that will connect principles and norms to the practice of civil liberties? Can one of the most confirmed findings of research on tolerance—abstract tolerance, concrete intolerance—be changed? Is it possible to improve the levels of tolerance among students through well-designed curriculum materials that make the appropriate connections between principles and practice?

### **The Tolerance Curriculum, Pretest Schools, and Teachers**

Students receive inaccurate and dangerously misleading accounts of American history, which encourage complacency and discourage political participation and, particularly, dissent....Most conflict has been edited out of history textbooks in order to avoid affronting any group involved in textbook selection....The pattern of omission threatens the tolerance for disagreement that is fundamental to democracy....Denied exposure to struggle and debate, [students] are likely to view dissent as alarmism, disloyalty, or bad manners, and to be ill-prepared to value civil liberties.

— Stephen Gottlieb, lawyer

Most recent reviews of civics curricula and texts note that they emphasize isolated bits of information about government institutions and processes, while providing no in-depth examinations of key constitutional issues. As Gottlieb has noted, in an effort to avoid potential controversy, most textbook publishers give issues of civil liberties and tolerance only superficial coverage.

Our four-week curriculum unit—"Tolerance for Diversity of Belief"—is designed to engage junior high students in actively exploring issues associated with freedom of belief and expression. Unlike many instructional materials, the lessons have been shaped by theory and research. Particularly, we have attempted to respond to the weight of research suggesting that when people understand how the abstract principles of freedom of speech and minority rights are embedded in a system of legal protection and rights, they are more likely to exhibit tolerant attitudes under duress.

Throughout the curriculum, students systematically examine the ways in which the legal and constitutional framework of our society directly embodies the norms of freedom of speech and minority rights. Students analyze the legal protections that have been given to unpopular groups at the national level and the parallel principles that are embodied in the Universal Declaration of Human Rights at the international level. Case studies, role playing, simulations, and mock interviews are used throughout the

curriculum to examine the historical, psychological, and sociological dimensions of tolerance and intolerance. Specifically, information from psychological studies helps students understand why some individuals are particularly intolerant of beliefs that differ from their own. Descriptions of the Holocaust, the Cultural Revolution in China, and the internment of Japanese-Americans in the United States during World War II direct students' attention toward the short- and long-term consequences of intolerance for the victim, the perpetrator, and society.

Students consider both the rights and responsibilities associated with freedom of expression. For example, if one strongly disagrees with the beliefs of the Ku Klux Klan, does one have both a right and a responsibility to express disagreement? What rights and responsibilities do members of unpopular groups have? A series of vignettes encourages students to decide for themselves what limits, if any, should be placed on freedom of expression in a democratic society. Questions guide students toward differentiating between acknowledging an unpopular group's civil liberties and approving of the group's message, between beliefs that are abhorrent to the majority and behaviors that are violent and harmful. Our curriculum does not, however, provide "right" answers; instead, lessons pose questions that should be challenging to both tolerant and intolerant viewpoints.

The curriculum was originally pretested in 1990 on a population of 271 junior high students attending three public junior high schools in the state of Minnesota. At the sole urban school (School A), four classes of eighth graders (a total of 90 students) were taught the curriculum. At the two rural schools (B and C) a total of nine classes of ninth graders also completed the curriculum (a total of 181 students).

With the support of CURA, the curriculum was revised in the summer of 1990 based on feedback from students and teachers, as well as quantitative analysis of test results. During 1991, it was tested again on 342 students from schools B and C, and ninth graders in a different urban school (School D).

School A is located in a central, urban neighborhood in Minneapolis. Of the students who participated in the study, 57 percent were people of color. The second and third junior high schools (Schools B and C) are located in a city of 11,000 approximately thirty miles outside Minneapolis. These two rural schools are racially homogeneous. School D is located in a diverse urban Minneapolis neighborhood, and 46 percent of the students who participated in the study were people of color.

Students completed at least two surveys: one at the onset of the four-week session on tolerance and the other immediately after completing the curriculum. In addition to the closed-ended questions, the surveys included open-ended questions

**Cover photo: Debate is an integral part of the pilot Tolerance Curriculum Project. In their ninth grade civics class at Minneapolis South High, students Ben McCoy and Erik Gieson-Fields argue their side of an issue while teacher David Martin mediates.**



As members of the United States Supreme Court, Brett Stately, Katie Schoenrock, and Roman Cress are deciding the outcome of *Tinker vs. Des Moines Independent School District*. In 1965 Des Moines high school students wore armbands to protest the Vietnam War. The school district forbade the wearing of armbands and the case was appealed to the Supreme Court. In the tolerance curriculum, students make their own decisions about the case before they learn what the court's decision was in 1965.

that allowed students to explain some of their responses. Some students were also personally interviewed by our staff both before and after they studied the curriculum. The responses to these surveys and interviews offer important insights into the adolescents' levels of tolerance and how they were affected by their four-week exposure to the ideas in the curriculum.

### Curriculum Effects on Political Tolerance

The variable of most interest in this analysis is political tolerance. We take the view that individuals can not be "tolerant" of those of whom they approve; by our definition, tolerance requires that a person exercise some level of forbearance. For example, if one is a member of a pro-choice group, or sympathetic toward their views, then one cannot be "tolerant" of the group. Tolerance is, rather, the willingness to acknowledge and support the civil liberties of those with whom one disagrees.

In order to assess tolerance, we asked students to express any dislike they felt toward a number of potentially unpopular political groups from both the left and the right (peace activists, pro-life groups, pro-choice groups, American Communists, and Nazis, for example). Students were then asked to specify the group they liked the least.

Once students had specified a group, each student was asked six questions concerning the rights that should be extended to his or her least-liked group. The following items compose the tolerance scale (we will use pro-choice activists as an example):

1. [Pro-choice activists] should not be able to run for president or other elected office.
2. [Pro-choice activists] should be allowed to teach in public schools.
3. [Pro-choice activists] should be outlawed.
4. [Pro-choice activists] should be allowed to make a public speech.

5. The government should be able to tap the phones of [pro-choice activists].

6. [Pro-choice activists] should be able to hold public demonstrations or rallies.

Each tolerance question had five possible responses, from strongly agree to strongly disagree. The most tolerant response was assigned a 5 and the least tolerant response a 1. The tolerance scale therefore ranges in value from 6 to 30.

Variables that might affect students' levels of tolerance were also measured. Demographic variables were assessed, such as race, gender, perceived socio-economic status, grades (from student self-report), religion and religious attendance. Personal attitudes and characteristics were measured, such as level of perceived threat of the least-liked group; self-esteem and generalized empathy; and support for democratic norms and values in the abstract. We also assessed how much students enjoyed the curriculum, and tested how much they learned from it.

One important issue is whether students displayed increased levels of political tolerance after studying the curriculum. Contrary to the finding that civics curricula in general have few measurable effects and do not affect adolescents' levels of tolerance, our curriculum does seem to increase students' levels of tolerance toward unpopular political groups.

