

Building civic capacity to resolve environmental conflicts

By Michael Elliott and Sanda Kaufman

Michael Elliott
City and Regional Planning Program
Georgia Tech
245 Fourth Street
Atlanta, GA 30332-0155
404-894-9841; fax: 404-894-1628
michael.elliott@arch.gatech.edu

Sanda Kaufman
Levin College of Urban Affairs
Cleveland State University
1717 Euclid Avenue
Cleveland, OH 44115
216.687.2367; FAX: 216.687.9342
sanda@wolf.urban.csuohio.edu
<http://urban.csuohio.edu/~sanda/newsk.htm>

Building civic capacity to manage environmental quality

Abstract

Decisions involving environmental issues affect, and are affected by, numerous stakeholders. Solutions frequently require the efforts of multiple agencies, individuals, and interest groups. Civic capacity, consisting of institutions, organizations, and individuals, the knowledge and skills imbedded in them, and their ability to collectively resolve problems affecting their shared space or resources, is therefore a critical element ~~in~~ of a the collective ability to make complex environmental decisions.

This article explores how shared frames for understanding and acting upon environmental issues promotes civic capacity, as do processes of effective civic discourse and problem solving.

Frames shape the manner in which stakeholders comprehend the environment, as well as the perceived fruitfulness of working with others. Civic discourse and deliberative processes enable cooperative joint problem solving. This article further argues that ~~communities with~~ where civic capacity is high, there is ~~achieve~~ more successful partnering between organizations, and between lay publics and environmental professionals; that civic capacity can be built: and that doing so improves the quality of environmental decision making. Meaningful change in discourse and in outcomes is possible, even when parties to a conflict start out highly divided, with significantly segmented frames. However, this change requires simultaneous improvements both in patterns of discourse and in the framing underlying joint problem solving.

Imagine two localities similar in many respects – size, socio-economic status, location -- faced with an environmental challenge. At one location, a fractious battle is observed amongst interests groups, while at the other parties seems very effective at engaging in deliberations that yield implementable solutions to the challenge. All else being similar, the difference might be the level of civic capacity in at the two locations, which is the focus of this article.

Decisions involving environmental issues affect, and are affected by, numerous stakeholders who may be members of a spatial community – sharing a physical space although not necessarily interests– and/or interest communities – sharing a set of interests regardless of location. Consider efforts to establish a linear park that traverses a spatial community, to remediate a Superfund site, or to clean a contaminated urban stream. In each situation, the whole community may be affected by the environmental condition, and effective solutions may depend on the civic capacity of the all involved. Solutions will require the efforts of multiple public agencies, residents, activists, business, and other interests. Civic capacity, consisting of these institutions, organizations, and individuals, the knowledge and skills embedded in them, and their ability to collectively resolve joint problems, is therefore a critical element to complex (spatial) community action.

In the absence of civic capacity, stakeholder groups may hinder, or even counteract each other's efforts, leaving environmental problems to fester (Susskind and Cruikshank, 1987.) While a crisis may catalyze action, the action is often divisive and short-sighted, dealing more with the symptoms of the moment than with underlying environmental conditions. When no crisis is apparent, action may be postponed indefinitely, with potentially costly long-term consequences.

Civic capacity grows from many roots. This article emphasizes two facets – shared frames and civic discourse. Frames are cognitive devices used by individuals to make sense of a situation and to communicate about it. Frames shape the manner in which stakeholders comprehend the environment, as well as the perceived fruitfulness of working with others to promote potentially shared values. Civic discourse is the collection of means by which members of spatial and interest communities communicate and deliberate with the aim to arrive at mutually acceptable joint decisions affecting them all. Civic capacity grows from shared frames for understanding and acting upon the environmental issue, and it is imbedded in processes of effective civic discourse and problem solving. When parties to an environmental conflict hold incompatible frames – about what the issues are, how they should be resolved or what information is relevant, for instance -- civic discourse is weakened. In turn, ineffective civic discourse may isolate groups, block the sharing of knowledge and resources, inhibit the emergence of new frames and perspectives needed to resolve environmental issues, and promote retrenchment towards avoidance or short-term solutions.

