

Governing Nature, Governing Ourselves:
Engaging Citizens in Natural Resource Decisions

Part 1

Matthew McKinney and Will Harmon

Abstract

This two-part article explores the lessons the authors have learned from their work helping citizens and decision makers engage in collaborative governance on land use, natural resource, and environmental issues. Part I describes a range of natural resource problems and examines what makes some intractable, or 'wicked'. The authors propose a set of concepts, principles, and practices that constitute the most effective form of collaborative governance for responding to such problems.

This article builds on more than 20 years of practical experience in designing and facilitating different types of processes to engage citizens and officials in shaping and implementing public policy. The intended audience is anyone who engages in, or wants to engage in, collaborative governance, including scientific and technical experts, elected and appointed officials, public administrators, advocates on different sides of public issues, and others who have an interest or stake in public deliberation of natural resource and environmental issues.

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‘Wicked Problems’—Welcome to Our World

Across today’s American West, water is scarce and demand for it high. In Montana, trout-conservation advocates and fisheries managers decided to ask farmers and ranchers to leave some water in streams and rivers instead of diverting most or all of it for irrigation. The farmers and ranchers declined.

After years of stalemate and frustration, the state’s water management bureau held a public meeting to discuss the idea of irrigators voluntarily leasing some of their water to maintain in-stream flows. Most of the folks in the crowd that showed up clearly opposed the proposal, many of them shouting protests before the meeting even started. Standing in front of the mob, the water bureau chief asked for a chance to have a civil dialogue. ‘I hope we’ve moved forward from the days of vigilante justice’, he said. ‘You know, the first murder in Montana happened in a dispute over water’. The crowd quieted slightly. Then, from the back of the room, a gruff voice boomed out: ‘And before tonight’s over, there’s gonna be a few more’.

Welcome to the Wild West.

Imagine, then, being asked to mediate the ensuing six-month dialogue among the entrenched stakeholders. That ‘in-stream flow’ issue was one of our first assignments as the fledgling Montana Consensus Council. Fortunately, no murders occurred, and we survived to tell the tale. In the 20 years since then, being stubborn (or maybe just uneducable), we’ve earned our keep by helping people resolve other intractable natural resource problems. We’ve worked with groups of citizens, scientists, elected and government officials, and various professional experts on issues ranging from land-use and transportation planning to watershed and ecosystem

* The conceptual framework and research findings of this article are the results of a research collaboration between the University of Montana Public Policy Research Institute and the Charles F. Kettering Foundation.

management. We've tackled problems involving fisheries, old-growth forests, wildlife habitat, water quality and supply, urban sprawl, and air pollution. In this article, we want to share what we've learned about engaging people in the sticky, slippery, delicate, hand-hewn work of democracy in action.

Resolving Natural Resource Issues: A Range of Difficulty

Our experience as mediators and facilitators suggests three broad categories of natural resource issues, ranging from most to least tractable: (1) technical and practical problems; (2) value-laden problems in which people agree on the basic nature of the problem but not on how to resolve it; and (3) value-laden problems in which people disagree on both the nature of the problem and how to resolve it. The last of these—'intractable' problems—are the problems that grab headlines and generate lots of work for litigators. In this paper we focus on such problems because they stymie stakeholders and mediators alike. First, though, let's briefly consider the other two types of problems.

Technical and Practical Problems. Technical and practical problems are essentially 'how to' questions that can be answered by reasoning and the application of existing knowledge. People are likely to agree on the nature of such problems and on a short list of potential solutions. These problems are susceptible to expert-generated solutions without much consideration of values, and they may not require high levels of involvement by those the problems affect.

For example, when Montana's state parks agency was faced with an infestation of noxious weeds on park lands, managers knew they had to draw up a weed control plan. Noxious weeds crowd out native plants, are toxic to wildlife and livestock, and threaten to invade neighboring ranch and farm properties. There was never any question of not fighting the weed problem, but park managers had to decide which methods would work best.

To do this, the managers identified the weed species present, learned about the available control methods, and weighed the options. The decision factored in the efficacy of the control methods, their availability, cost, ease of use, safety, and associated ecological risks. In the end, the managers came up with a plan that integrated several different tools and strategies for removing weeds and preventing their spread. The agency worked with adjacent landowners to implement similar strategies on their properties, and the weed problem is now under control.