Comparison of pretest and posttest scores indicates a statistically significant increase in levels of political tolerance among students both in 1990 ( $p < .0001$ )\* and 1991 ( $p < .0001$ )\*. Average tolerance scores increased in 1990 from 15.35 on the pretest to 18.06 on the posttest; in 1991, the scores increased from 15.48 to 17.89.\*\* In 1991 we also included a control group, whose scores did not show a statistically significant increase between pre- and posttest. The lack of change in the control group indicates that change in the experimental groups could be due to the curriculum, rather than reflecting naturally occurring changes among adolescents in this age group.

What changes, then, occurred due to the curriculum? A possibility—one we hoped did not occur—is that students who study this curriculum learn that the groups they dislike should in fact be liked. By decreasing negative affect toward these groups, the curriculum could enhance tolerance indirectly. Recalling the nature of many disliked political groups in our society—the Ku Klux Klan and the Nazis, for instance—we would view such an outcome with dismay. Even with groups we ourselves feel more positively about, it

\* There is less than a 1 in 1,000 probability that the change was due to chance.

\*\* These are average increases in tolerance. Some students increased much more than others, and in fact, some students' scores decreased significantly, bringing down the overall average. We have more to say in the text about the types of students whose tolerance decreased.

would be unfortunate if the major effect of the curriculum were to teach students to drop their own prejudices and adopt ours. Given our understanding of tolerance, we hoped that the curriculum would instead teach students to be tolerant given that they dislike a particular group.

In examining the predictors of increased levels of tolerance, we found ample support for the conclusion that the curriculum could in fact be given the lion's share of the credit for the changes that occurred. Increases in tolerance can, it appears, be attributed to features of the curriculum that explicitly teach an increased ability to show forbearance in the face of threat—forbearance that seems to have been obtained from studying and discussing the tolerance curriculum. Evidence for this conclusion comes from findings about the importance of curriculum knowledge, the changing role of threat perceptions, the impact of gender, and changes in the language and content of students' answers to open-ended questions about their least-liked group's right to hold a public demonstration, and what would happen if the group did in fact hold such a demonstration.

First and perhaps foremost, a strong predictor of increased levels of tolerance in both years was students' knowledge of the curriculum materials.\* Simply put, knowledge of lesson content contributed substantially to higher levels of tolerance. Overall grades, however, did not correlate with increases in tolerance. This suggests that the curriculum worked equally well for all ability levels, and that specific learning rather than intelligence or more generalized academic motivation explained the impact the curriculum had on junior high students.

Second, in 1990 and 1991, levels of perceived threat were strongly and negatively related to political tolerance prior to the students' introduction to the curriculum. Groups that were perceived by students as very threatening tended to be denied the most democratic rights. While this relationship persisted in the posttest results in both years, it was much weaker. The curriculum had the effect of weakening the link between threat and intolerance; though the perception of threat remained, there were a range of considerations that intervened to "uncouple" the apparent cause and effect relationship between threat and intolerance that had been shown in pretest results.

Students viewed a brief video depicting a fictional story of the controversy surrounding a high school student who wished to display his painting of a swastika in the school art competition. They were interviewed about their reaction to this video both before and after the curriculum, in order to explore their attitudes and reason-

ing processes regarding the issues presented. While many of the students recognized vaguely the right to freedom of speech possessed by the unpopular student, they were ill-equipped to grant him this right in the face of his controversial views during this pretest. After completing the curriculum and viewing the video a second time, many students showed a more explicit awareness of the student artist's right to free speech. Although few of the students who had initially wanted to remove the student's painting actually reversed their decision, many demonstrated a more thoughtful consideration of the rights of both parties in the dispute.

Matthew, a grade nine student with low tolerance scores in both the pretest and posttest, expressed shock when he first saw the painting depicted in the video. He explained, "I'd like to see them take it out because it shouldn't be hanging there. I guess it's maybe evil, I think. And I wouldn't want it hanging in school." When it was suggested that some people might protest the removal of the painting, arguing that the artist has a right to express himself, Matthew explained that such protesters would not cause him to change his decision: "I'd still take it down. I just don't like Nazism. I guess maybe if there was some really good reason for having it up, but I can't think of one right now." In his second interview,

Matthew still decided to remove the painting, but recognized that the issue was more complex. When asked what the school board should do about the painting, Matthew explained:

"They'll have to think of both sides of it. And deciding whether or not they should keep [the painting] in....It's going to be harder, harder to take it out if he has freedom of speech and he's going to fight for it. And no law can be passed to take it out. Oh, I think I'd still try to take it out, the same decision."

Further, he explains that he draws a limit to freedom of speech where,

"it hurts other people's feelings. There is a limit to it, but you should be able to say mostly what you want to....[The painting of the swastika] goes against other people's religious beliefs, because of the Jews and Hitler."

Timothy, another grade nine student, demonstrated higher levels of tolerance at the pre- and posttest than did Matthew. Timothy explained that he was Jewish and was personally offended by the painting, and "offended for my Mom, because [the Nazis] did hurt her family." But he explicitly recognized, during both interviews, the artist's right to freedom of speech. He agreed the painting should be permitted to be displayed, but explained in the first interview that he would reverse his decision if he learned that the artist did, in fact, belong



Computer simulations are used in the tolerance curriculum to place students in different decision-making dilemmas. Here a group of teachers try out the simulations at a teacher training workshop for the new curriculum held at the University of Minnesota. They are (l. to r.) Rachael Ackland; authors Pat Avery, Kris Thalhammer, and John Sullivan; David Martin; Chet Boen; and Sue Brendon (seated).

\* The role of each variable was determined by a regression analysis, so its importance was assessed by controlling for the impact of all of the other variables. For example, all else being equal, students who learned more from studying the curriculum—as assessed by objective testing—were more likely to exhibit large increases in tolerance.

**Table 1. Changes in Students' Reasoning (Pre- and Posttest) During Open-Ended Responses to Their Least-Liked Group Holding a Public Rally**

Reasons Mentioned	Number of Mentions							
	Pre		Post		Pre		Post	
	LOW*	LOW*	LOW*	MED/ HIGH*	HIGH*	HIGH*	HIGH*	MED/ LOW*
	(n=11)		(n=11)		(n=11)		(n=6)	
No right	6	1	5	1	0	0	0	2
Rights/Constitution	0	3	0	8	10	13	4	1
Danger/hurt/threat	8	9	4	7	6	5	1	6
Hecklers' veto	1	0	2	0	1	1	0	0
Recruitment	2	0	7	1	0	1	1	0
Exchange views/protest	0	1	0	2	5	8	3	0
Ignore	1	1	0	2	3	4	0	1
Maybe peaceful	0	2	0	1	3	2	1	0
Vague right ("do what they want"; "free country")	0	0	0	0	4	3	2	1

n = number of students in each group.  
\* Indicates level of tolerance.

to a Nazi organization.

"If he was a Nazi, then it would totally change. Then I would jump to my views instead of [listening to] his, like I said about my Mom and stuff. This is America and it has free speech, I suppose you can go by that. But if he was a total Nazi and wanted people to think 'this is good, my opinion,' I would get offended and it would be taken down."

