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Organizational Dynamics of Watershed Partnerships: A Key to Integrated Water Resources Management

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One of the most significant institutional innovations in natural resources and environmental management over the past decade or so has been the widespread emergence and growth of collaborative and partnership-based watershed initiatives (John 1994, Griffin 1999, National Research Council 1999, Sabatier et al. 2005). These initiatives vary from traditional approaches and are used across multiple water management scales. Their distinguishing hallmarks are: decentralized and shared, devolved decision-making; collaboration; participatory engagement of a wide array of stakeholders; and expanded goals concerned with broader ecosystem sustainability (Born and Genskow 2000, Weber 2000, Koontz et al. 2004). In many cases, these watershed initiatives form a place-based nexus for multiple actors attempting to address complex natural resource management issues, and they have become governance mechanisms for implementing integrated water resource management. As watershed planning and management evolves to accommodate multiple interests working in partnership to achieve more integrated and coordinated management, challenges have emerged with regard to predicting success and evaluating effectiveness of these initiatives (Bellamy et al. 1999, Kenney 2000, Leach and Pelkey 2001, Lubell et al. 2002, Conley and Moote 2003).

We would like to focus attention on one aspect of many watershed initiatives—their highly dynamic organizational character and functioning in time and space. In many instances, the efforts and results related to watershed management are not simply the result of the workings of a singular entity or partnership, but rather are the aggregation of activities within an organizational field or network over time (Godschalk 1992, Alexander 1993, Korfmacher 2000). As noted by Imperial and Hennessey (2000):

> every watershed is 'managed' by a wide range of governmental and non-governmental actors, whose decisions influence the health and integrity of ecological systems.The challenge for a watershed governance program is to get this portfolio of actors and programs to work together more effectively. Watershed management should therefore be viewed as an effort to build, manage, and maintain inter-organizational networks; in other words, to develop an institutional ecosystem...

Failure to fully understand and assess this broader institutional landscape or "ecosystem"—that is, the organizational field that may evolve through time versus a specified partnership entity—will impair evaluations. Without a better understanding of organizational dynamics, erroneous conclusions can be reached regarding the effectiveness and success of partnership initiatives in watersheds. A case deemed to have resulted in failure may in reality be a success or vice versa. Institutional support provided by prior partnerships significantly enhances the number and activity level of later partnerships within a watershed (Lubell et al. 2002). While a partnership may have ended "unsuccessfully," its role in building social capital and capacity for future problem-solving (Korfmacher 2000, Putnam 2000, Chess and Gibson 2001) can only be appreciated by a contextual understanding of the watershed institu-

tional ecosystem.

After presenting a summary characterization of "new" collaborative watershed approaches and a brief review of efforts to evaluate them, we argue that those concerned with integrated water resource management should take a more expansive view of the organizational space in which integrated initiatives take place. We conclude with implications for integrated management efforts and future research.

Watershed Partnerships as Vehicles for Integration and Governance

Watershed initiatives have grown rapidly over the past decade (Kenney 2000, Moore and Koontz 2003). Partnership and collaborative efforts have come to refer to a wide variety of institutional arrangements that include informal, ad hoc coalitions, formally structured interagency agreements, loosely configured citizen-dominated efforts, and formally incorporated non-profit organizations. These initiatives differ significantly from traditional single-agency-dominated efforts that may have solicited limited or token advisory input from stakeholders. Although represented by varied institutional arrangements, contemporary watershed partnerships generally share the following characteristics (Born and Genskow 2001):

1. They use watershed boundaries (at various scales) as units for analysis and management.
2. They address a more comprehensive scope of issues, including water quality, water use, habitat, and goals related to healthy ecosystems.
3. Multiple local and non-governmental interests participate meaningfully and share influence over decisions.
4. Their decision making processes draw upon biophysical science as well as social and economic information and local knowledge, including perspectives on previous management efforts and site specific contextual information.
5. They are oriented toward collaborative planning and problem solving, which promotes consensual, negotiative discussions and specific situation-appropriate management actions.

What is "new" about contemporary watershed partnerships is the combination of these characteristics and features. Watershed partnership approaches have roots in more than a century of experimentation and learning and draw upon the evolution and "lessons learned" from water resources planning, collaborative environmental planning, and citizen involvement processes in natural resources management, place-based management, ecosystem management, decentralization, and devolution of governmental decision-making processes (Kenney 1999, Koontz et al. 2004, Sabatier et al. 2005).

