

## **Cultivating a Community-Based Approach to Restoration of the Cache River Wetlands in Southern Illinois**

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Natural resource conservation agencies and organizations are increasingly taking advantage of opportunities to build partnerships between the public, private, and community sectors. The benefits of collaborative natural resource management—increased social justice (Smith and McDonough 2001), better conflict resolution (Lachapelle and McCool 2005), and ecosystem-scale conservation (Grumbine 1994)—have been touted by researchers, practitioners, and citizens alike. While community-based partnerships are essential to effective and sustainable environmental management, clear direction for agencies on how to cultivate these partnerships is lacking. This study used a qualitative methodological approach to (1) develop a community stakeholder typology, (2) identify constraints to and opportunities for community-based partnerships in a watershed-scale restoration project, and (3) develop outreach recommendations tailored to each stakeholder group.

Large tracts in the Cache River watershed in southern Illinois were cleared and converted to agricultural production from the early 1900s through the 1970s (Kruse and Groninger 2003). The resulting deforestation, flooding and sedimentation of the Cache River, and decline in waterfowl migration to the area inspired local citizens to organize and advocate for wetlands protection and restoration. Grassroots conservation efforts propelled the establishment of the Cache River Joint Venture Partnership (JVP) in 1991, a restoration cooperative of the U.S. Fish and Wildlife Service, Illinois Department of Natural Resources (IDNR), The Nature Conservancy, Ducks Unlimited, and, later, the Natural Resources Conservation Service. The Cache River wetlands complex was identified as a Wetland of International Importance by the Ramsar Convention of the United Nations Educational, Scientific and Cultural Organization in 1994, largely because of the area's ecological significance for migratory waterfowl (Ramsar Secretariat 1994). The primary goal of the JVP is to protect and restore a 60,000-acre forest and wetland corridor along the Cache River, which encompasses both public and private lands.

### **Methods**

In-depth personal interviews were conducted from September 2006 through February 2007 with 25 residents of the five counties encompassing the Cache River. A purposive and heterogeneity sampling strategy was employed to identify and gain access to different interest group representatives or information-rich “community gatekeepers” (Marshall and Ross-

man 1999). A variety of community members were interviewed, representing a wide range of interests, including local government officials, environmental advocacy group members, tourism operators, economic development agency staff, educators, and farm and agricultural advocates.

Once an initial set of key informants was identified, a snowball or chain-referral sampling technique was used to broaden the participant pool. Interviews were conducted following an interview guide and were audio-recorded and transcribed. Data analysis followed Strauss and Corbin's (1990) strategies for data reduction, organization, interpretation, and verification. To ensure credibility and confirmability (Marshall and Rossman 1999), an iterative analysis process, substantiated by a team of researchers, was adopted.

## Results

Data analysis revealed that study participants attach a wide variety of meanings to the wetlands and hold diverse attitudes toward restoration and in particular, the JVP. Three stakeholder types: advocates, generalists, and skeptics emerged through the analysis of four characteristics: (1) awareness of the JVP and its restoration initiatives; (2) involvement with restoration; (3) meanings ascribed to the Cache River wetlands, and (4) attitudes toward restoration and the JVP.

Below, the stakeholder typology is presented first, followed by findings associated with barriers to and opportunities for community-based partnerships in restoration.

**Advocates.** Nine of the 25 participants were classified as "advocates." They represent three broad community interests: (1) environmental advocacy; (2) nature-based tourism; and (3) landowners and agriculture. Advocates described both high levels of awareness of and extensive past involvement in restoration initiatives, attributed primarily to public meetings, volunteer programs, and personal interaction with JVP staff. Participants in this group exhibited the most favorable attitudes toward restoration, often linked to the need to preserve and restore rare wetlands habitat: "The southern Illinois landscape, while it is very unique and very diverse, is incredibly fragmented on a forest aspect. And when you get to the wetlands all you have to do is look at the history of what was done to our wetlands."

These stakeholders expressed meanings for the Cache River Wetlands associated with the ecological and inspirational significance of the area. For instance, one participant compared the wetlands to "forest cathedrals." He continued, "I can't think of a place more like that than Heron Pond. It just has that very dramatic feel to it. It is really a unique place and it just draws me." Above all, however, this group emphasized ecological significance of the Cache River Wetlands:

I have been to the Okefenokee, to the Cache River over in Arkansas. And everyone brags about their trees and their swamp. But the Cache, our Cache, the Cache River has as much to offer as any of those places. Maybe not as big ... but it is a unique little spot on the planet.

Advocates expressed great trust in local natural resource managers and the JVP in particular. Their trust was attributed primarily to personal relationships with JVP staff. Participation in environmental planning efforts was both a source of information and medium for interaction with local managers.

