

Private Property, Public Resource, Public Problem: The Role of Participation in Developing Innovative Stormwater Management Approaches in Aiken, South Carolina

Chanse, Victoria

AUTHOR:

Victoria Chanse, Ph.D.
Assistant Professor
Clemson University
Department of Planning and Landscape Architecture
College of Architecture, Arts, and Humanities
306 Lee Hall
Clemson University
Clemson, SC 29634-0511

REFERENCE:

Proceedings of the 2008 South Carolina Water Resources Conference, held October 14- 15, 2008, at the Charleston Area Event Center.

Abstract. Public demand for more transparent processes and for increased civic involvement in planning drive increased participation in watershed management (Gutman and Thompson 1996, cited in Webler and Tuler, 2001: 30). This talk discusses the context of participation in watershed restoration in the U.S. and highlights a framework for detailing and assessing the participation process for the Sand River Restoration in Aiken, South Carolina.

Stormwater drains from the surrounding City of Aiken into the Sand River running through Hitchcock Woods, an urban forest of approximately 2,000 acres. The river has eroded over the past decades and has become a twenty-foot canyon despite years of debate and study. The three recent workshops led by Clemson University's Restoration Institute and Center for Watershed Excellence with participants from the Hitchcock Woods Foundation and the City of Aiken revealed some important lessons in approaching river restoration in urbanizing areas.

INTRODUCTION

Stormwater drains from the City of Aiken into the Sand River that flows through the Hitchcock Woods, an urban forest of approximately 2,000 acres. During the past decades considerable debate and research has occurred between the City of Aiken and the Hitchcock Woods Foundation related to land management and soil erosion. In the meanwhile, the river has continued to erode to point that the banks of the river are, in places,

twenty-feet high. This problem has reached critical proportions and needs to be resolved quickly. As part of this, Clemson University's Restoration Institute and Center for Watershed Excellence was invited to work with the City of Aiken and the Hitchcock Woods Foundation to develop an ecological restoration plan that would address stormwater runoff. One aspect of the ecological restoration is involving the key stakeholders, the Hitchcock Woods Foundation and the City of Aiken staff, in participatory workshops to develop and decide upon a restoration approach.

Land ownership is a driving force in this participation because the stormwater originates on city land while the erosion happens on the privately-owned but publicly-used forest of Hitchcock Woods. This paper examines the role of recent participatory approaches as a way to resolve the long history of erosion caused by stormwater runoff from the City of Aiken. This paper first presents the context of addressing the stormwater problem in Sand River, then presents the participatory approach and meetings, discusses the outcomes of the workshops, and concludes with the lessons learned and suggested approaches for river restoration in the future. From the perspective of planning practice, the insights gained from the Sand River Restoration process provide guidance for approaching river restoration alternatives by conveying complex watershed processes to the general public. The intended contribution is to examine the role of participatory workshops and graphic representations in solving a complex river restoration problem.

Much of the literature around civic involvement in river restoration and management discusses the role of reaching consensus and the growing role of involvement in river restoration. At the national, state, and local levels, restoring rivers is particularly challenging because of the unique mix of legal, political, and ecological issues. Intensity of urban environments, habitat fragmentation, and resource use continue to shape water management policies and practices in the United States 21st century (Booth, 2005; Thorud et. al., 2000). Communities have begun to develop new watershed restoration approaches and alternative land management approaches to combat the challenges of everything from stormwater runoff to nonpoint source pollution (Schueler, 2005; Selman, 2004).

Growing participation characterizes community-based watershed management and redefines how communities approach river restoration. Since the early 1980s, community involvement in watershed restoration and management has grown dramatically. Small urban watershed efforts have expanded from a few to hundreds, with roughly 4,000 small watershed organizations involved in watershed management (Schueler, 2005). From 1988 to 2003, water monitoring program organizations have increased from 44 groups in 24 states to 832 groups in all 50 states (EPA, 2003; Riley, 1998).