As with integrated approaches generally, contemporary watershed initiatives have been widely heralded for their potential to leverage resources, gain wide-ranging support, and address complex resource management challenges that defy unilateral action (John 1994, Hooper et al. 1999, Weber 2000). Partnership approaches have also been challenged for their inefficiencies and their potential to co-opt local resource management decisions (McCloskey 1996, Amy 1997, Getches 1998, Walker and Hurley 2004). Numerous researchers have identified the need for a better understanding of the phenomenon, including Conley and Moote (2003) who state:

> As proponents of collaborative approaches to resource management, we are unnerved by the ways in which these processes have been portrayed as a cure-all. We are similarly troubled by knee-jerk criticisms of collaborative processes that are based on an opposition to collaboration in principle rather than evaluation of specific processes and outcomes. Thoughtful evaluation of the effectiveness of different collaborative processes is central to understanding what can and cannot be expected of such processes and how they can be integrated with existing institutions.

Evaluation Challenges

We agree that developing and testing systematic evaluation approaches for assessing the efficacy of the growing watershed partnership movement is essential if we are to learn from experience and extend the concept of "adaptive management" to institutional design for watershed management. A growing body of research addresses the emergence, characteristics, support needs, and impacts of watershed partnerships, yet systematic and thoughtful evaluations of their effectiveness present

a series of challenges and evaluation dilemmas.

One significant challenge is conceptualizing the criteria for measuring successes and accomplishments of watershed and related integrated partnerships. Solutions to watershed problems or the deployment of watershed protection measures are more likely to be measured in decades than years, and it is unlikely that measurable improvements in environmental quality—an explicit goal of many efforts—will be evident in the short term (Born and Genskow 1999, Coughlin et al. 1999, National Research Council 1999, Huntington and Sommarstrom 2000). Recognizing this, researchers have explored precursory steps to demonstrated environmental quality improvements related to organizational processes (Imperial 1999, Margerum and Born 2000, Margerum 2002), social capital (Mullin and Allison 1999, Leach et al. 2002, Leach and Sabatier 2005), and requisite management practices (Bellamy et al. 1999). Further, participants' perceptions of success vary, and incorporating multiple goals into watershed initiatives can translate to varied expectations and levels of satisfaction with outcomes (Leach 2000, Moore and Koontz 2003).

A second challenge relates to attributing accomplishments to the watershed initiative. Watershed settings include many confounding influences and the complexity of contextual factors limits the ability to ascertain causality between partnership actions and water resource policy outcomes (Born and Genskow 2000, Sabatier et. al 2005). Even when considering intermediate measures, researchers must consider how benefits can be attributed to the integration versus individual agency or organizational action (Bellamy et al. 1999, Conley and Moote 2003). Additionally, the intermediate measures themselves may not be linked definitively to desired outcomes.

A third formidable challenge lies in determining what to evaluate. What constitutes a watershed partnership or integrated effort, and at what point is meaningful assessment possible? Evaluation must address the issue of partnership age, longevity, or maturity—differentiating immature or emergent efforts from established or mature ones (Born and Genskow 2000). There is no agreement on the expected duration of watershed partnerships—are they short-term or long-term, temporary or permanent entities? (Lubell et al. 2005). Evaluation is difficult where the partnership to be evaluated is not a long-term, continuous endeavor (Leach and Pelkey 2001), and thus efforts tend to focus on mature durable partnerships, viewing those that have met a relatively early demise as "failures." Most evaluation efforts treat the group or collaborative entity as the unit of analysis (Conley and Moote 2003). However, in the search to apply statistical analysis using large-n studies, definitions of watershed partnerships can become overly restrictive. Necessary filtering and focusing only on mature, long-term, defined partnerships risks losing the contextual richness of the changing institutional setting—thereby missing the precursors of successful watershed management over time.

The diverse forms of watershed partnerships commonly change as time passes and the path of metamorphosis can lead to highly varied, multi-modal watershed management institutional arrangements. These entities and their outputs can confound the evaluation of a narrowly-conceived, tightly-specified watershed partnership. Recognizing and understanding the organizational dynamics of watershed initiatives provides important insights for integrated management and evaluation.