Timothy reaffirmed in the second interview that he was upset and offended by the painting. But he was even more determined to apply the artist's right to free speech, even if he was a Nazi. Timothy offered an analogy from the curriculum to explain his decision about the painting:

"It is his free speech, just like marching in Skokie. They had to let them march because it is freedom of speech. Whoever wants to listen listens. So yeah, I would probably do something, but he has the right to hang it."

And he offered an analogy of his own, concerning the censorship of controversial recording artists: "The same thing as 2 Live Crew. Put a warning label on it. People that don't want to see it don't have to see it." Timothy also reevaluated his response with regard to his mother's feelings:

"I figured then, when I first saw [the painting], she popped in. I thought 'take that down because of my Mom'. Now I can understand that if my Mom didn't want to see it, she didn't have to go."

Finally, Timothy demonstrated a fairly complex understanding of the First Amendment:

"Because of that, people can say what they feel. And no one can stop you from saying it. No one has to listen to you, but no one can stop you from saying it....It kind of helps you to feel what you want to feel and speak what you want to speak....If it's gonna hurt somebody, then it's gone too far, like pulling a fire drill in an auditorium where they're

having something. That's not right. You do have your freedom of speech, but it only goes so far."

To seek additional evidence that changes in tolerance could be attributed to curriculum effects, we examined students' answers to several open-ended questions. Both before and after studying the curriculum, students were asked to explain their views on whether their least-liked group should be allowed to hold a public rally, and also to comment on what they thought would happen if the group did hold such a rally (Table 1).

Among the twenty-two students who had the lowest pretest tolerance scores, we identified eleven whose posttest scores remained low and eleven whose posttest scores increased into the middle or top third of the possible range of scores. Among the eleven whose scores remained low, nine answered the posttest open-ended questions primarily in terms of denying the right to hold a rally because of the clear and present danger presented by the group; only three of them used the language of constitutional rights. Most of the responses were similar to that of Mary, who explained that she would not want her least-liked group to hold a rally because "I think if they held demonstrations they could become violent and people could be hurt." On the other hand, among the eleven students whose posttest scores increased significantly, none used the language of rights on the pretest, but eight did so on the posttest. Fairly representative was the response of Angela, who explained, "Everyone has the right of assembly, so they also have the right if they're not hurting anyone."

We also identified the twenty-two students whose pretest tolerance scores were highest; after studying the curriculum for four weeks, sixteen of them remained high,

while six showed some significant decline. Among those whose scores remained high, ten used the language of rights in the pretest while thirteen did so in the posttest. Fairly typical was Suzanne's response to her least-liked group, pro-choice activists. In the pretest, she said: "I think they have every right to do public demonstrations or rallies," and in the posttest: "If I don't get along with someone, it doesn't mean they shouldn't be able to do these activities." Additionally, students with high tolerance scores were more likely, both in the pre- and posttest, to mention the possibility of counter-protests or an exchange of views that may occur when disliked groups hold public rallies. And they were more likely to recognize that the public could simply choose to ignore the disliked group.

In contrast, among the six students whose scores were initially high but then declined, four used the language of rights in the pretest, but only one did so in the posttest. At the same time, only one of the six used the language of clear and present danger on the pretest, while all six did so on the posttest. The curriculum may increase some students' fears, which in turn lessens their concern for rights. This led us to explore whether some students' personal characteristics made them "reactive" to the curriculum.

We therefore compared students who exhibited the highest increases in tolerance with those who showed the greatest decrease in political tolerance on many characteristics. We found several significant quantitative differences between them, but most importantly, that those who decreased in tolerance scored much higher on a measure of authoritarianism.\* They were also significantly less threatened on the pretest but significantly more threatened on the posttest when compared to those whose tolerance increased the most. It appears that some adolescents are highly authoritarian and when they experience a curriculum designed to promote tolerance, they react against it, becoming more defensive, fearful, and thus less tolerant. This result was too systematic to be attributed to chance factors or to measurement errors.

In fairness, we need to also point out that pretest tolerance scores are the strongest predictor of posttest tolerance scores. The attitudes students bring to their civics classes (and to this curriculum) are informed by many broad aspects of political socialization that we have neither measured nor affected in the course of this project. Many of these factors are related to attitudes that have been fostered in the home, particularly by parents and mass media that transmit general cultural views on topics of tolerance and intolerance. We do not expect that our curriculum can overcome all of the entrenched and intolerant

\* The measure of authoritarianism included dimensions of strong conformity, conventionalism, aggression, and dogmatism.



ideas that children learn from adults and society more generally. While our findings leave much of the origins of tolerant and intolerant attitudes unexplored, we have effected important enough changes to warrant cautious optimism.

### Discussion and Implications

Research on civics curricula as they are currently constituted suggests that they have little impact on the political attitudes and behaviors of children in the United States. One ought not conclude from this research, however, that a reconstituted civics curriculum would be ineffective. Our project suggests that such a reconstitution might pay generous dividends. A curriculum that helps students comprehend the consequences of intolerance can increase students' willingness to extend rights to disliked groups. In short, tolerance can be taught.

Importantly, our preliminary testing of the curriculum seems to indicate that it is effective under different classroom conditions. Students' levels of tolerance increased at all four schools at about the same rate. The message of this curriculum appears to have been sufficiently broad to have an effect across student populations, teachers, and school settings.

The effectiveness of this curriculum has important implications for democratic theory—and more particularly, democratic practice. Some scholars have cautioned against trusting ordinary citizens to make fundamental decisions about democratic rights. Rather, they argue that political elites, who possess the requisite understanding of how democratic norms and values ought to be applied, should make the difficult decisions about democratic rights. Studies of tolerance generally show, as well, that political elites do perform with greater consistency when asked about concrete implementations of minority rights.

Our study provides hope that a greater level of democratic participation is possible and even desirable. If civic education included a systematic examination of the role of dissent in a democratic society, young people might develop a commitment to protect civil liberties that would ultimately engender a more fully democratic citizenry. In other words, if tolerance of diverse beliefs is an important democratic ideal, then it may be possible to realize this ideal through challenging and creative curricula. We can create the conditions for a democratic society in which we need not fear the actions of an intolerant citizenry.

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**adjunct professor of psychology at the University of Minnesota. Karen Bird, Sandra Healy and Kristina Thalhammer are graduate students in political science at the University of Minnesota. For further information about the curriculum, write to: Prof. Patricia Avery, Dept. of Curriculum and Instruction, 152 Peik Hall, 159 Pillsbury Drive S.E., University of Minnesota, Minneapolis, MN 55455 or Prof. John L. Sullivan, Dept. of Political Science, 267-19th Avenue S., 1414 Social Sciences Building, University of Minnesota, Minneapolis, MN 55455.**

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**Photos on pages 1, 3, and 4 by Robert Friedman.**

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## New CURA Publications

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**Courses in Survey Research, University of Minnesota 1991-1992.** Minnesota Center for Survey Research. June 1991. 21 pp. Free.