This article argues that civic capacity can be built, and that doing so will improve the quality of environmental decision making. The cases of the Alton Park and Piney Woods neighborhoods in Chattanooga and of the Doan Brook watershed in Cleveland illustrate these points. As will be seen in these cases, meaningful change in discourse and in outcomes is possible, even when parties to a conflict start out highly divided, with significantly segmented frames. However, this change requires simultaneous improvements both in patterns of discourse and in the framing underlying them. When these changes occur, it is often at a higher level than is found within a single dispute, and occurs over longer periods of time than is usually allotted to

resolving a single dispute. Such changes involve social learning and improvements in civic capacity, and enable parties in an environmental dispute to:

- move beyond recognition of suffering and blaming to resolving specific task-focused differences;
- represent their interests coherently and cohesively so they can be taken into account effectively in decisions;
- help develop solutions that incorporate local knowledge and resources that might otherwise be overlooked to the detriment of decision quality; and
- see themselves as active partners in decision making, taking responsibility and offering the support necessary for implementation of decisions.

High civic capacity enables various segments of a spatial community -- residents, stakeholders, agencies, and private entities -- to partner successfully, and helps segments of the lay public and environmental professionals to respond jointly to environmental challenges. This leads to the recognition that for effective community-based environmental practice in any specific case, environmental professionals need to assess the state of a spatial community's civic capacity, to help build it where it is found lacking, and to make the best of it where it is found adequate.

Civic Capacity and What We Mean by It

Consider the case of Chattanooga (Elliott, 2002), a vibrant transportation and industrial center during the first half of the twentieth century. In two contiguous neighborhoods, Alton Park and Piney Woods, heavy industries such as coking, chemical manufacturing, and tanning processes intermixed with a community of 5,000 residents. The industries provided jobs, but also generated a wide range of pollutants. Between 1950 and 1980, the neighborhood demographics shifted from predominantly white to 98% African American. At the same time, many industries closed down. The neighborhood inherited a toxic legacy that included numerous brownfields, forty toxic waste sites, and Chattanooga Creek, three miles of which was declared a Superfund site.

Along with the problems, the neighborhoods also contained significant environmental resources. Lying at the base of Lookout Mountain, the neighborhoods abutted a beautiful natural space. Chattanooga Creek, while highly contaminated, offered the potential for a linear park running through the heart of the neighborhoods and linking them to the rest of the city. Air quality had significantly improved in time as a result of more effective management of air pollution and a less polluting mix of industries in the area.

How might the members of this spatial community make the best of its environmental resources, while managing more effectively its environmental problems? Several key actions were needed, including pollution prevention and site remediation of active industries, rehabilitation of brownfields and toxic landfill sites, and cleanup of Chattanooga Creek. Yet, efforts by industry and federal agencies to initiate cleanup processes often faced extensive opposition from residents. While demanding action, residents remained deeply distrustful of companies and public agencies that might conduct the cleanup. For example, they fought efforts to install an afterburner that would have reduced one industry's air emissions by 90%, as well as the United States Environmental Protection Agency's (USEPA) efforts to clean up Chattanooga Creek. In both cases, residents felt that the remedy would end up increasing their exposure to risk. Why?

The community residents' risk frames, identity frames and social control frames differed significantly from the professionals employed by these agencies (Elliott, 2003, in this issue.) To the residents, the contamination ~~in the community~~ represented a significant and active risk, one that was manifest in the cancer, miscarriages, and asthma incidence in their neighborhood. The residents identified themselves as victims because of their race, their poverty, and their perceived powerlessness. They alternated between a sense of passive anger and active protest over these

conditions. They distrusted industry because it had created the pollution, and government agencies because they had failed to protect the residents from an unhealthy environment. Residents felt that both industry and public agencies dismissed many of their concerns as unwarranted or overblown. Thus, they did not believe the environmental professionals, perceiving instead the industry's afterburner to be a hazardous waste incinerator and believing that sediments removed from Chattanooga Creek would further contaminate their space.

