Watershed Groups Literature Review

OWEB staff reviewed 14 studies of watershed councils and natural resource collaborative partnerships published between 2001 and 2011. Staff considered the studies' conclusions in developing the proposed new criteria for council support grants. Below are common themes and conclusions from the literature. The list of articles, including the citation, abstract, and a few bulleted key points from each paper can be found at **http://www.oregon.gov/OWEB/GRANTS/pages/council_support_apps.aspx**

Characteristics of successful organizations

- Characteristics include: 1) Successful leveraging of financial and social resources; 2) Recognition they are more powerful together than alone, and large change often requires collaborative, collective action; 3) Are adaptive; and 4) Have developed enduring, diversified financial support.
- Organizations with stronger organizational processes, including action plans, do a better job implementing projects with the highest restoration value.

Indicators of success

- Common theme: it is difficult to establish a common metric of effectiveness for watershed groups because of the diversity of problems and conditions they address. Common factors of a successful watershed council or collaborative:
  - Clear goals and mission of the organization
  - Effective leadership
  - Human and social capital
  - Representativeness of the watershed
  - Ability of the organization to reach agreement among stakeholders
  - Implementation of restoration, monitoring, and outreach/education projects (effectiveness should consider the success of the group's educational, social, community engagement, and restoration missions)
- Effectiveness of a watershed council is not measured by the success of particular restoration actions, but by determining if the organization has the institutional assets that are needed for obtaining those actions.
- Collaboration among watershed councils leads to more effective resource management and greater restoration impact.

Membership

- Homogeneous watershed councils are less likely to complete an assessment or an action plan, but are likely to implement restoration projects. Heterogeneous councils are likely to complete an assessment, action plan and implement restoration projects based on sound science.
- Councils with a large membership that use a variety of techniques to increase membership are more successful at leveraging other funding sources.

Scale

- If watershed groups focus on too narrow an area they may ignore many of the causes of the problems they are trying to address.
- Effectiveness at achieving a watershed council's mission is higher in larger watersheds, suggesting that the complexity of a larger watershed is not an obstacle to success.
- The state (Oregon) does not have enough money to cover the administrative costs for all watershed councils and funding many smaller watershed councils seems counterproductive to creating effective councils.
- Recommendation for two-level approach to council structure
  - A regional council with a decision making board that coordinates broad, regional policy planning work, competes for grants, and enables higher-level decision makers to be at the table.
  - The second-level, or project level, would be a local council that uses a consensus making approach and engages in very local outreach, community engagement, and organizes local project support.

1. Collaborative Partnership Design: The Implications of Organizational Affiliation for Watershed Partnerships

Bidwell, Ryan D. and Clare M. Ryan. 2006. Society & Natural Resources 19(9): 827-843

Collaborative watershed partnerships are a common strategy for addressing complex natural resource management decisions. Despite a large literature surrounding their procedural strengths and weaknesses, little theory regarding collaborative partnership design is available to guide policymaking and implementation efforts. This study investigated the relationship between partnership structure and activities using interview data from 29 of Oregon's watershed partnerships. Confirming previous research, partnership composition is related to outcomes. Further exploration reveals that organizational affiliation is related to both composition and activities. Independent partnerships were more likely to conduct scientific assessments or plans, while agency-affiliated partnerships focused primarily on restoration projects. Additional findings suggest that independent partnerships develop priorities internally, while agency-affiliated partnerships tend to adopt the strategies of their parent organization. Diverse participation, incentives, and capacity are identified as critical design considerations for collaborative partnerships.

- In Oregon watershed councils fall into two broad categories: 1) those affiliated with an existing agency such as an SWCD, as a parent organization and 2) “independent” partnerships with no parent organization affiliation.
- Homogeneous watershed councils are less likely to complete an assessment or an action plan, but are likely to implement restoration projects. While heterogeneous councils are likely to complete and assessment, action plan and implement restoration projects.
- Independent councils are more likely to have diverse memberships than organizations affiliated with a parent organization.
- Independent councils are more likely to implement restoration projects based on science while councils affiliated with a parent organization tend to be more opportunistic.
- Diverse participation in watershed councils is critical if the objective is changing watershed resources and not maintaining the status quo.

2. Collaborative Watershed Groups in Three Pacific Northwest States: A Regional Evaluation of Group Metrics and Perceived Success

Chaffin, B.C., R.L. Mahler, J.D. Wulfhorst, and B. Shafii, 2011. Journal of the American Water Resources Association 48(1): 113-122.