Many departments at the University offer courses that address methods of survey research. Those where at least 25 percent of the primary focus is on survey research are listed here. Listings are alphabetical by department and include course descriptions, teachers, quarters when the class will be offered, prerequisites, and the percent of the class devoted to survey research. Only classes on the Twin Cities campuses of the University are covered.

**Environment and the River: Maps of the Mississippi.** William J. Craig and William S. Anderson. October 1991. CURA 91-9. 38 pp. Free.

A summary of this report is presented in this issue of the *CURA Reporter* on pp. 1-6.

**Nonprofit Organizations of Color in Minnesota: An Overview and Directory.** July 1991. CURA 91-7. 58 pp. Free.

Out of the 2,800 nonprofit organizations registered in Minnesota, 152 are organizations of color. They are controlled by persons of color and/or primarily serve persons of color. This directory lists the organizations by group: Asian/Pacific Islander, African American/African, American Indian, Hispanic, and multi-cultural. Address, phone number, name of the director, and a two or three word description of the organization are included. The directory does not include all the organizations that serve people of color. Many religious organiza-

tions, for example, are not included. A thirteen-page overview provides a picture of these organizations as a whole: who they are, where they are, how old and how large they are, who guides them, how they operate, what they do, and where they get their money. Mailing label matrices are provided for each community of color.

**Resources for Organizers.** Kim Pengelly. 1991. CURA 91-8. 80 pp. Free.

Around the country, the shortage of community organizers has prompted the development of innovative recruiting and training strategies. Organizers in Minnesota thought it would be helpful to have information about the training opportunities now available for both new and experienced organizers. In response, CURA has assembled this directory of detailed information about training courses, apprenticeships, internships, and volunteer services. Recruitment and referral networks are also included along with places where technical assistance can be obtained. The directory provides information for organizers seeking further training, for young people interested in exploring organizing as an occupation, for directors of organizations looking for ways to recruit new organizing staff, and for organizations needing specialized technical assistance ranging from updated telephone technology to community economic development to nonviolence training.

**CURA publications may be ordered by phone (612/625-1551) or on the CURA Publications Order Form included in this *CURA Reporter*.**

# Environment and the Mississippi River

by William J. Craig and William S. Anderson

The Mississippi River is an environmental barometer for the core of the nation. In the middle two-fifths of the country, anything that fouls the environment inside the Mississippi's basin is proclaimed by changes in the river. In late 1990, the Minneapolis-based McKnight Foundation decided to create an environmental grant-making program and to focus their concerns and activity on the Mississippi River. The foundation's goal is to develop a program aimed at ensuring that "...a healthy, sustainable environment is maintained and, where necessary, restored in the Mississippi basin."

The foundation asked CURA to provide a baseline of environmental data on the Mississippi River. As part of the research and analysis involved in that effort CURA has just published a series of maps about the Mississippi River and the environment.

We present here a sampling of the maps from this new publication, *Environment and the River: Maps of the Mississippi*.<sup>\*</sup> They are grouped into three categories to show the current status of the river, insults to the river from human activity in its basin, and the capacity of the people in the basin to cope with these environmental problems.

## Status of the River

The maps in this section show the extent of the Mississippi system and the current environmental status of the river and its adjacent lands. The Mississippi River runs 2,358 miles from its origin at Lake Itasca, Minnesota, to the Gulf of Mexico. With its

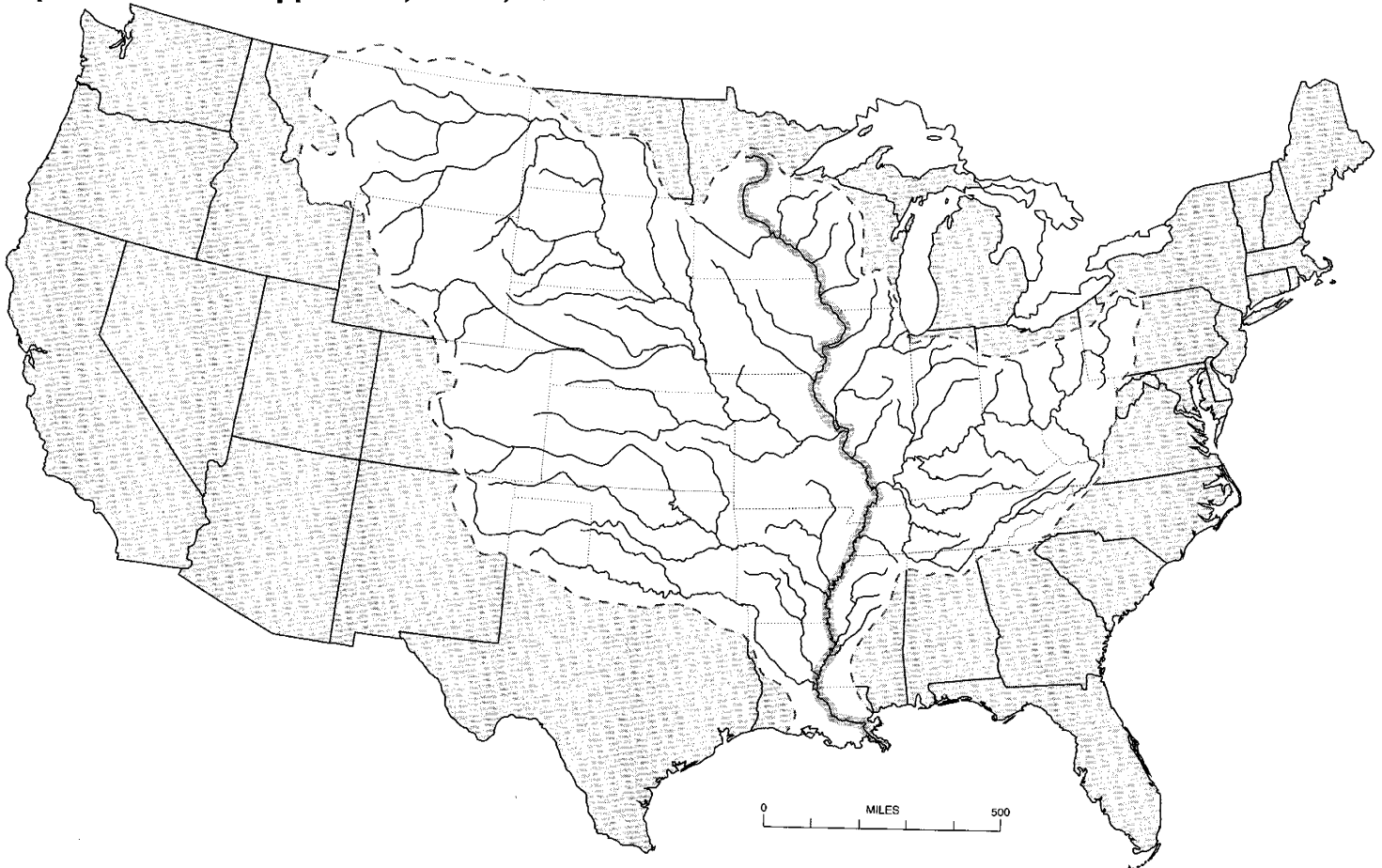
tributaries, the Mississippi drains 1,231,000 square miles—an area that covers all or parts of thirty-three states and two Canadian provinces (Map 1). It is the dominant watershed of the North American continent and second largest drainage basin in the world.