Value-laden problems. A somewhat less-tractable type of problem arises when people generally agree on the nature of a problem but they disagree over the basic direction to take in responding to it. In this type of problem, values and interests begin to pull people in different directions. Even working together in good faith and with reliable information, they are likely to encounter difficulty even in identifying options for consideration. In fact, just acknowledging the need for a solution may raise choices that are too painful even to contemplate, and stakeholders will try to avoid discussing the matter or to dominate any discussion they enter into.

In Jefferson County, Montana, for example, residents were upset when a local cement plant announced plans to burn hazardous waste as fuel. The plant was near an elementary school and within a stone's throw of several neighborhoods. Parents and neighborhood advocates complained to county commissioners and threatened to take the cement plant to court. As word spread, people began talking about zoning to better separate residential and industrial land uses in the county. This raised the hackles of people having an interest in defense of private property rights, who argued that landowners should not be restricted in how they use their property.

No one, of course, spoke up in support of burning hazardous waste at the cement plant—even the plant's owners went silent. But people clearly disagreed about how to solve the problem of the proximity of properties devoted to residential and industrial uses. In letters to the editor and in other public forums, the debate soon stalled, leaving property rights advocates and homeowners who opposed industrial and commercial activity at a standoff. Both camps were fixated on one-sided solutions that served their own interests.

At this point, the county hired a mediator and formed a broad-based stakeholder group to study the issue and recommend possible solutions. The group researched how other communities had addressed similar issues. They then spent six months deliberating several options. Talks were often heated, and the mediator spent time between meetings shuttling between opponents, trying to build understanding and trust. The group relied on county planners and attorneys for information and advice, and also requested an opinion on zoning from the state attorney general. In the end, the group converged on zoning as the best option, but with stipulations that satisfied the property rights camp: zoning would apply only to the northern end of the county, where the potential for land use conflicts was highest, and any zoning area designation could be blocked or rescinded by a simple majority of the residents within that area.

As this case shows, value-laden issues require that the values in tension be given serious consideration, not just by the experts, but also by both those who are interested in and affected by the issues and those who must implement the solutions. Technical experts can help inform possible solutions to these types of problems, but without the participation of those who actually bear the full brunt of the problem (stakeholders), progress will remain elusive. In such cases, people may be wary of each other, and it can take a substantial commitment of time for them to reveal their values, learn about and acknowledge each other's interests, and build trust before they're ready to address specific problems and to seek agreement. Participation by stakeholders in some form of collaborative problem-solving greatly increases the likelihood of success.

What Makes Some Problems 'Wicked'

The third category of natural resource issues consists of problems that are often described as 'intractable'. Some researchers and practitioners refer to them as 'wicked' problems.¹ Because they are so difficult to resolve, they warrant a deeper analysis and require more-robust tools for responding to them.

In contrast to issues that are more readily resolved, issues arising from wicked problems (1) tend to involve many stakeholders with different—often divergent—interests; (2) revolve around complex, sometimes confounding information; and (3) occur in a briar patch of governmental jurisdictions with overlapping and conflicting mandates, laws, policies, and decision-making protocols. In such issues, the power to address the problem is scattered among a host of players. Disputes arise over facts and data, previous or tangential issues, the parties' intentions and 'agendas', and who has the authority to make or implement decisions. Typically, communication fails, trust plummets, and goodwill goes out the door.

More fundamentally, wicked problems are those in which people disagree over not only how to solve the problem and who bears responsibility for doing so, but even over the nature of the problem itself. Such problems involve competing or conflicting values, priorities, ideologies, and worldviews. The deep-rootedness of the sources of the parties' disagreement prevents them from agreeing even on how to characterise, or 'name', the problem. The absence of this most basic prerequisite for solving a problem—a shared view of what the problem *is*—makes it impossible for people to move to the task of identifying options for solving it. (People can't be expected to solve 'it' if they can't say what 'it' is.) Moreover, precisely because stakeholders see

the problem itself so differently, they are apt to see *each other* as an essential part of the problem. ('The problem is, *they* don't see the problem accurately; therefore, they must be blind, misguided, or guilty of malign motivation and intent!') Needless to say, when 'the people are the problem', working relationships among stakeholders likely will be marked by the inability and unwillingness to cooperate, by the absence of goodwill and trust, and even by a lack of integrity. In such circumstances, it is well nigh impossible for any of the parties to name the problem in a way that others will accept.