Watershed management through collaborative groups has become important throughout the United States over the past two decades. Although several studies of Oregon and Washington watershed groups exist, a definitive regional analysis of Pacific Northwest (PNW) watershed groups’ success is lacking. This paper uses data collected from a single survey instrument to determine the status, structure, and success of watershed groups in Idaho, Oregon, and Washington, respectively. Results indicate that watershed group member satisfaction with elements of group structure correlates with levels of perceived group success. Strong leadership within a group and a clear mission statement also indicate higher levels of perceived success. Contrasting realized successes among PNW watershed groups with metrics of perceived success constructed from survey data define watershed groups’ missions and goals and is validated by analysis of the Washington State planning groups’ responses. Overall, PNW watershed groups identified themselves as largely successful. Therefore, the structure, function, and operation identified as characteristic of PNW

watershed groups could be used as a model for developing watershed group programming in regions with similar conditions.

- Key factors for success
    - Leadership
    - Clear mission
    - Clear goals

3. Collaborative Environmental Decision Making in Oregon Watershed Groups: Perceptions of Effectiveness

Dakins, Maxine E., Jeffery D. Long, and Michael Hart. 2005. Journal of the American Water Resources Association. 41(1): 171–180.

Collaborative watershed groups have formed at a significant rate throughout the United States in the last decade. Data on these groups, however, has been largely anecdotal and lacking in rigorous examination of the relationship between group formation, membership, process, and group effectiveness. Using a mail survey, Oregon watershed group participants were asked to identify who initiated the formation of the group, how efficiently the group formed, how the group determines membership, what decision making method the group uses, and how members perceive the group's effectiveness. Findings indicated that a majority believe that, because of their participation in a watershed group, they better understand issues in the watershed and the perspectives of others, but less than half believe that relationships with government decision makers or physical conditions in the watershed have improved. Members of citizen initiated groups rated their groups higher than government initiated groups on addressing difficult or controversial issues. Members of groups that use consensus responded most positively on whether the group gives fair consideration to dissenting opinions. Overall, groups with restricted membership systems rated themselves lowest on involving key decision making groups, timeliness in addressing issues, and overall effectiveness. These results raise concerns about this type of group membership system.

- Group effectiveness should consider the success of the group’s educational, social, community engagement, and restoration missions.
- It is difficult to establish a common metric of effectiveness for watershed groups because of the diversity of problems and conditions they address.
- Groups with open membership systems perceived themselves as being the more effective than closed membership systems.

4. Tune in, Turn off, Drop out: A Study of Stakeholder Attrition from Oregon Watershed Council

Ekins, James Patrick, A Thesis Presented to the Department of Planning, Public Policy, and Management and the Graduate School of the University of Oregon in partial fulfillment of the requirements for the degree of Master of Community and Regional Planning, June 2002

While much speculation surrounds the problem of attrition from watershed councils, no formal research on the problem appears to exist. Planners are increasingly involved in council activities and are recruited for coordinator positions by some watershed councils. Getting representatives to the table and keeping them there is a critical task that troubles many council coordinators.

Therefore my research question is: why do people drop out of active participation in watershed councils?

My research design consists of 20 qualitative structured conversations to record and identify themes for which people drop out of substantive participation from Oregon watershed councils. I use a benchmark of "substantive involvement" to limit my search and be more specific in asking for dropouts. The interviews have revealed three areas of concern. These are 1) efficiency *(of the decision making process)*, 2) volunteer time constraints, 3) potential volunteer over reliance for administrative work.

- Watershed council collaborative watershed management efforts move beyond visioning and planning to implementation of restoration efforts and education on resource issues. This differs from other participatory processes which focus more on facilitation of information exchange and the development of policy prescriptions.
- The state does not have enough money to cover the administrative costs for all watershed councils and there is a trend of councils splitting off and creating more and smaller councils. This approach seems counterproductive to creating effective councils.
- Recommended two-level approach to the council structure
    - The top-level would be a regional council that includes a decision making board that coordinates broad, regional policy planning work, competes for grants, and enables higher-level decision makers to be at the table.
    - The second-level, or project level would be a local council that uses a consensus making approach and engages in very local outreach, community engagement, and organizes local project support.

5. Creating High-Impact Nonprofits
Grant , Heather McLeod and Leslie R. Crutchfield. 2007. Stanford Social Innovation Review.

Conventional wisdom says that scaling social innovation starts with strengthening internal management capabilities. This study of 12 high-impact nonprofits, however, shows that real social change happens when organizations go outside their own walls and find creative ways to enlist the help of others.