Maps showing the status of the river today represent the varying quality of the river environment by varying the width of a schematic band following the river. The wider the band, the bigger the environmental problem. Data collection stations are labeled and we have interpolated the data between these points to show a smooth increase or decrease, simply because of the limited number of sampling stations. We do not have enough data to know exactly where significant changes occur.

In general, problems get worse as one travels down-river, but dilution by cleaner tributaries can produce an apparent lessen-

<sup>\*</sup> Copies of the full publication are available free-of-charge. Phone 612/625-1551 or use the CURA Publications Order Form on page 12 of this *CURA Reporter*.

**Map 1. The Mississippi River, Basin, and Tributaries**



ing of the problem. In fact the situation is worse than it may appear on the maps because all problems are measured here in quantity per unit of water volume. The total volume of the river is always increasing as it flows downstream while the total quantity of fertilizer (or other substance) is also increasing at a rate much faster than what is shown on these maps.

Sediments are a problem both for the river and for the land which feeds the river. Sedimentation can fill pools and backwaters and lead to a need for extensive dredging to keep navigation channels open. Soil erosion from farmland is the major source of sedimentation in the river. Recorded levels of sedimentation vary from 4.2 milligrams per liter at Lake Itasca to 340 milligrams per liter at St. Louis, where the Missouri River flows into the Mississippi. The concentration of sediments in the water increases throughout the agricultural parts of the region, then holds steady or decreases as sediments drop out and the river is diluted by tributaries carrying less sediment.

Both phosphorus and nitrogen, major ingredients in cropland fertilizer and urban wastewater, have been measured in the river. In general, twice as much nitrogen is used on the land as phosphorus, and these relative proportions are also found in the nutrient loads present in the Mississippi. Phosphorous peaks in two places along the river, where the Missouri River and the Red River (Louisiana) flow into the Mississippi. Nitrogen concentrations increase throughout the agricultural Midwest, then decrease below St. Louis.

Dieldrin is a farm pesticide that has been identified as a health threat to humans. The U.S. Fish and Wildlife Service has data for chemical residue in carp at six stations along the river (Map 2). In order to cover the entire river we extended from these stations—showing no change downstream from the Luling, Louisiana station and reducing the upstream portion to zero at Lake Itasca. This map shows the familiar pattern increases throughout the agricultural Midwest, followed by decreases in the southern portion.

The number of recreation sites along the river is a measure of environmental quality and local perception both of the river and of its nearby environment. Minnesota is blessed with the most recreation sites while the southern end of the river has much less to offer.

### Insults to the River

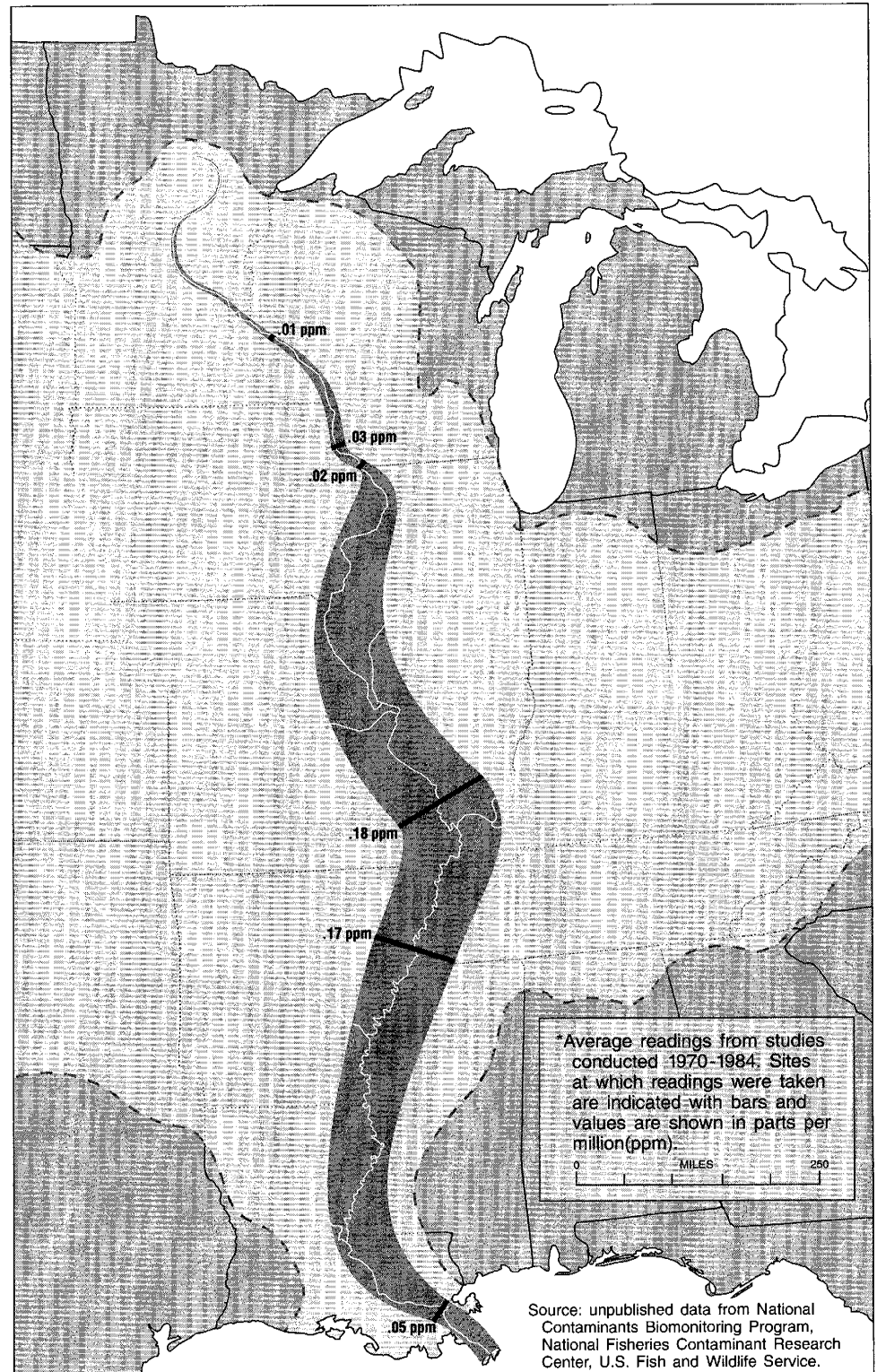
People damage the river directly by discharging environmentally harmful material into the river and indirectly by their treatment of the land within the basin. Misuse of land in the basin will invariably affect the quality of the river itself through runoff. Insults come from agriculture, industry, the transportation system, and municipal sewage treatment plants.