A good example of a wicked problem is the opening of the Arctic National Wildlife Refuge (ANWR) to drilling for oil. After decades of public debate, the various camps remain far apart in how they name the issue and frame options. In ANWR, conservationists see critical wildlife habitat and one of the last truly wild landscapes in the United States. Proponents of drilling see independence from foreign oil and greater homeland security. Industry sees a profit from a known and exploitable oil and gas field. Native peoples worry about damage to the land, water, and other resources that support their way of life, but they also see economic opportunity in oil. Options for how to move forward run the gamut from 'no drilling' to 'limited drilling' to 'drill it all'.

To complicate matters, multiple government agencies weigh in on the issue. Any resolution of the ANWR drilling issue must address the legal mandates and responsibilities of the federal Department of the Interior's Fish and Wildlife Service (both its refuge system and endangered species divisions); Interior's Bureau of Land Management, which oversees a 1.5 million-acre '1002 area' where drilling is allowed; Interior's National Park Service; and the Department of Agriculture's U.S. Forest Service. In addition, local native jurisdictions, the State of Alaska, and the government of Canada have a say in what activity takes place in the area and how it is conducted. It should come as no surprise that agreement on ANWR management priorities has proved elusive.

In sum, the idea of intractability, or 'wickedness', implies that a problem is so freighted with encumbrances that it is extremely difficult, perhaps impossible, for stakeholders to move forward toward a solution. Chief among these difficulties is the inability of the parties to gain sufficient 'traction' even to 'name' the problem, and hence to 'frame' options or potential solutions.² This inability owes to several factors. First, there are no clear rules or shared experience for defining the problem. Second, the problems are often so complex that they require a higher degree of

abstraction than simpler problems. Third, there is no immediately obvious objective measure of success. Fourth, and perhaps most important, communication channels typically work poorly, if at all—stakeholders are unable to talk with each other without inflaming the situation. What communication exists takes place through lawyers, press releases, and/or symbolic acts (sometimes violent) that are designed to ‘send a message’. By itself, establishing direct, constructive communication between the parties won’t solve the problem, but it can help people smooth the way for progress by building a common vocabulary and setting guidelines for civil dialogue.

Addressing intractable problems successfully requires the right political timing—acting when a window of opportunity opens—and a suite of different strategies, tools, and formats that can be used to devise and sustain a disciplined process of naming the problem, framing options, and deliberating about the consequences of different choices.³ As explained more fully below, discussions need to be inclusive, well-informed, and deliberative—artfully organised in such a way that the ‘forum matches the fuss’.⁴ That is, the forum for deliberation must be tailored to the needs, interests, and purposes of the stakeholders, and also to the characteristics of the problem itself. One size does not fit all. The challenge is to create a public space in which the participants feel unconstrained in applying knowledge, tools, creative intuition, and common sense. They must be unshackled, free to seek unconventional solutions.⁵

Two Common Challenges Posed by Wicked Problems

In the face of wicked problems, people (elected officials, government agencies, scientific and technical experts, interest groups, businesses, and other stakeholders) face two common challenges:

1. First, citizens must strengthen their ability to voice their concerns, priorities, and desires *in a politically effective manner*. The difficulty may not be a lack of political activity or lack of participation, but rather that the actions of various groups are counterproductive. Public debate concerning wicked issues often sounds like an orchestra in which the musicians are each playing a different tune. Regardless of the quality of individual playing, the overall sound is just noise. The addition of another player, or a change in what one of them plays or in how well she plays it, cannot turn the noise into music.

The challenge is to build the capacity of citizens to create a shared sense of direction in response to a shared interest in a particular issue or place. They must also learn to recognise and accept the tensions that exist among common interests, between compatible but different interests, and between truly conflicting interests.⁶ They must move beyond seeing the issues that divide them as ‘zero-sum’ contests and improve the ability of all participants to create mutual-gain (‘all-win’) solutions.⁷ Unfortunately, most democratic institutions today remain ill-equipped for the task of bringing citizens together to engage in constructive, productive conversation.⁸ Citizens and civic leaders alike need an alternative to the ‘judicial’ model of deciding in favour of one side or the other, on the one hand, and on the other hand, to the majoritarian model of determining a winner (or achieving compromise) through the mechanical adding-up of votes. Such an alternative must be ‘integrative’ rather than divisive, and hence collaborative rather than competitive. In short, democratic structures must be augmented by genuine public dialogues and meaningful deliberative forums.