Although the role of participation is important in stormwater and river restoration, components such as place attachment also need to be considered. Higgs (1997) argues that restoration practice requires understanding social, historical, political, ethics, and aesthetics (338). The perception of the problem is complex, specifically how place attachment plays a role in the different stakeholder groups to the Hitchcock Woods and to Sand River as they consider restoration targets. Manzo and Perkins (2008) demonstrate how place attachment, sense of community, and place identity foster community development. This community sense of place attachment is of critical importance in addressing the historical, cultural, and environmental values surrounding the historic and publicly-used Hitchcock Woods.

CONTEXT

Three major factors shaped the context of the perception of the stormwater problem and guided participation approaches in this process. These were the value of the Hitchcock woods, land ownership, and previous efforts to manage the stormwater.

Place attachment plays a significant role in the historic,

cultural, and environmental values of Hitchcock Woods. Several long-term residents remember what Sand River used to look like, prior to the stormwater problem and also remember historic features of the woods, including Bartons Pond. Unfortunately, the severe stormwater problem is smothering the forested wetlands and the forest of Hitchcock Woods, simultaneously changing these historic and cultural landscapes. Unfortunately, the erosion problem has reached a point to which restoration to the original look of Sand River and certain historic features is impossible. Stormwater flows, “have literally changed the landscape of Hitchcock Woods” in the past forty years (Rabold in an interview, quoted in Guffey, 2008).

PARTICIPATORY APPROACHES FOR SAND RIVER

Approaches to stakeholder involvement and leading workshops have been covered by multiples sources (Condon, 2008; Sanoff, 2000). There were several important questions that needed to be addressed as the meetings uncovered place attachments and differing restoration goals that related to individual memories of the woods. A number of workshop participants had memories from their childhood. They wanted to bring back certain historic features of Sand River. A second important question raised throughout the workshop was who would be paying for the restoration and, how to keep the costs low. A third question was which restoration and stormwater management options existed. The fourth and final question was how to develop and determine the final decision of how to restore Sand River and reduce the stormwater flow.

Initial meetings

Three meetings between the Hitchcock Woods Foundation, the City of Aiken, and Clemson University have been held thus far. The first meeting examined the historical, cultural, and environmental values associated with the woods and also the problems and potential solutions. The second meeting was the visioning meeting. What was demonstrated during this second meeting and the efforts to do a design charrette approach in a short period of time was the strong value of the Hitchcock Woods Foundation maps, rather than the engineering maps, in connecting with the stakeholders to begin in-depth discussion about restoration approaches. The third meeting synthesized the Hitchcock Woods Foundation map with graphics conveying the different stormwater management and restoration options. This did eventually lead to some other solutions in an iterative process raised and discussed by the stakeholders and Sand River Restoration team.

This process is still currently underway. As of the time of this report, the Sand River team will develop a final approach to present to the City of Aiken and the Hitchcock Woods Foundation. A future meeting has been planned to discuss this final restoration plan.

DISCUSSION

Reflection upon this community involvement process demonstrates the significant role of visual images and maps in developing alternative solutions to river restoration in a participatory process. Although the final outcome of this process is yet to be determined, discussion and analysis of the initial three participatory workshops sheds some light upon how to work towards an iterative process of developing restoration goals with the stakeholders for a historically contentious river restoration problem.

As part of this, the first meeting revealed the themes of place attachment. It was important to address this because what people envision as restoration often responds to their place attachment (Manzo and Perkins, 2006). The second meeting revealed the importance of particular images and maps, most significantly, the map of Hitchcock Woods that the Foundation and the public could respond to as the team discussed the many different options of approaching stormwater management. This most recent meeting also demonstrated the options of different hybrid solutions and attaching the hybrid to the different features on Sand River. This third meeting demonstrated the iterative process that developed through discussions around the options to further develop the final hybrid solution.

This iterative process was also interesting as it relates to restoration theory and approaches. Although during the first meeting, there was a greater emphasis by workshop participants to restore Sand River back to the way that it was, which would have included bringing back a pond that would in the process destroy the ecologically valuable forested wetlands, a shift in thinking about this was demonstrated as the team progressed through other workshops. Furthermore a great deal of additional meetings of Restoration Ecologist Dr. Gene Eidson with the City of Aiken following the workshops also contributed a great deal to moving the stakeholder groups closer to consensus about a decision.

