

FOREWORD

At the Fall 1998 OPSA meeting at Oklahoma Baptist University in Shawnee, I presented a proposal to the editor of *Oklahoma Politics* and the leaders of the Oklahoma Political Science Association to publish occasional "theme" issues, either with or in addition to, the regularly scheduled *OP* issues. I further offered to edit the first of these thematic issues and take responsibility of soliciting papers on the theme of environmental policy in Oklahoma. It was obvious to me that environmental policy scholars and practitioners were conducting important research, formulating ground-breaking policy, and finding novel ways to analyze and implement policy that deserved recognition among the Oklahoma policy community. This issue, entitled, *Environmental Policy in Oklahoma: Issues, Innovations, and Insights*, followed from their hospitable response to and approval of my proposal.

To get this project started, I prepared a flyer that was mailed out to all OPSA members shortly after the 1998 meeting that solicited papers for consideration. The solicitation failed to stimulate interest, however. Not easily dissuaded, I began to call colleagues and friends whom I knew were conducting noteworthy work and asked if they would be interested in contributing a paper to this project. Gradually, support began to build.

The real kickoff occurred at the Fall 1999 OPSA meeting held at Redlands Community College in El Reno. I chaired a session of the same name as this issue and five papers were presented – all of which are among the papers in this issue. Inspired by the reception, I redoubled my efforts to recruit additional contributions. By summer 2000, I had gathered 14 suitable papers. I ultimately withdrew one of these papers to publish in another journal, leaving 13 for this issue. Two other persons had submitted abstracts but ultimately did not submit papers.

After some preliminary editing, I sent the papers for peer review in Fall 2000. Comments were sent to the authors and revised papers were returned during Winter and Spring 2001. During Summer 2001, I edited the papers one more time and copy-edited the volume for consistency of formatting and appearance. The final manuscript was submitted to OPSA in Fall 2001.

The papers in this issue communicate the successes, novelties, lessons, and other noteworthy information learned from our recent advances in environmental policy. I hope that you find them useful in your research, practice, and teaching. This volume includes all of the academic work in environmental policy being conducted in Oklahoma of which I am aware. If I have failed to include other important work, I apologize.

Before discussing the individual papers included in this issue, I want to recognize all those who helped make this special issue possible. First, I thank Professor Bob Darcy who first proposed that I consider assembling a special issue four years ago while he was still editor of *Oklahoma Politics* and I had just arrived in the OSU Political Science Department. I also thank Professor Greg Scott who succeeded Dr. Darcy as *OP* editor and who encouraged and assisted me in gaining *Oklahoma Politics* editorial approval and the funds to publish this issue. Without his leadership, this project would not have been realized. Sincere thanks are also due to Professors Tom Webler of the Antioch New England Graduate School in Keene, New Hampshire and Bob Brulle at Drexel University in Philadelphia who reviewed the articles in this issue and provided many valuable suggestions that greatly improved the quality of its contents. To Sandra Mace, without whose patience, dedication, and artistic skills this issue would never have found a publisher nor such an attractive cover, I am deeply indebted to you. Finally, I want to thank the contributors to this volume who were willing to share their work with us in this forum. In particular, I thank my graduate students who deserve the reward of seeing their work in print.

Organization of This Issue

The papers in this issue are grouped under five topics.

In **Part I: Environmental Policy in Oklahoma**, an introduction to environmental policy in Oklahoma is skillfully presented by Stephen L. Jantzen, an assistant attorney general for the State of Oklahoma at the time of his writing, in "Environmental Regulation in Oklahoma: A Patchwork Green." This informative review of environmental agencies, statutes, regulations, rulemaking procedures, permitting processes, and enforcement mechanisms illustrates the bewildering complexity of environmental regulation in Oklahoma. Nevertheless, his accounting can help the reader to navigate the maze of jurisdictions and gain a better appreciation of the complex, diverse, and fragmented "patchwork" of environmental policy in Oklahoma.