The majority of the maps in this section show human activity in the states comprising the river basin. Eroded soils, flushed-out agricultural chemicals, and released industrial toxins reek havoc on the land where they occur; much ends up in the Mississippi River, because the land's holding capacity has been reduced by extensive

drainage of wetlands. Twenty-one states are either predominantly or entirely within the river basin.

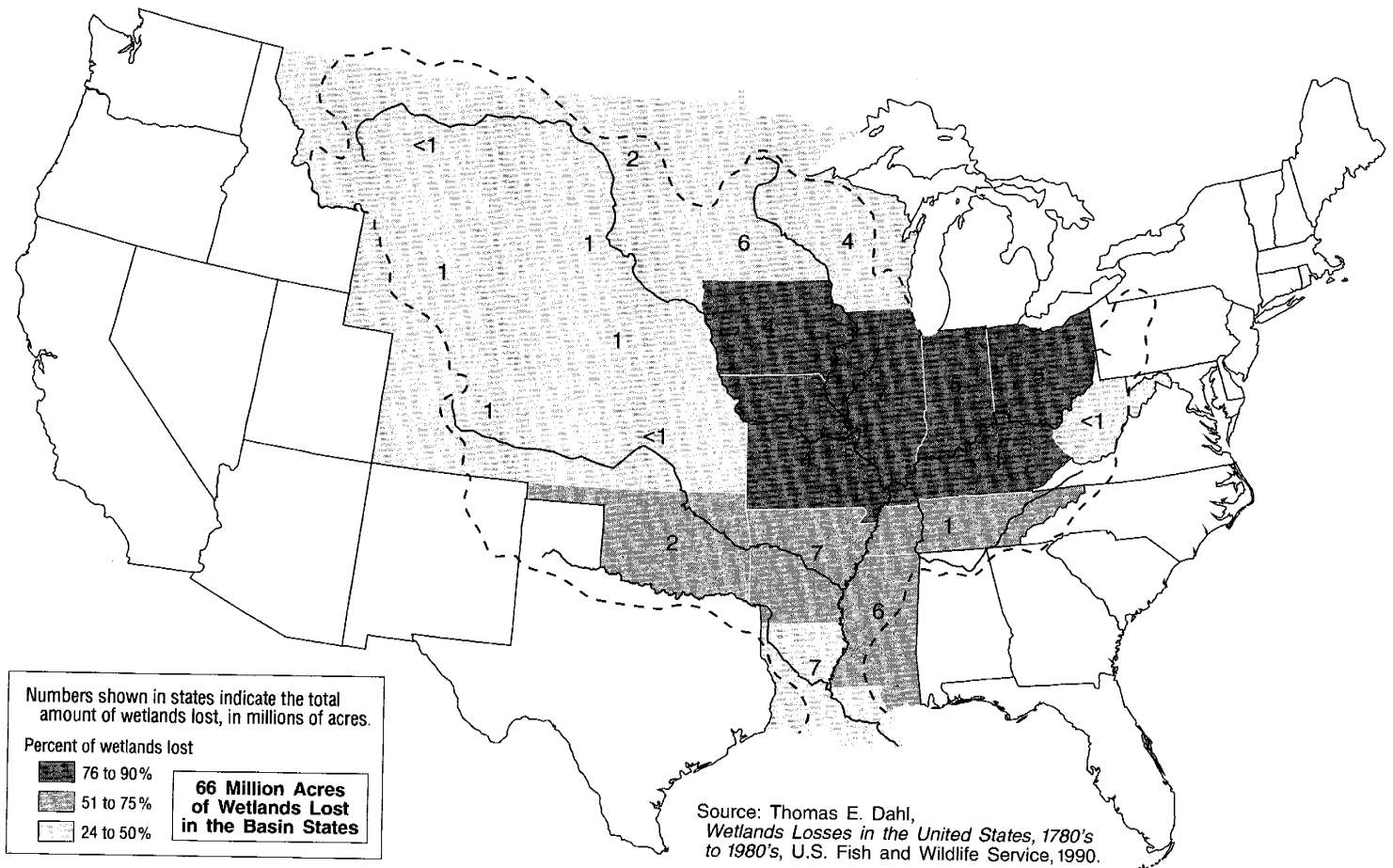
Erosion can occur on many types of land use, but is most significant on cropland. Erosion is caused by water, but significant additional losses can come from wind erosion. Approximately 1,080 million

**Map 2. Dieldrin Insecticide Residue in Common Carp\***





**Map 3. Wetlands Losses, 1780s to 1980s**



tons of soil were washed off cropland in the basin during 1987. The most severe losses were in the corn growing region of the basin. Losses of more than five tons per acre are considered intolerable—greater than what can be replaced by soil building activities. Iowa, Illinois, Missouri, Kentucky, Tennessee, and Mississippi were all above the five-ton threshold in 1987 and individual counties in the other states were also above that threshold. Minnesota lost fifty-seven million tons of soil in 1987, but averaged losses of less than three tons per acre from cropland.

Over twenty-one billion pounds of chemical fertilizer was used in the Mississippi basin states in 1990. With luck and good management most of this went into the crop, but sudden storms and over-application too often result in these chemicals washing away. Roughly half of chemical fertilizer is nitrogen, the rest equally divided between phosphate and potash. While the application rate was greatest for fall potatoes, corn received over two-thirds of the total chemical fertilizer used in the Mississippi basin. Illinois and Indiana led the Mississippi basin states in the amount of chemical fertilizer used per acre of planted land. Illinois and Iowa used the largest total amounts of chemical fertilizers.

Over 283 million pounds of chemical

pesticides were put on major crops in the Mississippi basin states in 1990. Additional pounds of some chemicals were applied in quantities too small to be reported at the state level by the U.S. Department of Agriculture. Invariably some pesticides intended to protect crops from weeds, insects, and fungi are washed away. In the river basin two-thirds of these chemicals are used on corn. Discounting the use of sulfuric acid on Colorado potatoes, the crop getting the greatest rate of application is rice—5.6 pounds per planted acre. Arkansas and Louisiana are the rice growing states in the basin.