To government agents and industries' environmental managers, on the other hand, the contamination represented a manageable risk, with relatively few substantiable impacts on the health of residents. Moreover, the best way to reduce risk was to implement cleanup activities, which the residents opposed. The agency officials identified themselves as engineers and scientists, and as public servants. Environmental managers also emphasized their professional role and their commitment to being "good neighbors." Both groups usually felt that the management of the conditions found in Alton Park and Piney Woods was best identified through professional expertise. They often characterized the residents as overly emotional and uninformed, and stuck in the past, harking back to problems that occurred 30 years ago (cite).

The frames each group brought to the issues tended to accentuate their differences, inhibit effective communication, and escalate conflict between them. Individual residents, activists, industrialists, and public officials lacked the skills to understand and communicate with each other. Equally important, residents and professionals both lacked the institutional and organizational support needed to engage in effective dialogue, to reconsider the frames and positions held by their communities or agencies, or to communicate effectively with each other, though each group needed the others in order to attain its own goals. They all saw few options for managing their differences. How might these parties have moved forward?

Before answering this question, consider a second case, that of Doan Brook (Kaufman, 2002). The brook crosses Cleveland and two of its inner suburbs. The Doan suffers from ailments common to urban watersheds, due to its surroundings -- high building density, paved surfaces, poor gardening practices, combined sewer overflows and an altered course prone to flooding (most of the problems are not readily apparent.)

Despite widespread affection for this natural feature unique in the city, few citizens and interest groups are aware of the need to manage the watershed and of the risks and costs involved in delaying restoration. Conflict over Doan Brook is usually muted, flaring up only when The Nature Center (a local non-profit), or a municipal agency attempts to implement unpopular measures to resolve a water quality or habitat problem. Hence, for close to 25 years, efforts to manage this deteriorating watershed have amounted to few, if any, implemented decisions. On the whole, environmental damage continues unchecked for lack of leadership, mandate, and funding for action.

In 1999, failure to comply with USEPA-mandated water quality standards prompted the collective revisiting of the watershed management challenge. The local Sewer District initiated a year-long process of consulting stakeholders on goals for the brook, preferred ways of attaining these goals, and of complying with USEPA regulations. Remedies, including engineered solutions and behavioral changes, were expected to be very costly.

The consultation process, unfortunately, did little to engage stakeholders in resolving the brook's problems. While participants highly valued the consultative process, they focused almost exclusively on understanding the problem and did not work through their differences or develop concrete solutions. The participants in this dialogue process did not frame themselves as responsible for the final decisions. In fact, most (residents, interest groups, and even some

government agency staff) framed Doan Brook as someone else's responsibility and imagined themselves as having little or no effect on the eventual decision.

To suburban residents, the problem and the solution rested with Cleveland residents, elected officials, and agency staff. They viewed these groups as more empowered than they, but difficult to reach. Cleveland residents, in turn, perceived suburban stakeholders both to cause the watershed's problems and to be the prime beneficiaries of efforts to improve the watershed, while city residents bore the brunt of poor water quality and flooding. They did not feel welcome at the table, and suspected their concerns would not be taken into account.

The Doan Brook story has elements common to many environmental decisions: failure to build consensus for action, disguised as a neutral analysis, effectively leads to significant deterioration of a valued natural resource. The residents care for the brook, and may act individually to improve it. However, they have lacked the ability to represent meaningfully the interests of various community segments or to join forces with those able to act. For 25 years and even during the Sewer District's participatory process, those at the decision table represented only themselves. As a result, the participatory process would not necessarily have yielded decisions acceptable to the community at large. As in Chattanooga, we are left with the question: How might this community move forward?