**Generalists.** Ten of the 25 participants were classified as “generalists.” They represented several community interests, including (1) regional, county, and municipal government; (2) tourism and economic development; (3) education, and (4) business. Generalists exhibited the least awareness of and past involvement in Cache River wetlands restoration initiatives. When asked how familiar she was with JVP’s restoration initiatives, a participant responded, “Not familiar at all.” Another participant described her familiarity with the JVP: “I know that they are here.”

The meanings generalists ascribed to the Cache River wetlands were largely associated with economic development or as one participant put it, “economic revitalization.” However, several participants also noted the impact of the wetlands on the quality of life in the area. Recreation opportunities and aesthetics were highlighted:

It gives our citizens an opportunity that they don’t have to travel so far for canoeing. People like canoeing; there is a place to go. People like bird watching; there is a place to go. They don’t have to travel to do those sorts of things.

Generalists exhibited positive attitudes toward the restoration of the Cache River wetlands, yet little initiative for personal involvement in JVP programs. These stakeholders also described moderate levels of trust in local natural resource managers, despite being largely unaware of what managers were doing. When asked how much he trusts local natural resource managers, one local community member replied, “I am moderately trusting.”

**Skeptics.** Six of the 25 participants were classified as “skeptics.” They represented three primary community interests: (1) environmental advocacy; (2) regional, county, and municipal government; and (3) landowners and agriculture. Skeptics described extensive past involvement in Cache River wetlands restoration activities. Like the advocates, personal involvement in environmental planning processes was a primary source of information. However, civic science and the exchange of traditional knowledge throughout community organizations were additional sources of information that were generally perceived as more reliable.

Skeptics often expressed meanings for the Cache River wetlands linked to its ecosystem functions, primarily around water retention and associated agricultural drainage. Big hardwood trees have important meaning to some skeptics:

I think of big cypress trees in real thin water, and seeing certain wildlife like maybe a cottonmouth or a rattlesnake or water birds. But now I see the dead and dying hardwood trees and the duckweed and I know. I have a general idea about what that means so it’s not all good.

Skeptics were generally supportive of the idea of restoration, but were distrustful of the JVP, its restoration targets, and programs. One participant questioned current water levels and the impacts on public and private land:

They are sticking to the pool stage being 328.4 . . . meaning that they are content to kill the rest of those trees, not only on private land but on public land. Hey, I have reported three separate times the oak trees in the Section 8 Woods is being impounded by water. The beavers have shut up all of the drainage ditches. . . . Nobody does nothing.

Several skeptics were concerned about the JVP's restoration targets and intimated they believed the JVP may intend to flood the entire Cache River Valley. This sentiment was summarized by one participant:

Go down to the end of my road . . . you will see a sign that says reforested in 1997 with native hardwoods. Look and see what the majority of the trees is behind that sign. It's cypress trees. Why would they put cypress trees? They are going to be above that swamp. Right out here is the same thing. The trees in the field, does that look like maybe in the future, maybe a hundred years from now, that they expect this is going to be the swamp? . . . I really believe. A hundred years from now, they have already planned and are not telling the public. That is going to fill in.

**Constraints and opportunities for community-based partnerships.** Study participants were asked to describe existing constraints to and opportunities for community-based partnerships in the restoration of the Cache River wetlands. The findings presented here are based on those responses, as well as constraints and opportunities that emerged through further analysis of the interview discussions. Seven constraints were revealed:

- Regional economic depression;
- Unclear community benefits;
- Lack of community awareness and comprehension of restoration;
- Limited communication with the broader community;
- Limited opportunities for community involvement in decision-making;
- Distrust of outside decision-makers; and
- Uncertainty of restoration science and targets.

Regional economic depression, coupled with the unclear community benefits of restoration, has contributed to constrained community resources and general apathy around restoration. According to participants, many residents struggle to meet their basic needs and do not have free time to participate in programs. Moreover, the potential for the economic benefits of restoration, including nature-based tourism industries and other ecosystem services, have not been clearly articulated. The generalists acknowledged having little to no knowledge about the JVP and its restoration programs. Since the generalists of this study likely represent a large proportion of the broader community, this may be one of the most important and challenging constraints to overcome.

Several participants believed that the JVP's communication efforts could be improved, especially since the construction of the Cache River Wetlands Center in 2002. Several participants felt that better access to the center could help the community take ownership of restoration efforts:

Wonderful facility. I think it's a great facility. Lot to learn. I have little kids and I haven't taken them there because every time you drive by it's closed. You can't get in. I understand that the state is broke, but they didn't ask us. We have a multi-million dollar facility that no one can see unless you have a tour scheduled.