In the case of the in-stream flow dispute in Montana, the stakeholders remained at an impasse until they met in a facilitated dialogue in which they began to see, comprehend, and acknowledge one another’s experiences, concerns, interests, and priorities. After several weeks, they began to find some common ground amidst their differences. Ranchers and farmers conceded that they, too, value healthy fisheries and recreation opportunities. Anglers and advocates for fisheries conceded that water left in-stream has a monetary value, and that irrigators should be compensated for forgoing the use of water to which they are entitled. Finding such common ground among their otherwise-competing interests allowed them to start framing an option for leasing irrigation water and using it to sustain stream flows. Later on, a mechanism for leasing water to sustain in-stream flows was codified in Montana statute.

2. The second challenge people face when confronted with wicked problems is to make institutional mechanisms and arenas for public problem-solving and decision-making do a better job of seeking and incorporating citizen and stakeholder interests and input. In the United States, few government agencies actually encourage citizen participation in a way that genuinely shapes agency decisions and actions. Fewer still respond to citizen participation in a way that clearly shows how public input was used. All too often, public comments are accepted and used as ‘shelf art,’ with no acknowledgment of how (if at all) public input shaped an agency’s decision. Institutionalised approaches to public participation typically reflect a top-down, command-and-

control style of leadership, rather than bottom-up, collaborative leadership. They emphasise one-way communication—informing citizens or passively receiving input—rather than engaging citizens in give-and-take and joint problem-solving. Though useful, these conventional measures alone are inadequate for resolving wicked problems such as those that underlie land-use and natural resource issues.⁹

The two challenges cited here overlap; the ability of citizens to engage each other constructively is in part a function of the public arena in which they meet. Unresponsive government breeds frustration and discouragement, and public engagement (indeed, democracy itself) suffers. Further, the public's collective voice is diminished when agencies treat diverse interests as discrete, disconnected publics rather than as constituent parts of a (potentially) coherent entity with a single overall vision or purpose. We should not address the first challenge—bringing interests together to improve the effectiveness of their voices—while neglecting the second challenge of connecting public dialogue and deliberation with our democratic institutions. Contemporary democracies need urgently to bring representative government into harness with democratic *governance*.

In sum, wicked land-use, natural resource, and environmental issues can be addressed more effectively through public structures and processes¹⁰ that:

- Move beyond *naming problems* in partial, preconceived ways that reinforce polarised positions and reflect specific courses of action to be taken by government (which is only one actor in the governing process);
- Embrace a broader and richer set of *desired outcomes*, including social, economic, and environmental well-being, rather than resolution of particular issues and/or increasing institutional efficiency;
- Tap the strengths of *many partners* to name problems, frame a set of solutions, take actions, and achieve desired outcomes, rather than limit participation to prescribed steps in an official decision-making process. Citizens and stakeholders bring valuable information, ideas, and insights to the table that need to be integrated with the knowledge and authority of experts and official decision-makers.

- Facilitate genuine public discourse that can generate a ‘*shared sense of direction*’ so that members of the public can act in more concerted and more complementary ways.
- Reflect the inevitability of social, economic, and environmental change, and thus the need for public processes that promote continuous *learning and adaptation*.

Collaborative Governance: Engaging People in Democracy

In the past few decades, we at the Public Policy Research Institute at the University of Montana have facilitated many experiments in collaborative governance around land-use, natural resource, and environmental issues that reflect the foregoing principles. In Part 2 of this article (forthcoming, March 2008) we will explain collaborative governance in greater detail through a variety of examples. In the remainder of Part 1 we will give an overview of the coming discussion.

Through our work, we have learned that the most effective way to address wicked problems and promote *stewardship*—defined as liveable communities, vibrant economies, and healthy natural environments—is to create opportunities for the right people to come together with the best available information to address matters of common concern.¹¹ We believe stewardship is not primarily a scientific or technical challenge. Nor is it simply about managing natural resources more effectively and efficiently. *The core challenge is a social and political one: to integrate people’s diverse needs, values, priorities, interests, visions, and cultures.*

Four Key Traits of Collaborative Governance. In order to help stakeholders respond to the core challenge of stewardship, we help them design problem-solving processes that contain four key traits (which are echoed in several of the principles listed on the preceding page). To be effective, we’ve found that collaborative governance should be:

- **Inclusive.** It will meaningfully engage representatives of all viewpoints and interests, including unaffiliated citizens, local and national interests, and decision-makers. Participants will be empowered by the presumption that their input and advice will be considered by the decision-makers and will influence the outcome.