Key Aspects of Civic Capacity

What is missing in our examples can be called civic capacity: the ability of groups in a community to engage effectively in a meaningful discourse that leads to mutually beneficial joint decisions. In the absence of such discourse, little progress can be made on problems that cut across several interrelated communities of place and of interests. The Chattanooga residents, trying to reduce health risks from industrial activities, needed to develop internal consensus and to work with government agencies at the local, state, and federal levels, as well as with industry

and environmental groups. Despite the many differences among the two cases, the spatial and interest communities in the Doan Brook watershed needed the same elements – internal consensus, and ability to relate to each other and to government entities.

Intra-group and inter-group capacity

Civic capacity is built on both intra-group and inter-group characteristics. Intra-group capacity entails the ability of a large number of individuals with shared interests, such as members of a community or members of an agency, to act in a united manner -- formulating vision, goals, and strategies, and acting to implement them. This capability translates into identifying leadership, ensuring followership, providing representation at tables where decisions are made, and having among group members a broad set of skills and resources (the most critical including communication and, for environmental disputes, technical competence). So for example in the Alton Park and Piney Woods case, neighborhood residents often worked at cross-purposes to each other, with some groups focusing on affordable housing, others focusing on education or economic opportunity, and still others on environmental protection. When issues cut across these areas of interest, as environmental toxics issues often do, each group tended to act independently, creating a cacophony of voices from within the community. The neighborhood as a whole lacked both the skills and the institutions to develop coherent goals. The Doan Brook case, on the other hand, had few leaders and almost no followers, with constituencies largely uninvolved and unaware of decisions made on their behalf, which they later either oppose or fail to support.

Intra-group capacity was also lacking in the governmental agencies involved in these issues. In Chattanooga, a wide range of local, state, and federal agencies were involved in the management of toxics in the community. While the agencies generally agreed in their

assessments, they rarely coordinated their efforts. Some analyses conducted by public health agencies happened years away from efforts spearheaded by environmental agencies to remediate toxics.

Inter-group capacity refers to a group's ability to operate effectively in its context, understanding government rules and procedures and legal aspects of their situation, and knowing where to find external resources and information, as well as assistance from political and other sources. It also entails the ability to enter coalitions and to communicate effectively to the larger public in order to secure allies. In Chattanooga, the Alton Park and Piney Woods neighborhoods were physically and politically cut off from the city. The neighborhoods confronted this reality (and the city) through protest and community organizing. This worked to raise awareness of the problems, but also created conditions that inhibited the resolving of the problems. For example, while community protest helped raise concerns about Chattanooga Creek in the USEPA, continued protest blocked USEPA's efforts to initiate cleanup. Also, opposition to the chemical firm's afterburner grew out of years of conflict between residents and the company.

Doan Brook communities also exhibited a long history of failure to communicate across boundaries, both inter-municipal and amongst a single municipality's service staff. The Nature Center tried repeatedly to bridge communities bordering the watershed, with events designed to bring residents to each other's territory. Yet bike and pedestrian paths do not connect the communities, Cleveland residents feel unwelcome in the suburbs, and suburbanites see themselves as more concerned with environmental quality than Clevelanders. The failure to see interests as shared translates into a lack of resolve to work together to restore and maintain the brook.

A spatial community that has adequate civic capacity – both intra- and inter-group – can see itself engaging in a decision-making process that includes conflict management modes acceptable to the other parties. In contrast, communities that lack the intra-group capacity may be unable to act to promote their environmental interests, or may do so sporadically, especially in times of crisis. Even communities with intra-group civic capacity may fail to be effective on their own behalf if they cannot get the attention of key agencies that can help with funding, enforcement, or cleanup efforts. Inability to make a convincing claim to the general public may mean inability to successfully claim a share of scarce local resources.