Public involvement and decision-making authority was a hot topic, particularly among skeptics. One participant criticized the IDNR's public involvement policies and their failure to inform stakeholders during an environmental planning process. He said:

There is less requirements at the state level for public [involvement] and that has been a frustration for me, because the state is supposed to be more local than the federal government. They don't have to do NEPA, they don't have to do environmental assessments, they don't even have to take public comment. . . . They put all of those weirs in and never told anybody. . . . The DNR did it and it was illegal. You could sue them, but it's a huge undertaking.

Distrust and uncertainty, once again expressed by the skeptics, has constrained the potential for partnerships. According to several participants, the lack of a firsthand knowledge of the area and appreciation for community values demonstrated by the agencies and organizations involved has made community members, especially landowners and agriculturalists, wary of the JVP's restoration science and targets. One stakeholder surmised, "I really believe that they have got a different interest than the people in general. They are managers. They don't have to live here. They don't know what we are dealing with."

Several opportunities for the development of community-based partnerships to restore the Cache River wetlands were identified by participants. Nature-based tourism was perceived as a potential growth area that would link ecological and economic values. A few participants called for more partnering with local tourism businesses. Participants emphasized the need for communication and marketing strategies that were more targeted to the communities, including programs at schools, meetings with civic organizations, and articles in newspapers.

## **Discussion and conclusions**

This study offers a new stakeholder typology reflecting community member awareness, involvement, meanings, and attitudes (Table 1). The three stakeholder types—advocates, generalists, and skeptics—transcend traditional interest-group memberships and provide more clear guidance for developing outreach programs toward inspiring support and participation in restoration. Partnering with advocates will be the easiest first step for building a community-wide commitment to restoration. While the JVP has had great success in developing relationships with advocates, it has not tapped their potential as liaisons with the broader community. More intensive training, especially in environmental education and public relations, may help advocates play a stronger role in bridging the gap between the JVP and the community.

We speculate that the generalists make up the largest proportion of the Cache River wetlands community. The JVP needs to better articulate the community benefits of restoration to this group and reach beyond the Wetlands Center (e.g., programs at schools and presentations at civic organizations) to engage underserved residents. Finally, although the skeptics may appear to be the most oppositional group, in this study they expressed general support for restoration. Integrating traditional and agency knowledge will be important to gaining

	<b>Advocates</b>	<b>Generalists</b>	<b>Skeptics</b>
Meanings	<ul style="list-style-type: none"> <li>• Unique ecosystem, ancient forests and swamps</li> <li>• Spiritual, educational, and inspirational</li> </ul>	<ul style="list-style-type: none"> <li>• Wildlife conservation</li> <li>• Economic development</li> <li>• Aesthetics</li> <li>• Local quality of life</li> </ul>	<ul style="list-style-type: none"> <li>• Water levels</li> <li>• Flooding</li> <li>• Agriculture</li> </ul>
Awareness and involvement	<ul style="list-style-type: none"> <li>• High awareness</li> <li>• Extensive past involvement</li> </ul>	<ul style="list-style-type: none"> <li>• Limited awareness</li> <li>• Little past involvement</li> </ul>	<ul style="list-style-type: none"> <li>• High awareness of restoration initiatives</li> <li>• Extensive past involvement</li> </ul>
Attitudes and trust	<ul style="list-style-type: none"> <li>• Strong support for restoration</li> <li>• High trust in local managers</li> </ul>	<ul style="list-style-type: none"> <li>• Moderate support for restoration</li> <li>• Moderate trust in local managers</li> </ul>	<ul style="list-style-type: none"> <li>• Strong support for restoration</li> <li>• Opposition to JVP</li> <li>• Distrust in local managers</li> </ul>
Outreach recommendations	<ul style="list-style-type: none"> <li>• Provide more structured volunteer opportunities</li> <li>• Develop expertise through orientation and training</li> <li>• Validate and acknowledge contributions</li> </ul>	<ul style="list-style-type: none"> <li>• Better market recreation opportunities</li> <li>• Better communicate restoration benefits</li> <li>• Instill a sense of pride and ownership</li> </ul>	<ul style="list-style-type: none"> <li>• Restore communication channels</li> <li>• Seek opportunities for relationship building</li> <li>• Offer meaningful participation opportunities</li> </ul>

Table 1. Summary of Cache River wetlands stakeholder typology and recommendations.

their support. Furthermore, more clearly defining restoration targets and communicating outcomes through modeling should build trust.

This study uncovered great potential for protected area managers in the Cache River wetlands to cultivate meaningful community support for restoration. The insight provided by this study should help to develop outreach strategies that can more efficiently and effectively reach community stakeholders.

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