Dynamic Watershed Organizations

The fact that watershed partnerships change and evolve from their formative stages over time is certainly not new. Partnerships often focus on one initial problem before expanding their interests to other issues (Selin and Chavez 1995, National Research Council 1999). They may increase the scope of their activities or geographic concern (Huntington and Sommarstrom 2000), and composition and participation change (Selman 2001). Watershed management partnerships may move across an organizational spectrum from loosely organized and unfocused to very formally structured and focused with a charter, bylaws, nonprofit status, officers and committees, and staff (Margerum and Born 2000). Such increased formality may be necessary for recognition, legitimacy, and receiving financial support (MacKenzie 1996, Born and Genskow 2000), yet not all partnerships will progress incrementally toward more formal structural arrangements. As we have noted elsewhere (Born and Genskow

2000):

> Watershed partnerships, particularly with regard to the non-governmental and citizen dimensions, generally do not have the comparatively enduring and stable character of governmental agencies and units...they are dynamic and nonlinear; they ebb and flow, become dormant or extinct, and resurface with old and new participants under new names and organizational forms. Furthermore, the balance of responsibility within the watershed partnership between governmental and non-governmental participants can shift markedly during the evolution of the partnership and the execution of its programs...

Partnerships may form or undergo change as the result of new governmental programs, new funding opportunities, or the emergence of new leaders. Changes in variables such as organizational name, structure, degree of formalization, mission, scope, and breadth of participation can frustrate evaluation. However, as suggested by Figure 1, it is the total array of activities occurring and evolving within the space over time that comprises a watershed management effort. Attempts at integration depend on effectively understanding, connecting, and coordinating actions within this dynamic institutional space (Born and Sonzogni 1995, Imperial and Hennessey 2000). Although globally relevant, we briefly introduce three examples from Washington and Wisconsin, United States, to illustrate dynamic partnership configurations in both large and small watersheds (see Table 1).

Dungeness

A series of temporally and spatially overlapping partnerships and planning initiatives in the Dungeness River Watershed over the past two decades aptly demonstrates the concept of a dynamic institutional space. Contemporary partnerships for this watershed, located on Washington's Olympic Peninsula, trace to the mid 1980's when a group of stakeholders, including county and tribal governments, convened in response to a funding opportunity to address water quality issues in a coastal bay. Intending to build upon that successful experience, the county government passed a resolution creating the Dungeness River Management Team (DRMT) to address a broader set of water resource issues, including irrigation withdrawals and in-stream flows for fish. This "first" Dungeness River Management Team stopped functioning within a few years because of a lack of progress addressing key issues and because new opportunities drew participants to other planning efforts. Those efforts were associated with newly developed regional water quality goals and a pilot state watershed planning program. The state pilot linked the Dungeness with a neighboring watershed and involved a combined consensus-building

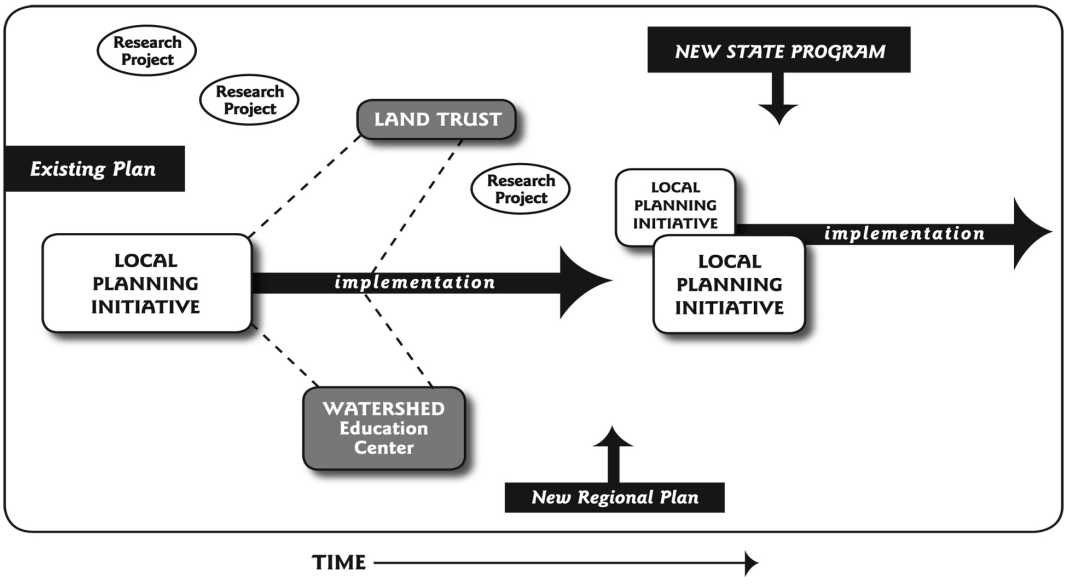

Figure 1. Watershed initiatives are comprised of the full array of activities over time.