The Role of Frames in Civic Capacity

Frames play a role in both intra- and inter-group capacity. Frames contribute to, or undermine, capacity by filtering information and altering cooperative discourse. A wide array of frames -- including frames associated with identity (how I see myself), characterization (how I see others), risk (how I perceive risk) and technical information (what constitutes useful knowledge) -- alter perceptions among residents, activists, businesses, and public agencies involved in environmental protection. Similarly, conflict management frames (the options I see for resolving differences) shape a community's approach to dispute management and problem solving.

Identity frames may foster needed internal cohesion with like-minded individuals, but in conjunction with characterization frames used to interpret the actions of other parties, can also lead to an “us versus them” sentiment (cite) focusing on differences that can be very persistent and prevent productive civic discourse (Gray, 2002). It takes skill to recognize that someone you opposed in one context can be a useful ally in a new situation, bringing needed resources or skills. This focus on differences can also be fueled by the parties' risk and technical information frames (Burgess and Kaufman, 2003, in this issue; Elliott, 2003, in this issue). Residents may

believe that risks associated with a contaminated stream are high, based on local knowledge and experience of cancer, asthma, and miscarriages in the community; environmental professionals may indicate that the risks are within acceptable limits, based on technical analysis of contaminant concentrations and dose/response data. Parties engage in mutual delegitimization of others' perceptual, experiential, and analytic views of the problem. The result of these adversarial frames is further polarization and failure to communicate.

Yet, these frames and their accompanying dynamics are not immutable (Kaufman and Smith, 1999). In Alton Park throughout the late 1980s, incompatible frames held by residents and environmental professionals led to pervasive conflict. A series of problem-focused dialogues altered this dynamic, by cumulatively cultivating the community's capacity to engage in civic discourse over difficult issues. In Alton Park, individuals and groups capable of solving problems across community divides emerged slowly, with each success creating conditions that encouraged further efforts. Consider the establishment of a community advisory panel between residents and a chemical manufacturing firm after 25 years of conflict and animosity. The process was initiated only after two conditions emerged.

First, the city as a whole had completed a highly successful community visioning process. While this process did not involve either Alton Park residents or industrialists from this neighborhood, environmental activists and city-wide civic leaders did participate. These leaders encouraged both the residents and the industry to begin discussions, and worked with both groups to clarify the ways in which a community advisory panel might function, such that interests on both sides might be served. They helped both groups suspend their characterization of each other long enough to listen, and to design workable dialogue processes that acknowledged the concerns of both sides.

Secondly, the conflict between the residents and the company had reached a hurting stalemate (Zartman and Aurik, 1991). The industry's managers faced significant harassment at public hearings, yet the community rarely succeeded in blocking actions that the industry sought to initiate.

Both sides recognized that a better way was needed, but neither could initiate this on their own. Community institutions with greater capacity for civic engagement helped move the disputants toward productive dialogue. While participants remained highly suspicious during the first two years of working together, the dialogues led to concrete improvements that both sides recognized. This, in turn, led to an expanded network of contacts between the company and the residents, more proactive planning by industrialists and the community, and more effective problem-solving skills on everyone's part.

In Doan Brook, characterization frames rooted in past interaction also created obstacles to joint action between Cleveland and suburban residents. Moreover, although this frame changed rather quickly, the participating residents initially distrusted the Sewer District as well; they framed it as a powerful bureaucracy that was going about business as usual, implementing an engineered solution because that is what it did best. Toward the end of the consultative process, when it became clear that this was indeed the likely outcome, frames had changed and participants became receptive to technical arguments favoring such solutions. The frame change was likely brought about by the Sewer District's willingness to fund efforts to search for alternative solutions they evaluated using the criteria participants had generated. Their patient trust-building measures paid off within the group of stakeholders participating in the consultative process.

Interestingly, frames instrumental in rallying a group, and therefore contributing to intra-group civic capacity, may undermine joint decision efforts, thereby threatening inter-group capacity. In such cases, civic discourse cannot evolve unless the polarizing frames change to allow legitimization of other parties' views. However, such changes are difficult and take time and effort, especially through trust-building measures. In contrast, when inter-group capacity is high, community groups understand the need for joint action and often are less willing to negatively frame those with whom they plan to engage in civic discourse. Identity and characterization frames are more inclusive, and parties do not so readily discount risk perceptions different from theirs.