- High impact nonprofits are successful at leveraging financial and social resources.
- High impact nonprofits recognize they are more powerful together than alone, and large change often requires collaborative, collective action.
- High impact nonprofits are adaptive.
- High impact nonprofits have developed enduring, diversified financial support.

6. Some community socio-economic benefits of watershed councils: A case study from Oregon
Hibbard , Michael and Susan Lurie. 2006. Journal of Environmental Planning and Management, 49(6):891-908.

One of the most significant junctures in natural resource planning and management in recent years has been the emergence of community-based natural resource management (CBNRM). The central focus of CBNRM is the environment, of course. However, it explicitly considers the local economy and community as well. It is a highly participatory approach to local, place-based

projects, programs and policies aimed simultaneously at environmental and community health. This paper is an attempt to shed light on what happens in the local economy and community as a result of pursuing a CBNRM strategy. Oregon has been in the vanguard in putting CBNRM into operation. A key example is the state's experience with local watershed councils and the state agency that supports them, the Oregon Watershed Enhancement Board (OWEB). Drawing from a larger study of Oregon's watershed councils, we ask and answer the questions: 'What direct contribution do watershed councils make to the local economies of Oregon?'; 'Do watershed councils contribute to 'civic engagement' in Oregon?' and 'Do they enhance individuals' and communities' capacity to engage in public issues beyond watershed council activities?'

- During this study period (July 1, 2001-June 30, 2004) on average each council support dollar generated an additional $5.09 for the local watershed economy.
- During this study period (July 1, 2001-June 30, 2004) they typical watershed council created $268,072 of local economic activity each year.
- If watershed councils focus with greater intention on the basic elements of community-based natural resource management 1) the environment, the local community, and the economy are interdependent and should be addressed simultaneously, 2) the local community is an important local of action, 3) collaboration among various parties is essential for effective resource management, they will have a greater restoration impact on their local environments.

7. Social Network Dynamics in Collaborative Conservation
Lauber, Bruce T., Richard C. Stedman, Daniel J. Decker, Barbara A. Knuth, and Carrie N. Simon. 2011. Human Dimensions of Wildlife. 16: 259-272.

Our research explored patterns in the development of social networks serving as the foundation for collaborative conservation. We conducted four case studies of conservation efforts associated with State Wildlife Action Plans in the United States. Data were collected on conservation objectives, key players, and their roles and interactions. Networks evolved through identifiable phases, which we labeled: organizational loyalty, reconsideration, partnership formation, and partnership utilization. During the partnership formation phase, networks had well-defined memberships, relied on structured opportunities for interaction and dialogue, and devoted attention to rules for dialogue. This phase was particularly important in contexts with multiple actors with diverse interests. In the partnership utilization phase, network memberships became more open, relied less on structured opportunities for interaction, and dialogue and decision-making became less formal. Our results can inform efforts to foster collaborative conservation.

- At the partnership utilization phase collaborative conservation groups tend to focus more on information sharing, funding, assistance, and other resources to benefit conservation actions than to focus on relationship building.

8. Watershed Councils East and West: Advocacy, Consensus and Environmental Progress
Lavigne, Peter, UCLA Journal of Environmental Law & Policy. 2004. 22(2): 301-319.

The views in this article originate from an experience I had at a national rivers conference in 1993, replicated dozens of times in the subsequent ten years, where conference participants were using

the term "watershed councils" in ways that assumed everyone was talking about the same thing. Few in the audience then (and it still is true today) knew the distinctive regional differences in structure, law and culture in organizations often called watershed councils from coast to coast in the United States. The broad scope of watershed institutional history in the United States includes (1) the analysis of the effects of forests on water supplies by George Perkins Marsh in Vermont in the 1860s, (2) the efforts to create the Adirondack Park in New York in the 1880s and 1890s, (3) and the seminal work of John Wesley Powell and his report on the arid lands of the great American West in 1878. (4) These are all antecedents of regional differences in governance and activism which endure to this day. More importantly, the nascent emergence of ecosystem law and policy in the twenty-first century (5) is best served by a clear understanding of common terminology and conceptual approaches.

In the spirit of cross-fertilization and further development of ecosystem law and policy, the views in this article are based on a twenty-year history of work in watershed ecosystem protection and restoration. Because of positions in local watershed organizations in New England and moving to regional work for American Rivers in the Northeastern United States and Canada, For the Sake of the Salmon in the Pacific Northwest, along with national and international work at River Network, as a private consultant, university professor, and at the Rivers Foundation of the Americas, I cannot address these issues as a disinterested academic. It is, however, the knowledge acquired through this diversity of experience and involvement that makes the analysis possible

- Eastern US watershed councils began as nonprofits with professional staff, dues paying members and generally educate and advocate for broad based river restoration and protection.
- Western US watershed councils began without nonprofit status, as multi-stakeholder organizations with few or no staff and volunteers, a consensus based decision making model and are highly dependent on government funding.
- Success does not necessarily depend on the watershed council model but whether there are clear goals, mission and vision, effective staff and appropriate technical support.