Table 1. Watershed examples of organizational dynamics.

Dungeness River Watershed, Washington, USA
Area: 300 mi^2
Major Issues: Water allocation, fisheries, minimum in-stream flows, habitat, water quality
Transitions: Several significant shifts based on planning and issue-identification processes. Efforts between 1987 and 2000 include two incarnations of the Dungeness River Management Team (DRMT), a Dungeness River Area Watershed Management Committee, the Dungeness-Quilcene Regional Planning Group, the Dungeness River Restoration Work Group. DRMT has also served as "lead entity" for additional state-funded habitat protection and planning efforts.
Precipitators: Water use conflict and funding opportunities for planning and management efforts.
Additional Information: Born and Genskow 2000

Tomorrow-Waupaca River Watershed, Wisconsin, USA
Area: 290 mi^2
Major Issues: Resource protection, ground water quality
Transitions: Citizen initiation of a multi-interest Tomorrow-Waupaca Watershed Association, which transitioned into an advisory and oversight "steering committee" for a government funded watershed management project.
Precipitators: Initial perception of threat and opportunity for project funding.
Additional Information: Born and Genskow 2000

Yakima River Watershed, Washington, USA
Area: 6,155 mi^2
Major Issues: Water allocation/use, fisheries, minimum in-stream flows, water quality.
Transitions: Multi-interest initiated watershed council developed consensus plan. Partners secured funding for additional work through a key partner, which redirected the effort away from the consensus plan and disempowered the council.
Precipitators: Water use conflicts and recognition of threats; funding opportunities.
Additional Information: Born and Genskow 1999, Genskow 2001, Kent 2004, Woolley and McGinnis 1999.

process with formal caucus groups representing a variety of watershed interests.

This series of intensive interactions with overlapping participation led to several important developments. One of the most significant was an agreement between irrigators and the Washington Department of Ecology regarding water withdrawals and in-stream flows. The agreement, which was later institutionalized through a formal Memorandum of Understanding, created trust water rights for the Dungeness, restored flows to the river, reduced uncertainty regarding tribal claims to in-stream flows, and enabled substantial assistance for irrigation efficiency improvements, partly through federal habitat improvement grants through the tribal government. The various planning efforts also led to the creation of a river and watershed education center, funded in large part through private donations. Upon completion of the state pilot planning effort, the county and tribal governments reconstituted the abandoned Dungeness River Management Team to oversee implementation of multiple plans and coordinate information and activities about a wide range of issues related to the Dungeness River and watershed, including salmon restoration, water quality, ground and surface water flows, development rights, and private property rights.

Tomorrow-Waupaca

The Partnership for the Tomorrow-Waupaca River and watershed emerged from a large meeting, convened by a private citizen, of resource managers, researchers, and other citizens with interests in the river and watershed. The individual who initiated the meeting was a riparian landowner and angler who had worked with a local conservation chapter to improve habitat along stream banks on her property. Interested in working with others in different parts of the river, she began a coordination effort for the river and watershed that led to the formation of the Tomorrow-Waupaca Watershed Association (TWWA), a group comprised of interested citizens supported by a broad base of agency and research advisors. Through the efforts of its participants, the partnership transformed from its origins as a citizen-driven non-governmental organization into a formal, multi-million-dollar watershed

project operated by local government with state funding, and continued oversight from a multi-interest steering committee. Tomorrow-Waupaca Watershed Association played an instrumental role in the watershed's selection for a project addressing non-point source pollution issues, then effectively disbanded and absorbed into the project's official steering committee. Through the project, partners address water quality, lead watershed and conservation educational efforts for key target audiences, provide financial assistance for landowners and municipalities, monitor and research, and provide technical assistance. Over time, as the watershed project has become less of a partnership, a new river group has formed to re-engage broad citizen interest.

Yakima

During its four years of activity, the Yakima River Watershed Council (YRWC) was considered a model of highly successful, grassroots, collaborative, watershed interaction for the 6,000 square mile river basin (Born and Genskow 1999, Woolley and McGinnis 1999). Within a very short period, the council and its related partnerships suddenly imploded and partially reconstituted as a new planning initiative with a reduced set of interests. While many individual and overlapping efforts continued, the breadth of coordinative and integrated elements diminished greatly.