- **Informed.** It will afford all participants an equal opportunity to share their views and information. The process will foster mutual learning, common understanding, and collective consideration of a variety of options. It will enable participants to jointly develop and rely on the best available information, regard-less of the source.
- **Deliberative.** People will listen to each other, appreciate the rationale behind competing viewpoints (the interests that underlie the positions), consider the pros and cons of alternative courses of action, and seek solutions that integrate as many interests as possible.
- **Adaptive.** (1) New forums or platforms will be designed to meet the needs and interests of a particular set of stakeholders, and to integrate previously-independent systems of users, knowledge, authorities, and organised interests. (2) The political choices and policy decisions made by participants will be adapted to experience on the ground as people learn through a series of experiments.¹²

Put briefly, collaborative governance processes are multi-party, grounded in high-quality information, and cooperative. They involve building relationships among individuals and groups that historically have been isolated or alienated from one another. In short, collaborative governance is *a process of working together to name problems and issues, frame options, discover or craft solutions, and take actions that require collective public action.*¹³

Governance differs from government, which is a formal institutional arrangement that has statutory authority in a given jurisdiction. Governance encompasses both formal and informal systems of relationships and networks for decision-making and problem-solving. Collaborative governance engages all sectors of society to do more than any one sector could achieve on its own. An existing government agency can take the lead, or the process can be fostered and led by citizens or non-governmental groups. Either way, government agencies retain their legal authority to make and implement public decisions, while sharing the responsibility and power to solve public problems with other sectors of society.

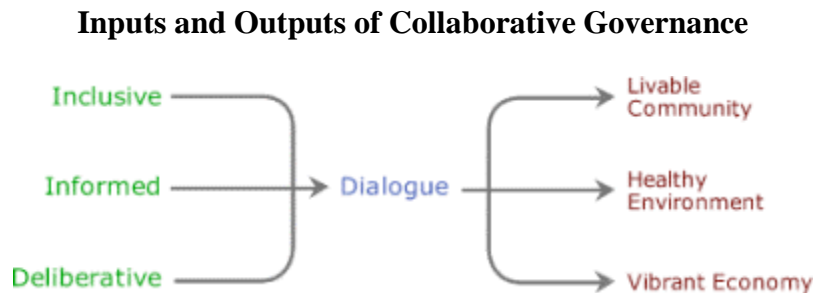
This approach to public engagement can be applied to both place-based and issue-specific processes. It is well suited to addressing issues within a particular multi-jurisdictional region.

Likewise, collaborative governance works well to foster dialogue among many communities of interest, no matter how they are geographically distributed.

Why Collaborative Governance? The core proposition of collaborative governance is that inclusive, informed, and deliberative public processes are more likely to create liveable communities, vibrant economies, and healthy landscapes. Corollaries of this core proposition are that collaborative governance:

1. Results in decisions that receive broad public support;
2. Saves time and money when compared to lobbying, litigation, and other ways of shaping public policy or resolving public disputes;
3. Provides the most direct and meaningful form of public participation;
4. Effectively integrates social and political values with scientific and technical considerations;
5. Makes implementation easier because the stakeholders have helped shape the proposed policy.
6. Imbues governance systems and institutional arrangements with greater levels of transparency, accountability, and legitimacy.

Figure 1



The reasoning behind these assertions goes as follows: In any given situation, people who are interested in or affected by a public issue can choose from a menu of approaches to satisfy their interests. They can use political lobbying, litigation, citizen initiatives, and negotiation, among others. To determine which approach might be most effective in any given situation, most people intuitively consider the following criteria:¹⁴

- **Satisfaction with Outcomes** – How satisfied are people likely to be with the outcomes of a particular process?
- **Sustainability of Outcomes** – What is the chance that the issue will be resolved—and not recur—through one process versus another?
- **Transaction Costs** – What amounts of time, money, and emotional energy are required by one process rather than another?
- **Effect on Relationships** – How will the use of one process instead of another affect the relationships among stakeholders?