Inter-group capacity also affects conflict management frames. When spatial communities lack institutions and mechanisms to support civic discourse, parties often imagine a narrow range of decision-making and conflict management options. They feel constrained to adopt adversarial tactics, even if collaborative processes are likely to yield better decisions. In contrast, a community with strong inter-group civic capacity is better able to imagine solutions, explore alternative strategies, identify resources, and build effective coalitions. It will also tend to see itself in control and able to meet others' interests in order to secure its own. Thus, parties that lack avenues for civic discourse often feel embattled or victimized. These parties frame other institutions and parties as untrustworthy and as having interests incompatible with their own, and frequently choose rights-based actions such as civil disobedience, protest, or law suits, while blaming these actions on the unwarranted behavior of other groups. Parties in communities with greater inter-group civic capacity might instead explore negotiation, consensus building, and other dialogue-based strategies, framing themselves and others as able to effectively partner joint solutions.

In the Alton Park case, many of the participants in the community advisory panel were leaders of community groups that had previously engaged in direct confrontation with industry and government agencies for decades. These participants did not give up their advocacy role when they entered into the dialogue, nor did they give up confrontation while in dialogue. Rather, they and the industrialists each learned ways to short-circuit escalatory cycles, and to work together to solve problems whenever possible. Flare-ups that did occur tended to lead to dialogue rather than protest, in large part because this proved to be a successful strategy for reducing toxics in the community. Moreover, success in this arena spread to related environmental problems. The long standing dispute between the USEPA and the residents over cleanup of the Chattanooga Creek eventually led to the creation of a second community advisory panel, again bringing together key leaders from the community with agency officials as a forum for working out differences.

The Doan Brook case shows a more tentative movement towards civic capacity. On the one hand, initial efforts at participation led the group to highly value the deliberative process, but for many the process of participating became more important than the goal of protecting the brook. The stakeholders participating in the Sewer District's consultative process did not effectively represent community constituencies. Instead, they "went along in order to get along." Many participants, who remained unable to incorporate technical information in their decisions, switched to trust frames. They opted for certain solutions not because they had effectively assessed the impact of these solutions on their values and concerns, but because they now trusted the Sewer District. Unfortunately, such choices that seem satisfying to the direct participants run the risk of appearing detrimental to others in their spatial community who did not undergo the same transformation from distrust to trust. The intra-group civic capacity of the spatial

communities sharing the Doan watershed was not affected either by the watershed crisis, or by the year-long deliberation over alternative solutions to the water quality problems, both of which went largely unnoticed.

At the same time, inter-group decision capacity did grow among participants. The Nature Center had for years promoted watershed protection with little success. With several elected officials, municipal service staff, and residents, the Center lent itself to a framing analysis to identify obstacle to their ability to plan and manage the watershed. From the framing analysis, these participants realized that most civic and agency leaders perennially expected that “someone else” would take charge. Each felt disempowered to act. In response, the group decided to form a watershed partnership that would actively promote education of constituencies and seek funding and technical resources to plan and manage the watershed. While its effectiveness at attaining these goals is a matter of future evaluation, the frame change and resulting actions bode well for the chances that Doan Brook will eventually be protected from further decline.

Case Lessons and Strategies to Enhance Civic Capacity

The examples of Chattanooga and Doan Brook provide insights into both the difficulties and importance of building civic capacity, and the conditions conducive to such capacity building. From these cases, we see that civic capacity can be enhanced when leadership and institutions are nurtured. We also note that the higher a community’s civic capacity, the more self-effective it is likely to perceive itself, and the more confident parties are in considering new frames and strategies in the light of new information. Thus, higher civic capacity is a distinct advantage in environmental decision making because such capacity promotes cooperative problem solving and implementation, in which participants react to information and incorporate it into their decisions.