9. Making Watershed Partnerships Work: A Review of the Empirical Literature
Leach, William D. and Neil W. Pelkey. 2001. Journal of Water Resources Planning and Management, 127(6): 378-385.

Two main goals are achieved in this review of the empirical literature on factors affecting conflict resolution in watershed partnerships. The first is an assessment of two public policy theories relevant to partnership structure and function. The second is a set of practical suggestions for designing successful partnerships. The 37 available studies collectively identified 210 “lessons learned,” which were grouped into 28 thematic categories. The most frequently recurring themes are the necessity of adequate funding (62% of the studies), effective leadership and management (59%), interpersonal trust (43%), and committed participants (43%). Exploratory factor analysis was used to search for patterns in the lessons. Four factors were identified, which together explain 95% of the variance in the 28 themes. The first two factors emphasize the importance of (1) balancing the partnership's resources with its scope of activities; and (2) employing a flexible and informal partnership structure. The third and fourth factors offer modest support for two theoretical

perspectives on collaborative resource management—the alternate dispute resolution framework and the institutional analysis and development framework.

- One of the greatest challenges partnerships face is deciding how to allocate limited resources. According to this literature review partnerships should prioritize funding, securing and maintaining effective leadership, and encouraging participation from stakeholders who are cooperative and committed to the process above other organizational activities.

10. Collaborative Public Management and Democracy: Evidence from Western Watershed Partnerships
Leach, William D.. 2006. Public Administration Review, 66**(**s1):100–110**.**

This article provides a framework for assessing the democratic merits of collaborative public management in terms of seven normative ideals: inclusiveness, representativeness, impartiality, transparency, deliberativeness, lawfulness, and empowerment. The framework is used to analyze a random sample of 76 watershed partnerships in California and Washington State. The study reveals the exclusionary nature of some partnerships and suggests that critical stakeholders are missing from many partnerships. However, representation was generally balanced. National and statewide advocacy groups were absent from most of these place-based partnerships; public agencies were the primary source of nonlocal perspectives. Deliberativeness was relatively strong, indicated by the prevalence of educational and fact-finding strategies and participants' perceptions of respectful discussion and improved social capital. Half the partnerships had implemented new policies, and two-thirds of stakeholders believed their partnership had improved watershed conditions, indicating empowerment.

- The weakest criterion was representativeness and most watershed partnerships struggle with engaging all factions of a watershed community.

11. Stakeholder Partnerships as Collaborative policymaking: Evaluation Criteria Applied to Watershed Management in California and Washington
Leach, William D., Neil W. Pelkey, and Paul A. 2002. Sabatier, Journal of Policy Analysis and Management, 21(4), 645-670.

Public policymaking and implementation in the United States are increasingly handled through local, consensus-seeking partnerships involving most affected stakeholders. This paper formalizes the concept of a stakeholder partnership, and proposes techniques for using interviews, surveys, and documents to measure each of six evaluation criteria. Then the criteria are applied to 44 watershed partnerships in California and Washington. The data suggest that each criterion makes a unique contribution to the overall evaluation, and together the criteria reflect a range of partnership goals--both short-term and long-term, substantive and instrumental. Success takes time--frequently about 48 months to achieve major milestones, such as formal agreements and implementation of restoration, education, or monitoring projects. Stakeholders perceive that their partnerships have been most effective at addressing local problems and at addressing serious problems--not just uncontroversial issues, as previously hypothesized. On the other hand, they perceive that partnerships have occasionally aggravated problems involving the economy, regulation, and threats to property rights.

- The ultimate measure of success is a partnership's effects on physical, biological, or social aspects of the watershed. Measuring project implementation alone is not a sufficient measure of success.
- Measures of success
    - Perceived effects of the partnership on the watershed
    - Perceived effects of the partnership on social and human capitol
    - The extent of agreement reached among stakeholders
    - Implementation of restoration projects
    - Implementation of monitoring projects
    - Implementation of outreach and education projects

12. Collaborative Watershed Partnerships in the Epoch of Sustainability
Lubell, Mark, William D. Leach, and Paul A. Sabatier. 2009. Chapter in Toward sustainable communities: transition and transformations in environmental policy MIT Press. pgs 255-288

This chapter argues that collaborative watershed partnerships are one of the pillars of the sustainability epoch. It is hard to argue with this statement given the massive growth in watershed partnerships in the last twenty years, with concomitant excitement about the approach from scholars, practitioners, and politicians. Kenny (2001, 188) states emphatically that collaborative partnerships are "the most significant and exciting development in natural resources management since the environmental movement of the 1960s and 1970s."