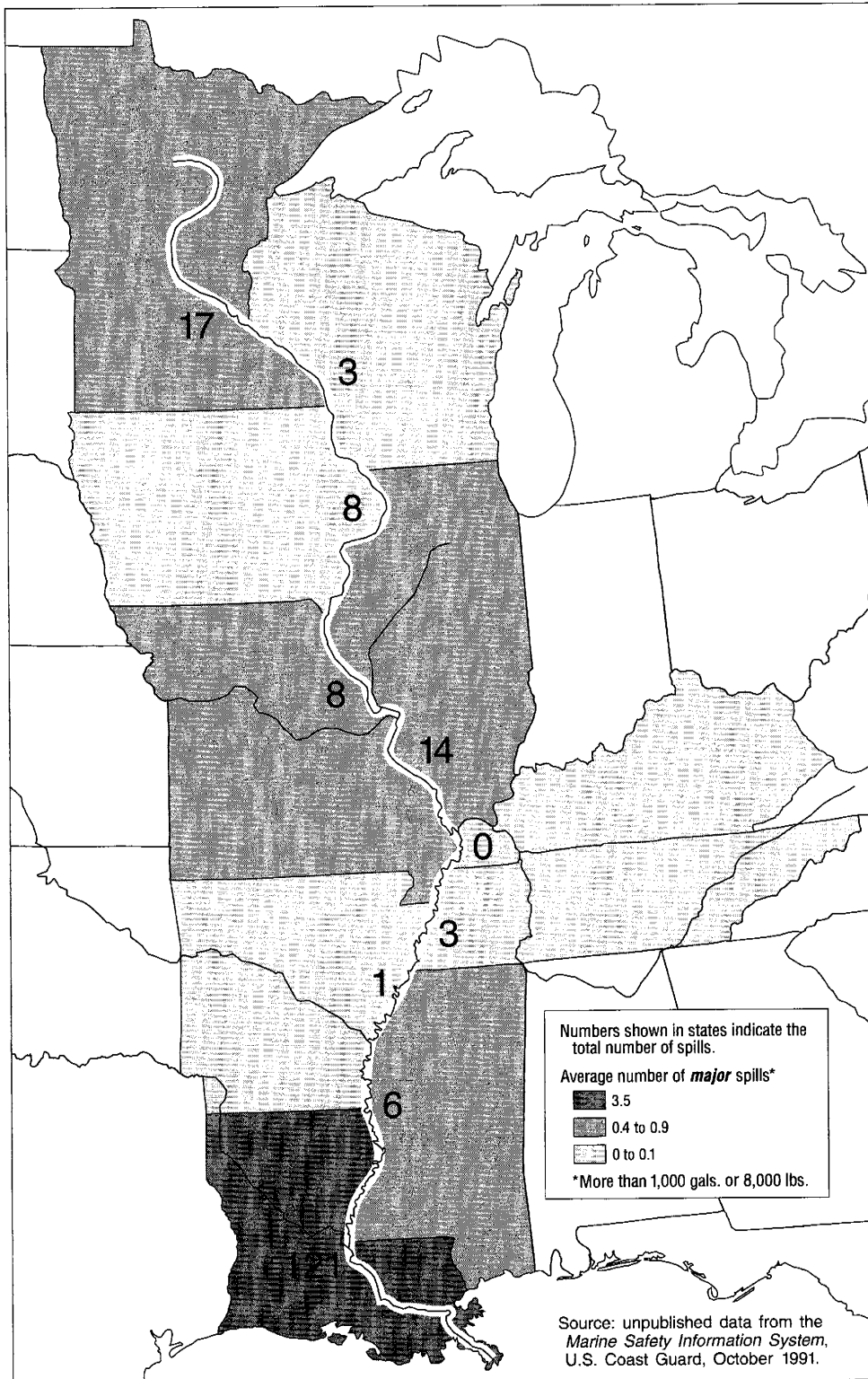
Wetlands are important to wildlife and for maintaining water quality. Since the late 1700s, sixty-six million acres of wetlands have been lost in the Mississippi basin, largely due to agricultural drainage (Map 3). Rates of loss have been greatest in the agricultural heartland, where more than 75 percent of the wetlands have been lost. The largest absolute losses, however, have been in states along the Mississippi corridor itself: Minnesota, Illinois, Arkansas, Mississippi, and Louisiana.

At least 2.3 billion pounds of toxins were released into the environment by industries operating in the basin states in 1988. The federal Toxins Release Inventory under-reports the actual situation because only

two of every three companies required to report do so, and many companies are exempt. The rate of release has been dropping as companies adopt more pollution control measures and as they become more adept at reporting. Nationwide, 8 percent of the toxins are carcinogens. Across the basin (and the nation) the most releases are in Louisiana. Louisiana injects 59 percent of its releases into the ground, accounting for over half of all underground releases in the Mississippi basin. The chemical industry is the leading discharger across the basin. In the eastern Great Lakes states, the primary metal industry's releases are of comparable magnitude, but many of these toxins are released into the Great Lakes watershed rather than the watershed of the Mississippi.

Spills into the river cause environmental damage (Map 4). This map summarizes ten years of spills as reported to the Coast Guard. Most often these spills are oils and chemicals, but saltwater and wastewater are also included. Over the ten year period, 1,810 spills occurred, an average of 181 per year. Louisiana was the location of most of the spills, averaging twice as many spills as the other nine Mississippi River states combined. Minnesota ranks a distant second. The number of reported spills has increased over time: from 1982 to 1986 there

**Map 4. Average Annual Number of Spills into the Mississippi River, 1982-1991**



were an average of 116 per year, and from 1987 to 1991 an average of 246 per year. By October of 1991, there had already been 378 spills into the river.

Most spills are small. We graphed the size of spills for 1990, a typical recent year (Figure 1). Forty-three percent of the spills were of unknown size, usually a sign that they were quite minor—perhaps identified

by the sighting of a slick. Only 2 percent of the spills were major, more than 1,000 gallons. The shading on the map indicates the average number of major spills into the river. Once again, Louisiana leads all states, averaging 3.5 major spills per year.

We attempted to determine the number of gallons spilled, but the original data did not lend themselves to such analysis. From

1987 to 1991, we calculated that 1.5 million gallons were spilled into the river, plus 1.6 million pounds. A rough attempt to combine these figures into a common measurement yields an estimated average of 336 thousand gallons per year spilled into the Mississippi River.

### Coping Capacity

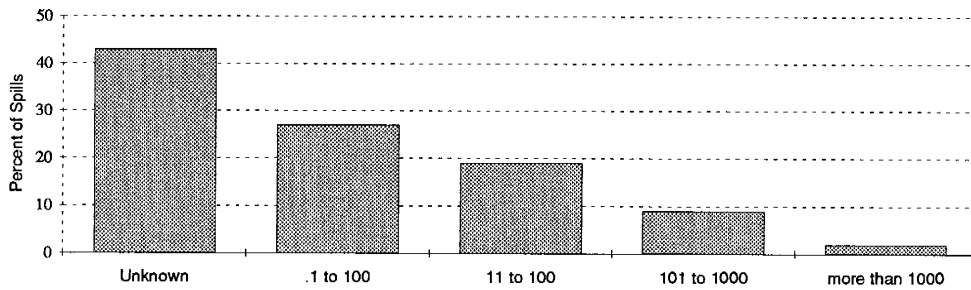
The capacity of individuals and society to deal with the environmental problems of the river is varied and limited. Too often the poorest people suffer the worst indignities. Our societal ability to rise to the environmental challenge varies with our ability to cooperate and coordinate across political, geographic and topical areas. Often the best response comes, not from government, but from nonprofit environmental groups.

Poorer people are less able to affect societal decisions and to protect themselves. Looking at personal income for 1988 in the counties that touch the river, we discovered that the lowest levels of personal income are at the southern end of the river, especially below Memphis. Metropolitan areas have the highest income levels, but Louisiana is among the poorer states and its metropolitan counties do not rise above the middle income level.