We have proposed that a party's civic capacity entails both internal organization and ability to act in concert with other parties. Both may take time to develop and may be easily slowed down by incidents that undermine mutual trust or by any party's unilateral adversarial moves. Positive frames and confirmatory experiences enhance the chances that parties will conduct constructive discourse. However, developing civic capacity necessitates resources for training, facilitation, support of communication channels, access to information and its interpretation, and sustaining a communicative web over time. Expending these resources should be balanced against the costs of failing to develop constructive discourse and to engage in productive joint decision making.

Whose task should it be to foster the civic capacity of parties likely to engage in environmental conflicts? Who should fund such efforts? Who should work toward the sustainability of civic capacity and how? While parties themselves should seek to enhance their own capacity to effectively pursue environmentally related goals, it can be argued that environmental professionals engaged in work with parties in conflict should themselves be equipped with the skills to promote civic capacity. To begin, they should develop the ability to evaluate the state of civic capacity of a spatial community with which they work, in order to design a work strategy that recognizes the community's strengths and weaknesses. Information about how parties frame the conflict and each other, and the handling of their conflict, can be instrumental in such an assessment, as our examples suggest. Should the civic capacity of a party be found lacking, it may be in the interest of the environmental professional to work towards helping this party become a more effective decision-making partner, by shoring up its ability to organize and to engage others in civic discourse.

Table 1 depicts strategies available to environmental professionals contending with varying levels of civic capacity. Strategies depend on the parties' intra-group capacity and on the community's inter-group capacity. When intra-group capacity is low, efforts are needed to build the organizational, technical, and communicative capacities of disenfranchised stakeholders, enabling unorganized stakeholders to develop a coherent voice in the environmental decision-making process. When inter-group capacity is low, efforts should be directed at shoring it up. This may include focus on the identification of opportunities for cooperative inter-group decision making and of incentives for such cooperation, the development of institutions and the deployment of resources to support joint problem solving, and the building on small successes to create momentum toward the resolution of bigger problems. While these efforts often require leadership, skills, resources, and commitment that go beyond what environmental professionals can provide on their own, this evaluation of needs, accompanied by active encouragement and participation of environmental professionals is often essential for success. In this way, environmental professionals contribute to the long-term project of civic capacity building and sustainability, in order to manage and protect environmental resources.

Table 1. Intervention strategies based on conflicting parties' civic capacity and recognition of shared interests.

| INTER-GROUP CIVIC CAPACITY: INTRA- GROUP CIVIC CAPACITY: | LOW | HIGH |
|---|---|--|
| LOW | <ul style="list-style-type: none"> ▪ <i>promote simple processes designed to activate latent civic concern (e.g., visioning, charrettes, nature mapping)</i> ▪ <i>identify and reach out to residents and other parties, employing exploratory dialogue and active listening around specific measures</i> ▪ <i>identify short-term maintenance measures to prevent further environmental deterioration</i> | <ul style="list-style-type: none"> ▪ <i>identify key weaknesses and needs, particularly as seen by unstructured parties</i> ▪ <i>provide technical and institutional support to enable unstructured communities to self-organize</i> ▪ <i>create opportunities for small successes to grow from initial dialogues</i> ▪ <i>build on these successes by locating resources and supporting capacity building efforts</i> |
| HIGH | <ul style="list-style-type: none"> ▪ <i>identify unilateral actions parties are willing/able to implement to protect the environment</i> ▪ <i>identify and act upon key areas of interdependence where implementation requires shared resources</i> ▪ <i>encourage joint fact-finding and decision making where appropriate</i> | <ul style="list-style-type: none"> ▪ <i>engage in consensus building from the outset</i> ▪ <i>sustain civic capacity by nurturing institutions and mechanisms that foster civil discourse</i> |

Booher, D. E. and J. E. Innes. 2002. Network power in collaborative planning. Journal of Planning Education and Research **21**(221-236).