These four criteria are related. For example, dissatisfaction with outcomes may lead to recurrence of disputes, which increases transaction costs and strains relationships. Because the four different costs typically increase and decrease together, they can be referred to collectively as ‘the costs of disputing’. Applying these criteria to the range of approaches available to prevent and resolve land-use, natural resource, and environmental disputes suggests that interest-based approaches (i.e., collaborative governance) tend to be less costly than rights-based approaches (e.g., litigation), which in turn are less costly than power-based approaches (e.g., citizen initiatives and lobbying). That said, collaborative governance is not a panacea; it is not always appropriate. Nevertheless, as a general matter, it tends to result in greater and broader satisfaction with outcomes, lower recurrence of disputes, lower transaction costs, and less strain on relationships.

Principles of Collaborative Governance. The Collaborative Democracy Network has identified at least 50 different theoretical frameworks for collaborative planning and policy-making.¹⁵ Although there is some variation among these frameworks, the following propositions constitute a coherent and widely-shared group of general principles that inform collaborative governance.¹⁶

1. Collaborative governance needs to be intentionally designed and coordinated. It will not happen by accident, and is usually preceded by a ‘situation assessment’, a process of diagnosing the problem (or opportunity), identifying stakeholders and their interests, clarifying people’s options to meet their interests, and determining whether a situation is ripe for some type of collaboration.

- 2.** Collaborative governance should be professionally designed and coordinated by impartial, nonpartisan process managers jointly selected by the stakeholder representatives. Among other things, process managers help the participants draft ground rules (or a charter, terms of reference, or a convening document), create and clarify options, assess trade-offs, improve communication, package outcomes in a way to satisfy as many interests as possible, and document and implement proposals.
- 3.** Collaborative governance is most likely to succeed when a critical mass of the affected stakeholders—including decision-makers—agrees to participate and select their own representatives for the dialogue. This principle fosters ownership in the process and any potential outcomes.
- 4.** All participants—elected officials, public administrators, private sector, non-governmental organizations, experts, etc.—must strive for transparency and communicate in good faith their interests, expectations, and predispositions.
- 5.** Participants must be allowed to name issues and frame options jointly, thereby clarifying their underlying interests and predispositions.
- 6.** Scientific and technical experts should help the participants name problems, frame options, analyse the consequences of alternative courses of action, and otherwise inform and invigorate the dialogue.
- 7.** Collaborative governance must be managed in accordance with an agenda, ground rules, a timetable, and a budget approved by all the parties. In other words, the process must be structured in a way that meets participants' expectations and is credible to all.
- 8.** The product of collaborative governance should be a written agreement that the participants commit to support.
- 9.** The product of collaborative governance is a recommendation, not a final decision. In this respect, collaborative governance supplements (and does not replace) formal decision-making processes.
- 10.** The complexity of most ecosystems means that we do not know enough to be able to anticipate (or model) the full range of effects of most important policy decisions. In the face of this complexity and the uncertain impacts of policy choices, it is best to take an adaptive management approach. This approach assumes that the effects of all policy choices must be

monitored closely so that continuous adjustments can be made (and the desirability of certain decisions can be reconsidered).

In Part 2 of this article, we give examples from our work of these principles in action. We'll highlight some specific tools, but the most important lessons we've learned are more about how to adapt when real people and situations put the principles to the test.

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Notes

¹ The origin of the idea of 'wicked problems' can be traced in the following literature: H.W.J. Rittel and M.M. Webber, 'Dilemmas in a General Theory of Planning', *Policy Sciences* 4 (1973): 155-169); Gerald M. Allen and Ernest M. Gould, Jr., 'Complexity, Wickedness, and Public Forests', *Journal of Forestry* 84(4)(1986): 20-24; R.A. Heifetz & R.M. Sinclair (1988), 'Political Leadership: Managing the Public's Problem Solving', in ed. R B Reich, *The Power of Public Ideas*, Ballenger Publishing, Cambridge, Massachusetts; Lawrence Susskind and Patrick Field, 'When Values Collide', in *The Angry Public: The Mutual Gains Approach to Resolving Disputes* (The Free Press, 1996): 152-197; John Forester, 'Dealing with Deep Value Differences', *The Consensus Building Handbook* (Sage 1999): 463-494; David Mathews, *For Communities to Work* (Kettering Foundation, 2002); Linda L. Putnam and Julia M. Wondollock, 'Intractability: Definitions, Dimensions, and Distinctions', in *Making Sense of Intractable Environmental Conflicts: Concepts and Cases* (Island Press, 2003): 35-59.

² For more information on intractable problems, see the website assembled by Guy and Heidi Burgess at the University of Colorado: <http://www.beyondintractability.org/iweb/>.