Several unique aspects of the participation process for the Sand River exist. From a theoretical perspective, lessons learned from the Sand River Restoration planning process characterize the role of participation in watershed

management for a public problem addressed in a private landscape. Sanoff (2000) observes that an important aspect of participation is “individual learning through increased awareness of the problem” (Sanoff, 2000: 10). Given the two decades of study and debate, the two primary stakeholders had felt they had exhausted the options. Yet, during the third meeting, new options emerged that had not been previously considered. This outcome illustrates the importance of participation and collaboration in innovating new solutions.

LESSONS LEARNED

The resulting lessons learned that inform the way future approaches to developing innovative stormwater approaches and river restoration are: 1) revealing historic place attachments; 2) visual components; and 3) visual options of choice. Many river restoration literature and practice demonstrates the importance of collaboration. What these three workshops demonstrated are the significance and the role of the visual images in conveying the complexity of stormwater approaches. Workshop participants, while well-versed about the issues of decades of discussions, were able to visually construct the options of what options existed at different points along Sand River and the potential landscape outcomes of these different options.

CONCLUSIONS

From a theoretical perspective, lessons learned from the Sand River Restoration planning process characterize the role of participation in watershed management for a public problem addressed in a private landscape. From the perspective of planning practice, the insights gained from the Sand River Restoration process provide guidance for participation in river restoration and approaches to conveying complex watershed processes to the general public.

Acknowledgments: The author of this paper was but one of several team members. Lead scientist, restoration ecologist Dr. Gene Eidson, the Center for Watershed Excellence’s Associate Director Cal Sawyer, Clemson University’s Masters of Landscape Architecture graduate student Erin Cooke, the Center for Watershed Excellence’s Program Coordinator, Jon Van Bergen, Planning and Landscape Architecture Department Chair Dan Nadenicek, and Civil Engineering Department Chair Nadim Aziz. Thanks also to Harold Clarkson from Woolpert, Inc. and Hitchcock Woods Foundation Executive Director Doug Rabold.

LITERATURE CITED

- Booth, Derek B. 2005. Challenges and prospects for restoring urban streams: a perspective from the Pacific Northwest of North America. *Journal of the North American Benthological Society* 24(3): 724-737.
- Condon, Patrick M. 2008. *Design Charrettes for Sustainable Communities*. Island Press: Washington, DC.
- Higgs, Eric S. 1997. What is Good Ecological Restoration? *Conservation Biology* 11(2): 338-348.
- Guffey, Michelle. 2008. "Salvaging Sand River: Aiken Again tries to save landmark from Erosion." *The Augusta Chronicle*. Monday, February 11, 2008. Accessed online on September 15, 2008 at: http://chronicle.augusta.com/stories/021108/met_186921.shtml.
- Manzo, Lynne C. and Douglas D. Perkins. 2006. Finding Common Ground: The Importance of Place Attachment to Community Participation and Planning. *Journal of Planning Literature* 20; 335-350.
- Rabold, Doug. 2008. Turning Back the Sands of Time. *Aiken Horse Show in the Hitchcock Woods*. Annual Publication by the Hitchcock Woods Foundation: 39-40.
- Riley, Ann L. 1998. Restoring streams in cities: a guide for planners, policy makers, and citizens. Washington, D.C.: Island Press.
- Sanoff, Henry. 2000. *Community Participation Methods in Design and Planning*. John Wiley & Sons, Inc.: New York.
- Schueler, Tom. 2005. *Manual 1: An Integrated Framework to Restore Small Urban Watersheds (Version 2.0) Urban Watershed Restoration Manual Series*. Produced by the Center for Watershed Protection.
- Selman, Paul. 2004. Community Participation in the Planning and Management of Cultural Landscapes, *Journal of Environmental Planning and Management* 47(3): 365-392.
- Thorud, David B.; Brown, George W.; Boyle, Brian J.; and Clare M. Ryan. 2000. Watershed Management in the United States in the 21st Century. *USDA Forest Service Proceedings RMRS-P-13: 57-64*.
- Webler, Thomas and Tuler, Seth. 2001. Public Participation in Watershed Management Planning: Views on Process from People in the Field. *Research in Human Ecology* 8(2): 29-39.