Yakima River Watershed Council formed in 1994, following a drought in an irrigation-dependent basin considered critical to the restoration of the Columbia River Basin fishery, with the intention of developing and implementing a consensus-based watershed management plan (Genskow 2001). The council was inclusive, consensus-driven, and served as a forum for raising and debating substantive issues in watershed management among a broad and diverse group of interests. Yakima River Watershed Council raised more than $600,000 in private contributions, supported a four-person staff, engaged more than 100 people on committees that met frequently for three years, and made significant advances in generating consensus on recommended actions for basin water management. As part of this process, the Yakima River Watershed Council catalyzed formation of the Tri-County Water Resource Agency as an entity to coordinate the three watershed counties' interactions with respect to watershed council deliberations and to facilitate adoption of the Yakima River Watershed Council plan by watershed counties.

Toward the end of its existence, the Yakima River Watershed Council worked with Tri-County and other partners to successfully secure a sizeable, multi-year planning grant made available through a new state watershed law intended to support collaborative efforts such as those in the Yakima River Watershed. Partners had expected that the funds would enhance and finalize the council's ongoing three-year planning efforts and move toward implementation of their consensus product. Tri-County was the official grant applicant, and in a move that surprised most partners, when selected to receive grant funds, they by-passed the Yakima River Watershed Council, established a new planning entity, and hired a consultant to begin the planning process anew. Their decision undercut the Yakima River Watershed Council which, without the expected funds, immediately ended their operations. These actions alienated many of the key participants who had been active in the Yakima River Watershed Council efforts, including leaders from Native American, agribusiness, and environmental communities, leading to their withdrawal from any further collaborative interactions. In a very brief period of time, the sense of trust and optimism that had developed through the watershed council had evaporated. A final plan was released in 2003 without the support of key interests. Since its publication and the end of that planning process, several interests have reconvened in separate initiatives (Kent 2004).

These examples illustrate organizational and network shifts and their various effects. Each partnership functioned effectively in terms of setting joint priorities and taking actions. They all pursued integrated approaches to water resource management. Each developed networks, trust, and reciprocity, thereby creating social capital, which can increase or diminish with time (Hutchinson and Vidal 2004, Putnam 2000). Each effort produced one or more plans. However, analyses that excluded contextual dynamics would have missed key linkages, and may have led to erroneous conclusions about the watershed initiatives. Far from the failed effort suggested by demise of

the first Dungeness River Management Team, partnerships, planning, and implementation efforts in the Dungeness are a model of coordination and have led to significant accomplishments. Without knowledge of the intensive partnership efforts that set it in motion, the Tomorrow-Waupaca project could appear to be a standard agency-driven management project. The transition in the Yakima from a model collaborative initiative to a planning effort conducted in an environment of mistrust with a reduced set of participants, sheds light on the final plan recommendations and challenges of implementation.

Conclusions and Implications for Research

Collaborative and partnership-based watershed initiatives for addressing complex water resource issues are now commonplace. These efforts are often perceived as single coordinating basin-wide organizations, but we have suggested a broader view of the organizational space in which watershed initiatives take place. This expanded view recognizes the ebb and flow of partnership initiatives and looks beyond individual coordinating bodies to incorporate key individuals, previous partnership incarnations, and the social capital developed or diminished by related and previous efforts. Effectively addressing complex environmental management issues through integrated approaches requires understanding the contextual dynamics shaping the complex organizational field or "institutional ecosystem" in watersheds. In sum, partnerships that form around watersheds are fluid and often ephemeral, which has implications for how agencies, funding organizations, and local partners engage, evaluate, and provide resources for the efforts. We recognize the challenge of maintaining a long-term perspective in place and activities in an environment of close scrutiny, government accountability, short-term time expectations, and outcome-focused evaluations.

It is clear that more research is needed regarding the efficacy of this approach, assessing integrated initiatives, and the influences of their many derivative pieces. Studies involving large sample sizes and static cross-sectional cases have been undertaken, and while important for helping understand the effectiveness of integrated approaches, focus on points in time and often overlook critical long-term relationships and cycles. The difficulty of adequate evaluation absent these factors demonstrates a need for combining methods for careful and comparative longitudinal case-study research with statistical analyses of multiple watershed initiatives to accommodate organizational change and its potential influence on management outcomes. Such studies will be challenging and would benefit from coordination and shared approaches among multiple researchers.