³ The standard reference on naming, framing, and deliberating public issues in David Mathews, *Politics for People: Finding a Responsible Public Voice* (University of Illinois Press, 1999).

⁴ Frank E. A. Sander and Stephen B. Goldberg, 'Fitting the Forum to the Fuss: A User-friendly Guide to Selecting an ADR Procedure', *Harvard Negotiation Journal* (January 1994).

⁵ R.W. Hutchinson, S.L. English, and M.A. Mughal, 'A General Problem Solving Approach for Wicked Problems: Theory and Application to Chemical Weapons Verification and Biological Terrorism', *Group Decision and Negotiation* 11 (2002): 257-279.

⁶ For more on the distinction among these 'types' of interests, see Roger Fisher, William Ury, and Bruce Patton, *Getting to Yes: Negotiating Agreement Without Giving In* (Penguin, 1991).

⁷ The theory of mutual gains negotiation is presented in Lawrence Susskind and Patrick Field, *The Angry Public: The Mutual Gains Approach to Resolving Disputes* (The Free Press, 1996).

⁸ See *Friday Letter* (October 6, 2006): 1.

⁹ For an excellent menu of conventional approaches to public participation, see the toolbox developed by the International Association for Public Participation. www.iap2.org. For a critical review of public participation in environmental decision-making, start with Matthew McKinney and Will Harmon, 'Public Participation in Environmental Decision-making: Is It Working?' *National Civic Review* (Summer 2002): 149-170.

¹⁰ There are many resources dedicated to this goal. One recent publication that is short, sweet, and to the point is Michael R. Wood, *Standards of Excellence in Civic Engagement: How Public Agencies Can Learn from the Community, Use What They Learn, and Demonstrate that Public Knowledge Matters* (The Harwood Institute for Public Innovation, 2005).

¹¹ See Gerald Cormick, et al., *Building Consensus for a Sustainable Future: Putting Principles into Practice* (National Roundtable on the Environment and the Economy, 1996).

¹² The ideas of adaptive management and adaptive governance are fully examined in Lee, Kai N. 1993. *Compass and Gyroscope: Integrating Science and Politics for the Environment*. Washington, D.C.: Island Press, 1993; Scholz, John T. and Bruce Stiftel, eds., 2005. *Adaptive Governance and Water Conflict: New Institutions for Collaborative Planning*. Washington, DC: Resources for the Future.; Brunner, Ronald D., et al. 2005. *Adaptive Governance: Integrating Science, Policy, and Decision Making*. New York, NY: Columbia University Press.

¹³ To review the emerging literature on collaborative governance, see John Donahue, *On Collaborative Governance* (Corporate Social Responsibility Initiative, Working Paper # 2, John F. Kennedy School of Government, 2004); David Booher, 'Collaborative Governance Practices and Democracy', *National Civic Review* (Winter 2004): 32-46; Rosemary O'Leary, et al., 'The New Governance: Practices and Processes for Stakeholder and Citizen Participation in the Work of Government,' *Public Administration Review* (September/October 2005): 547-558; Rosemary O'Leary, et al., eds., 'Special Issue on Collaborative Public Management,' *Public Administration Review* 66 (2006); and Rosemary O'Leary, et al, 'Symposium: Collaborative Public Management,' *International Public Management Journal* 10 (2007); and Doug Henton and John Melville, *Collaborative Governance: A Guide for Grantmakers* (The William and Flora Hewlett Foundation, undated). See also the Weil Program for Collaborative Governance at Harvard University (<http://www.ksg.harvard.edu/m-rcbg/wpcg/>); the Maxwell School Collaborative Governance Initiative (<http://www.maxwell.syr.edu/parc/Collaborative-Governance.html>); and the Consortium on Collaborative Governance (<http://www.usc.edu/schools/sppd/bedrosian/consortium/>).

¹⁴ See William Ury, Jeanne Brett, and Stephen Goldberg, *Getting Disputes Resolved: Designing Systems to Cut the Costs of Conflict* (Jossey-Bass, 1988).

¹⁵ Learn more about the Collaborative Democracy Network at www.csus.edu/ccp/cdn.

¹⁶ These propositions are adapted from speech presented by Professor Lawrence Susskind at Water in the West, Bozeman, Montana, September 2006. Also, see *Breaking Robert's Rules: The New Way to Run Your Meeting, Build Consensus, and Get Results*, Lawrence Susskind and Jeffrey Cruikshank, Oxford University Press, 2006.