In **Part II: Environmental Policy Legitimacy**, two papers by political philosophers consider political legitimacy as it pertains to the formulation of environmental policy. In "Environmental Management and Democratic Legitimacy," Professor Edward Sankowski addresses some of the legitimacy issues that attend stakeholder participation in environmental decision-making. Problems with economic-political equality, intergovernmental relations, cultural relations, role of experts and expertise, and access to legal recourse are discussed as threats to legitimacy. He argues that current environmental policymaking institutions must become more democratic and that new private-public partnerships need to be forged if political legitimacy is to be protected.

In the second paper, Professor Zev Trachtenberg, in his "Scientists and Stakeholders: Evaluating the Legitimacy of the Illinois River Basin Management Protocol" considers the relationship between two legitimacy needs: incorporating the values and attitudes of stakeholders in environmental policymaking and, equally importantly, ensuring that environmental policy is scientifically informed. This tension, based in part on competing notions of legitimacy based on volunteerism (free consent) and fiduciarism (public good), is inherent to most environmental policy contexts and is fundamental to any discussion of policy legitimacy. The means for resolving this tension between legitimation through stakeholder participation and justification through scientifically sound assessments is necessarily contingent on the policy context. A policy formulation protocol used in an ongoing case study is evaluated as a test case of legitimation across these two constructs.

Part III: Stakeholder Perspectives in Siting Controversies includes three papers. All three investigate the nature of stakeholder opposition to siting noxious facilities in community neighborhoods and inquire into the bases of these perspectives. Two over-arching conclusions can be drawn from these studies. First, stakeholders in such controversies are not simply locked in an intractable pro-con struggle that obviates resolution. Indeed, the perspectives are more complex and reveal moderate positions that can forge optimism for reaching consensus. Second, opposition is not simply based on lack of scientific understanding or selfish parochialism. Upon closer inspection, opposition involves issues of trust, local autonomy, and fairness that are often ignored by critics of "NIMBYism."

In the first paper, I consider stakeholder participation in localized hazardous facility decision-making as a psycho-political phenomenon. In "A Synthesis of Stakeholder Perspectives in Siting Controversies," I review 15 prior studies that defined typologies of the roles that people adopt in environmental decision-making and related arenas. Two findings are paramount. First, stakeholder perspectives reported in these studies are reducible to three major "ideal types." Second, these ideal types fail to account for three other perspectives that can be masked by the dominance of ideal types: the parochial communitarian, technocratic progressive, and radical skeptic. The discovery of these additional perspectives calls into question the efficacy of any attempt to resolve locational conflicts that ignores non-technical and community-based concerns, desire for local control, and social trust.

In the second paper in this part, "NIMBY-TIMBY: Analysis of Stakeholder Perspectives on Hazardous Waste Controversies in Oklahoma," Professor Jim Lawler and I examine stakeholder perspectives revealed in our study of noxious facility siting and remediation controversies in Oklahoma. Siting controversies that involve stakeholder opposition (the so-called not-in-my-backyard, or NIMBY, reaction) have been studied extensively over the last two decades. To a lesser extent, facility remediation controversies (referred to by the authors as the threats-in-my-backyard, or TIMBY, reactions) have also been studied. However, NIMBY and TIMBY stakeholder perspectives have not been compared

previously. In this paper, we examine these two perspectives together, based on interviews of stakeholders in three NIMBY and two TIMBY communities in Oklahoma. We find that both NIMBY and TIMBY communities include stakeholders who are fundamentally divided by their beliefs and values. For example, both communities include siting proponents (typically, industrialists and regulators) who favor scientifically rational decision-making and who are technologically optimistic and siting opponents (typically, environmentalists and community activists) who are offended by the technocratic perspective and distrust anyone who insists on its dominance in decision-making. In addition, both also include perspectives that are intermediate between these two extremes and which include mixtures of opponents and proponents as well as occupational types). These intermediate and less polarized perspectives can play an important role in mediating controversy. Only TIMBY communities manifest a perspective that is dominated by local concerns and desire for local control. Moreover, those fighting against the status quo in TIMBY communities seem more willing to work with the polluting facility than those opposing new facility siting in NIMBY communities. This finding has important implications for the use of risk-benefit analysis in justifying proposals for siting or remediation.