Finally, partnership approaches and integrated initiatives are applied across the hydrological spectrum from very large river basins to small watershed systems. Dynamic organizational arrangements and variations in institutional ecosystems are relevant across that spectrum, reinforcing the importance of situational and place-based assessments. It is important for resource managers and funding organizations to recognize that formulaic assessments of "success" and inflexible prescriptive approaches to develop collaboration may serve most effectively as general "guidance" but have limited use for successfully undertaking integrated management efforts in watersheds.

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References

Alexander, E. 1993. Interorganizational coordination: Theory and practice. *Journal of Planning Literature* 7(4): 328-343.

Amy, D.J. 1997. *The Politics of Environmental Mediation.* New York: Columbia University Press.

Bellamy, J. A., G. T. McDonald, G. J. Syme, and J. E. Butterworth. 1999. Evaluating integrated resource management. *Society and Natural Resources* 12: 337-353.

Born, S. M. and K. D. Genskow. 1999. *Exploring the Watershed Approach: Critical Dimensions of State-Local Partnerships.* River Network.

Born, S. M. and K. D. Genskow. 2000. The watershed approach: An empirical assessment of innovation in environmental management. In National Academy of Public Administration. 2000. *Environment gov: Transforming environmental protection for the 21st Century.* Research Papers 7-10, Volume II.

Born, S.M. and K.D. Genskow. 2001. Toward Understanding New Watershed Initiatives: A Report From the Madison Watershed Workshop. University of Wisconsin-Cooperative Extension.

Born, S. M. and W. Sonzogni. 1995. Integrated environmental management: Strengthening the conceptualization. *Environmental Management* 19: 167-181.

Chess, C. and G. Gibson. 2001. Watersheds are not equal: Exploring the feasibility of watershed management. *Journal of the American Water Resources Association.* 37(4):775–782.

Conley, A. and M. A. Moote. 2003. Evaluating collaborative natural resource management. *Society and Natural Resources* 16: 371-386.

Coughlin, C. W., M. L. Hoben, D. W. Manskopf, S. W. Quesada, and J. Wondolleck. 1999. *A Systematic Assessment of Collaborative Resource Management Partnerships.* University of Michigan School of Natural Resources and Environment.

Genskow, K. D. 2001. *Critical Factors for Watershed Partnerships: An Analysis of Actions and Accomplishments.* Dissertation. University of Wisconsin-Madison.

Getches, D. H. 1998. Some irreverent questions about watershed-based efforts. In Brick, P., D. Snow, and S. Van De Wetering, (Eds.) 2001. *Across the Great Divide: Explorations in Collaborative Conservation and the American West.* Island Press: Washington, DC.

Godschalk, D. 1992. Negotiating intergovernmental development policy conflicts: Practice-based guidelines. *Journal of the American Planning Association* 58(3): 368-378.

Griffin, C. B. 1999. Watershed councils: An emerging form of public participation in natural resource management. *Journal of the American Water Resources Association* 35(3): 505-518.

Hooper, B. P., G. T. McDonald, and B. Mitchell, 1999. Facilitating integrated resource and environmental management: Australian and Canadian perspectives. *Journal of Environmental Planning and Management* 42(5): 747-766.

Huntington, C. W. and S. Sommarstrom. 2000. *An Evaluation of Selected Watershed Councils in the Pacific Northwest and Northern California.* Report for Trout Unlimited and Pacific Rivers Council.

Hutchinson, J. and A. C. Vidal (Eds.). 2004. Using social capital to help integrate planning theory, research, and practice. *Journal of the American Planning Association* 70(2): 142-192.

Imperial, M. T. 1999. Institutional analysis and ecosystem-based management: The institutional analysis and development framework. *Environmental Management* 24(4): 449-465.

Imperial, M. T. and T. Hennessey. 2000. Environmental governance in watersheds: The importance of collaboration to institutional performance. In National Academy of Public Administration. 2000. *Environment governance: Transforming environmental protection for the 21st Century.* Research Papers 7-10, Volume II.

John, D. 1994. *Civic Environmentalism: Alternatives to Regulation in States and Communities.* Congressional Quarterly Press: Washington, DC.

Kenney, D. S. 1999. Historical and sociopolitical context of the western watershed movement. *Journal of the American Water Resources Association* 35(3): 493-503.