One of the most serious problems for the Mississippi River is the fragmentation of environmental management responsibilities among government agencies (Map 5). While a few agencies provide national management (the Department of Agriculture, for example), others split management among regional offices in ways that put the river on the margin of individual responsibilities. The Environmental Protection Agency deals with the Mississippi River from four offices. The Corps of Engineers and the Fish and Wildlife Services each divide the river into two regions, and each has multiple districts within these regions. The Corps of Engineers divides the river at Lock and Dam Number 24. The Fish and Wildlife Service divides it at Cairo, Illinois. Interstate agreements are a useful way to overcome political fragmentation, but no agreement covers the entire river. The Upper Mississippi River Basin Association, for example, coordinates water resource planning among river states and between those states and the many federal agencies, but only for the five states north of Cairo, Illinois—Illinois, Wisconsin, Minnesota, Iowa, and Missouri.

Nonprofit groups provide an alternative way for people to organize to make their will a reality. The number of such groups operating within any one state is a measure of the strength and diversity of environmental concern within that state. Every state has a significant number of such groups, and none has fewer than four. Ohio (sixteen), Illinois (fifteen), and Iowa (fifteen) lead in the number of nonprofit environmental groups that they support. The number of

**Figure 1. Gallons per Spill, 1990**



organizations per thousand people shows a different picture, with larger states (like Illinois and Ohio) seeming to be under-supplied and more sparsely populated states (like Iowa and Montana) looking like hotbeds of environmental activity.

**In Conclusion**

Everyone seems to know about the Mississippi River and some care about it deeply. But too few people seem to know what to do to improve the river. At least there is no consensus about how best to use the river while maintaining or improving its environ-

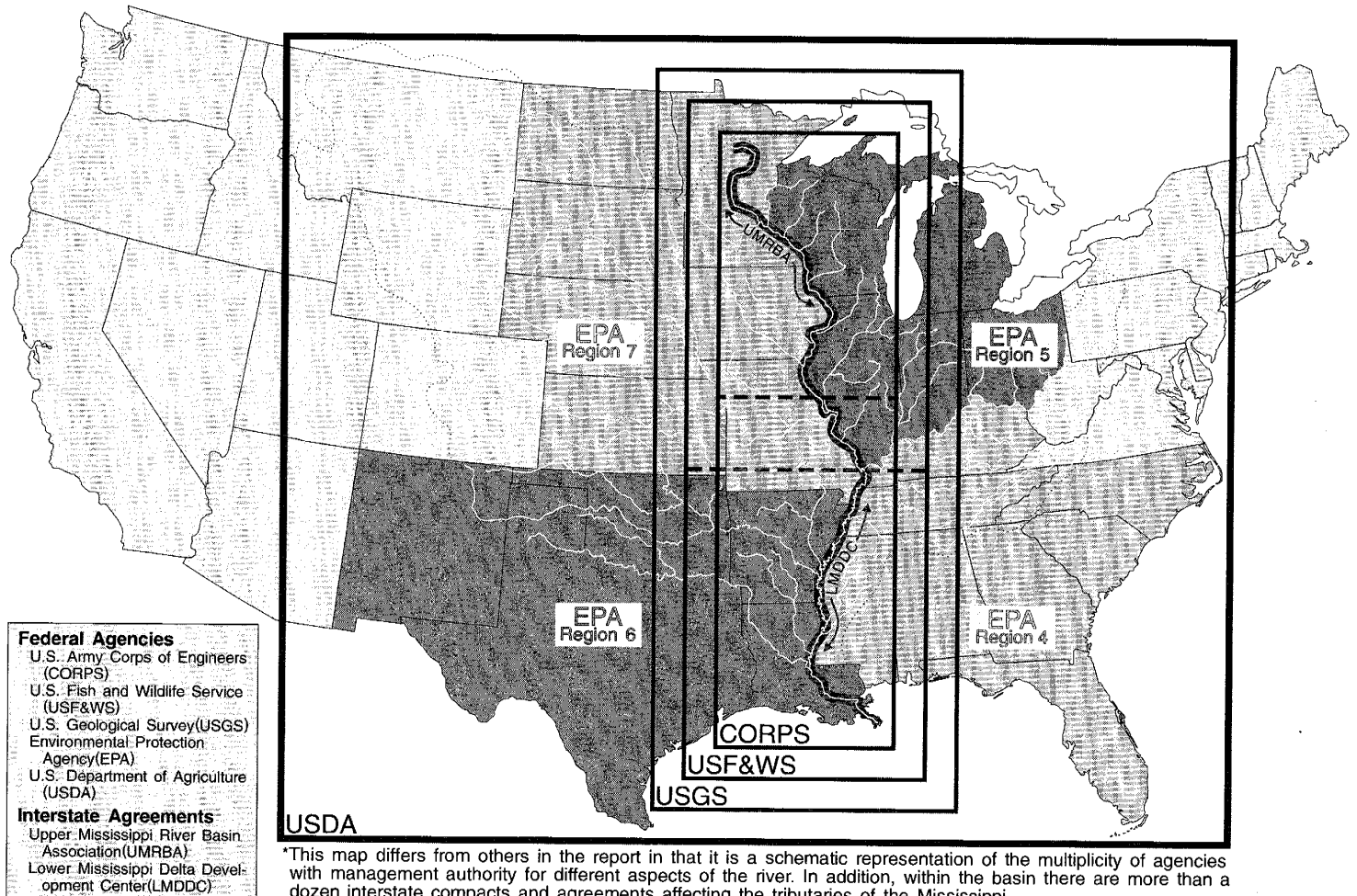
mental qualities. We found a wide variety of people and organizations interested in the river, but limited common ground on which they could meet to share information and discuss joint solutions.

From our work in compiling these maps, we see a number of deficiencies in the way people can learn about the river. Some federal data are available only when the researcher evokes the Freedom of Information Act. In several cases, we found suspect or incomplete data, so it may be necessary to use local experts for assistance in extracting usable information. Inventories of key databases and local experts would be useful.

Some additional research is required to round out this study. We were unable to collect, analyze, and map data about a number of key topics. Foremost among these is information about state-by-state environmental laws and regulations. Other topics that might be explored include: plant diversity and loss of original vegetation, animal counts and diversity, dissolved oxygen in the river, industrial pollutants in the river, air quality, municipal sewer discharges, and diseases related to water. Because the potential level of purity and the nature of basic problems differs in different parts of the river basin, it would be useful if analyses of these topics were placed within the context of each of the ecological regions that make up the basin of the Mississippi River.

**Will Craig is assistant director of CURA. Bill Anderson, a graduate student in landscape architecture, was the graduate research assistant for this project. Anderson has worked with CURA on many other projects during the last two years.**

**Map 5. Management, Federal Agency Jurisdiction, and Interstate Agreements\***



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The Center for Urban and Regional Affairs was established to help make the University of Minnesota more responsive to the needs of the larger community and to increase the constructive interaction between faculty and students, on the one hand, and those dealing directly with major public problems, on the other hand.

The **CURA Reporter** is published five times during the year to provide information about what CURA projects are doing.

Thomas M. Scott, director; Thomas L. Anding, associate director; William J. Craig, assistant director; Judith H. Weir, editor.