NIMBY opposition to the siting of public housing facilities can reach a level usually reserved for toxic waste sites. In his "Public Housing and NIMBY: The Effects of Citizen Participation in the Siting of Public Housing Facilities in Tulsa," Charles Peaden, in his master's thesis research, conducted a survey of 426 homeowners in Tulsa, Oklahoma to explain the bases of their opposition to public housing siting. The respondents were also asked whether provisions for their direct involvement in the siting process might increase their acceptance of public housing. The analysis revealed that the use of participatory tradeoffs had little impact in reducing opposition to the siting of public housing facilities. However, risk perception was a significant predictor for both groups.

Part IV: Environmental Policy Planning and Administration includes four papers that discuss the potential – and the challenges – of environmental policymaking and implementation in Oklahoma. Fragmentation of environmental programs across several statutes and administrative agencies continues to be a significant impediment to efficient and effective accomplishment of environmental goals. However, recent innovations have demonstrated that the barriers to cooperation can be overcome. These innovations involve building private-public sector alliances, increasing involvement of stakeholders in program planning, establishing supra-agency task forces to coordinate agency efforts, and increasing political efficacy of underserved groups.

In the first paper, Professor Mark Meo takes a rare look into the role that policy entrepreneurs play in environmental policy innovation in a case study entitled, "Strategic Policy Innovation and Flash Flood Hazard Mitigation: The Tulsa Story." Environmental policy innovation requires fundamental shifts in political institutional relationships, forging alliances outside of government, and careful systemic analyses. In particular, the need for concerted effort, coalition building, and rational planning in environmental policy innovation argues for the applicability of strategic entrepreneurship model over the "groping-along" model that may be more appropriate in other policy arenas. The story of Tulsa's successful efforts to control flooding along Mingo Creek illustrate how these requirements were satisfied in this case – despite the inevitable fits and starts that usually accompany such ambitious projects.

In "Brownfields Initiative in Oklahoma," Rita Kottke, a manager in the Oklahoma Department of Environmental Quality, reviews the evolution of a policy that guides the remediation and redevelopment of contaminated sites to restore them to productive use. Referred to as brownfield sites, they have presented continuing health threats, eyesores, and economic blights on those communities stigmatized by their presence. However, the controversy among stakeholders on how these sites should be handled complicates the policy process. Dr. Kottke interviewed stakeholders across the state to ascertain their concerns about brownfields, preferences regarding their remediation and reuse, and opinions about the performance of ODEQ in cleaning up these sites. She uses these findings to define the context of brownfields policy context and then recommends a policy formulation strategy appropriate to the context using a prescriptive model. The lessons learned from this exercise are being used to help ODEQ continue its formulation and implementation of its brownfields redevelopment policy.

"Inter-Governmental and Inter-Agency Coordination: The Oklahoma Environmental Crimes Task Force Example" was co-authored by Kelly Hunter-Burch and Stephen Jantzen. Ms. Hunter-Burch was also an assistant attorney general for the State of Oklahoma at the time of the writing of this paper. They

describe the recent effort to overcome intergovernmental and interagency barriers in the implementation of environmental policy by the Oklahoma Environmental Crimes Task Force. Established three years ago, the Task Force is a model of successful coordination among disparate organizations, programs, and personnel to obtain criminal convictions of those who commit environmental crimes. In this case, the aphorism that the total is greater than the sum of its parts is amply demonstrated.