Kenney, D. S. 2000. *Arguing About Consensus: Examining the Case Against Western Watershed Initiatives and Other Collaborative Groups Active in Natural Resources Management.* University of Colorado, Natural Resources Law Center.

Kent, C. A. 2004. Water resource planning in the Yakima River Basin: Development vs. sustainability. *Yearbook of the Association of Pacific Coast Geographers* 66: 27-60.

Koontz, T. M., T. A. Steelman, J. Carmin, K. S. Korfmacher, C. Mosely, and C. W. Thomas. 2004. *Collaborative Environmental Management: What Roles for Government?* Resources for the Future:

Washington, DC.

Korfmacher, K. S. 2000. What's the point of partnering? A case study of ecosystem management in the Darby Creek Watershed. *American Behavioral Scientist* 44(4): 548-564.

Leach, W. D. 2000. Surveying diverse stakeholder groups. *Society and Natural Resources* 15(7): 641-649.

Leach, W. D., and N. W. Pelkey., 2001. Making watershed partnerships work: A review of the empirical literature. *Journal of Water Resources Planning and Management* 127(6): 378-385.

Leach, W. D., N. W. Pelkey, and P. A. Sabatier, 2002. Stakeholder partnerships as collaborative policymaking: Evaluation criteria applied to watershed management in California and Washington. *Journal of Policy Analysis and Management* 21(4): 645-670.

Leach, W. D and P. A. Sabatier, 2005. Are trust and social capital the keys to success? Watershed partnerships in California and Washington. Pages 233-258 In Sabatier, P.A., W. Focht, M. Lubell, Z. Trachtenberg, A. Vedlitz, and M. Matlock (Eds.) *Swimming Upstream: Collaborative Approaches to Watershed Management.* MIT Press: Cambridge, Masachusetts.

Lubell, M., M. S. Schneider, J. T. Scholz, and M. Mete. 2002. Watershed partnerships and the emergence of collective action institutions. *American Journal of Political Science* 46(1): 148-163.

Lubell, M, P.A. Sabatier, A. Vedlitz, W. Focht, Z. Trachtenberg, and M. Matlock. 2005. Conclusions and Recommendations. Pages 261-296 In Pages 233-258 In Sabatier, Paul A and others (Editors). 2005. *Swimming Upstream: Collaborative Approaches to Watershed Management.* MIT Press: Cambridge, Massachusetts.

MacKenzie, S. H. 1996. *Integrated Resources Planning: The Ecosystem Approach in the Great Lakes Basin.* Island Press: Washington, D.C.

Margerum, R. D. 2002. Evaluating collaborative planning: Implications from an empirical analysis of growth management. *Journal of the American Planning Association* 68(2): 179-193.

Margerum, R. D. and S. M. Born. 2000. A co-ordination diagnostic for improved integrated environmental management. *Journal of Environmental Planning and Management* 43(1): 5-21.

McCloskey, M. 1996. The skeptic: Collaboration has its limits. *High Country News* 28(9): 7.

Moore, E. A. and T. M. Koontz. 2003. A typology of collaborative watershed groups: Citizen-based, agency-based, and mixed partnerships. *Society and Natural Resources* 16: 451-460.

Mullin, 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.

National Research Council. 1999. *New Strategies for America's Watersheds.* Washington: National Academy Press.

Putnam, R. 2000. *Bowling Alone: The Collapse and Revival of American Community.* Touchstone/Simon & Shuster: New York.

Sabatier, P. A., W. Focht, M. Lubell, Z. Trachtenberg, A. Vedlitz, and M. Matlock (Eds). 2005. *Swimming Upstream: Collaborative Approaches to Watershed Management.* MIT Press: Cambridge, Massachusetts.

Selin, S. and D. Chavez. 1995. Developing a collaborative model for environmental planning and management. *Environmental Management* 19(2): 189-195.

Selman, P. 2001. Social capital, sustainability and environmental planning. *Planning Theory and Practice* 2(1): 13-30.

Walker, P. A. and P. T. Hurley. 2004. Collaboration derailed: The politics of "community-based" resource management in Nevada County. *Society and Natural Resources* 17: 735-751.

Weber, E. P. 2000. A new vanguard for the environment: Grass-roots ecosystem management as a new environmental movement. *Society and Natural Resources* 13: 237-259.

Woolley J. T. and M. V. McGinnis. 1999. The politics of watershed policy making. *Policy Studies Journal* 27 (3): 578-594.