- Watershed restoration requires three goals be met. 1) Building human and social capital, 2) Development and adoption of watershed management plans, 3) implementation of specific projects (restoration, monitoring, outreach, education).
- If watershed groups focus on too narrow of an area they may ignore many of the causes of the problems they are trying to address.
- Research has shown that perceived effectiveness at achieving a watershed councils' mission is higher in larger watersheds, suggesting that the complexity of a larger watershed is not an obstacle to success.

13. Building Partnerships: Social Networks in Watershed Restoration
Smith, Courtland L. and Jennifer Gilden. 2001. Department of Anthropology, Oregon State University.

Programs to restore salmon and water quality rely on watershed groups to build partnerships with diverse interests. A technique built on levels of statistical significance measures the success of three watershed councils in Oregon at creating links to related organizations. Findings show that watershed councils vary in their ability to create partnerships and watershed often miss important interests. Partnerships are most often found within farming, forestry, and environmental groups. Cities and towns are the government units most likely to be partners with watershed councils. County government, particularly county planning, and fishing groups are two interests that are often missing from watershed council partnerships. Next weakest is business organizations. The technique measures the breadth of partnerships by watershed councils and helps them focus membership efforts. This technique could be used in a wide variety of research settings.

- Councils with a large membership and that use a variety of techniques to increase membership were the most successful at leveraging other funding sources than just OWEB.

14. Assets to Move Watershed Councils from Assessments to Action

Smith, Courtland L. and Jennifer Gilden. 2002. Journal of the American Water Resources Association. 38(3): 653-661.

Oregon watershed council leaders, members, and government supporters are working to improve watershed health. To identify the institutional assets that are most helpful in taking action, we assemble the lessons learned from several synthesis studies. The institutional assets fall into seven categories – leadership, vision, trust, social networks, capital, power, and local and technical knowledge. Scientific knowledge, leadership, vision, and social networks are the assets most widely recognized and available. Power, trust, and capital are challenges that must be met for actions to be successful. Most people affected by watershed council actions can appeal to more powerful interests to get these actions changed. Trust, particularly of scientific recommendations and government, is lacking. This distrust limits opportunities for watershed council actions.

- "Our objective is not to measure the success of particular restoration, rehabilitation, or preservation actions, but to determine what institutional assets are useful for obtaining action."

- "As in most situations, the more assets present, the better. We found no evidence that having one particular asset assures action, nor that lacking one particular asset prevents it."

15. Evaluating the Effectiveness of Watershed Councils in Four Western States

Sommarstrom, Sari Ph.D., 2000. Proceedings of the Eighth Watershed Management Council Conference, November 27-30.

Expectations appear fairly high that stakeholder-based, local watershed groups can be effective in contributing towards the success of watershed restoration programs. Findings from a recent report, "An Evaluation of Selected Watershed Councils in the Pacific Northwest and Northern California" by Charles Huntington and this author, address the issue. The three-part study evaluated fourteen watershed councils from four western states. Its purpose was to analyze the relationships between conservation effectiveness and organizational attributes of the councils, and to develop conclusions about these councils' abilities to address regional watershed restoration needs. Part I used standardized metrics and criteria to evaluate the ecological basis and effectiveness of the councils' restoration programs. Part II applied a separate set of metrics and criteria to evaluate the structure, function, and planning processes of the same councils. The results of these two independent evaluations were integrated in Part III to determine if any relationship existed between the quality of their restoration programs and their organizational processes. Conclusions were drawn about the groups' accomplishments and limitations, and recommendations were presented about how they might be more effective in restoring watersheds. A list of positive organizational attributes is presented to assist new and existing watershed councils.

- Good council processes are critical to success and should not be an afterthought in council development.
- A council's focus on restoration project implementation should not overshadow the need to develop changes in the watershed community's attitude and personal approach, which will have a longer lasting impact on the watershed.

- Councils need to place a greater emphasis on building trust and understanding within the community, not just within the watershed council.
- Councils with stronger organizational processes, including action plans, do a better job implementing projects with the highest restoration value.