Beierle, T. C. and D. M. Konisky. 2001. What are we gaining from stakeholder involvement? Observations from environmental planning in the Great Lakes. Environment & Planning C **19**(4): 515-527.

Burgess, G. and S. Kaufman. 2003. Just the Facts Please: Framing and Technical Information. Environmental Practice (forthcoming; insert later).

Brehm, J. and W. Rahn. 1997. Individual level evidence for the causes and consequences of social capital. American Journal of Political Science **41**(3): 999-1023.

Couto, R. A. and C. S. Guthrie. 1999. Making Democracy Work Better: Mediating Structures, Social Capital, and the Democratic Prospect, University of North Carolina Press.

Elliott, M. 2002. When the Parents Be Cancer-Free: Community Voice, Toxics and, Environmental Justice in Chattanooga. In Making Sense of Intractable Environmental Conflicts: Concepts and Cases, R. Lewicki, B. Gray, and M. Elliott, eds., Island Press, Covelo, CA.

Elliott, M. 2003. Risk Perception Frames in Environmental Decision Making. Environmental Practice (forthcoming; insert later).

Gray, B. 2002. Framing of Environmental Disputes. In Making Sense of Intractable Environmental Conflicts: Concepts and Cases, R. Lewicki, B. Gray, and M. Elliott, eds., Island Press, Covelo, CA.

Innes, J. E. and D. E. Booher. 1999. Consensus building and complex adaptive systems: a framework for evaluating collaborative planning. Journal of the American Planning Association **65**(4): 412-423.

IyerRaniga, U. and G. Treloar. 2000. A context for participation in sustainable development. Environmental Management **26**(4): 349-361.

Kaufman, S. and J. Smith, 1999. Framing in land use disputes. Journal of Architecture Planning and Research.

Kaufman, S. 2002. Doan Brook: Latent Intractability. In Making Sense of Intractable Environmental Conflicts: Concepts and Cases, R. Lewicki, B. Gray, and M. Elliott, eds., Island Press, Covelo, CA.

McCool, S. F. and K. Guthrie. 2001. Mapping the dimensions of successful public participation in messy natural resources management situations. Society & Natural Resources **14**(4): 309-323.

- Mullen, M. W. and B. E. Allison. 1999. Stakeholder involvement and social capital: keys to watershed management success in Alabama. Journal of the American Water Resources Association 35(3): 655-662.
- Potapchuk, W. R. 1999. Building an infrastructure of community collaboration. National Civic Review 88(3): 165-170.
- Rydin, Y. and M. Pennington. 2000. Public participation and local environmental planning: the collective action problem and the potential of social capital. Local Environment 5(2): 153-169.
- Sirianni, C. and L. Friedland. 2001. Civic Innovation in America: Community Empowerment, Public Policy, and the Movement for Civic Renewal. Berkeley, University of California Press.
- Sobels, J., A. Curtis, et al. 2001. The role of Landcare group networks in rural Australia: exploring the contribution of social capital. Journal of Rural Studies 17(3): 265-276.
- Susskind, L. and J. Cruikshank, 19. Breaking the Impasse. Jossey-Bass (I think).
- U. S. Environmental Protection Agency. 1999. Community-Based Environmental Protection (CBEP): Accomplishments and Value-Added of EPA CBEP Projects. Washington, DC, U.S. Environmental Protection Agency.
- U. S. Environmental Protection Agency. 2000. Building the Environmental Capacity of Rural and Small Communities: Lessons Learned from the Technical Assistance for Community-Based Environmental Protection Project (Draft). Washington, DC, U.S. Environmental Protection Agency.
- Zartman, I. W., & J. Aurik. 1991. Power strategies in de-escalation. Timing the De-Escalation of International Conflicts. L. Kriesberg and S. J. Thorson. Syracuse, NY, Syracuse University Press: 152-181.

Figure 1