Professor Rajeev Gowda and a doctoral student, Paula Long, review the unique challenges of addressing environmental federalism and environmental justice on Indian lands in their "The Complexities of Environmental Federalism: An Investigation of the Oklahoma Native American Context." In a study of two tribes in Oklahoma – the Sac and Fox and the Tonkawas – they illustrate the difficulties that the federal government faces in attempting to site nuclear waste facilities on tribal lands. The problems in siting such facilities are further complicated in Oklahoma by the patchwork of tribal jurisdictions and land ownership as well as the large number of interests seeking representation in environmental decision-making, both within and outside of the tribes themselves. The authors show that these policy conflicts are due to cultural barriers, socioeconomic disparities, diminished tribal administrative capacities, distrust of government, and procedural inequities. Remedies may require both structural and functional changes in the relationships between tribes and governments, which have been crippled by a long history of abuse.

Three papers are included in **Part V: New Tools in Environmental Policy Analysis**, the last part of this special issue.

In "Application of GIS in Environmental Policy Analysis," Professor Mahesh Rao, Professor John Bantle, and I consider the use of geographical information systems in spatially analyzing ecological risks caused by environmental contamination of surface water. Analysis of risk caused by environmental threats is essential to informed decision-making, as is the evaluation of the efficacy of alternative risk-reduction strategies. Geographical information systems are one tool that can be used to perform and communicate the results of risk analyses and alternatives evaluation. This paper presents preliminary results of a GIS-based toxicity study that is being used to inform policy dialogue and to frame further analysis of the causes of an observed decline in amphibian populations near a landfill located in Norman, Oklahoma, designated as a national toxicology study site by the U.S. Geological Survey (USGS). GIS was used to understand the spatial components of threats to amphibian populations from various environmental stressors as well as to integrate data collected from various sources such as global positioning system (GPS) data, remotely sensed data on habitat, Mesonet weather stations, water quality probes, FETAX assays on surface and ground water samples, and amphibian biomonitoring. Base maps were developed for the study site incorporating locational data from USGS and digital aerial photographs. Tagging the attribute data to the locational data has produced thematic maps pertaining to toxicity and amphibian population used to visualize spatial distribution of concentration, toxicity, hydrologic, and population data. The use of GIS to produce thematic maps of the study area facilitates policymaking regarding spatially dependent activities such as selection of sampling sites and the location of *in situ* toxicity experiments. The organization of data using GIS has important potential applications in modeling risks at other sites. Moreover, the results of the GIS analysis were used to identify where further studies are needed and to identify a pathway of exposure that may have been ignored without these results.

In the second paper, "Informing the Policymaking Process with Concept Mapping," Todd DeShong and I discuss a preliminary application of concept mapping to better understand stakeholder schema regarding impacts to the Illinois River watershed in eastern Oklahoma. We demonstrate how concept mapping can be another new tool that can be used in environmental policy analysis to identify the cognitive conceptions that stakeholders have of environmental problems. By revealing the constructs that stakeholders use to conceptualize environmental problem elements – and the relationships between them – the analyst can better understand why they are concerned about some impacts and not concerned about others. Understanding system constructs can also shed light on why stakeholders prefer the policies that they do. Using the case of the Illinois River Basin, we illustrate the use of concept mapping to help inform policy deliberations and point the way toward fashioning a policy that can enjoy widespread public support.

Katera Whitaker and I discuss the utility of using expert-developed influence diagrams to better understand an environmental system and thereby better inform subsequent policy deliberations in "Expert Modeling of Environmental Impacts" – the last paper in this issue. Environmental policy analysis depends, in part, on accurate functional representations of the environmental problem to be addressed.

Given the complexity of most environmental systems, graphical representations of these systems can greatly aid the comprehensibility of the problem. These authors introduce the use of influence diagrams to construct expert models of environmental systems, which can be used to assist analysts in identifying appropriate policy interventions, design educational programs to correct factual misunderstandings, and diagnose conflict. We introduce the use of expert models in policy analysis with a cursory explanation of the model we used to represent the Illinois River watershed in eastern Oklahoma.

I hope that you will find this issue useful in coming to grips with environmental policy in Oklahoma and to perhaps better appreciate the issues, innovations, and insights that have emerged from our investigations of it.

Fall 2001

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