

## FINAL REPORT

# Hudson River Human Dimensions Roundtable and Social Science Strategy

Report to the NOAA Coastal Services Center  
2234 South Hobson Avenue  
Charleston, SC 29105-2413

December, 2007

Pursuant to Order Number: FC133C06SE4123  
With the Hudson River Greenway Conservancy  
Prepared by the NYSDEC Hudson River National Estuarine Research Reserve

## Introduction

In 2006, the Hudson River National Estuarine Research Reserve (NERR) and the New York State Department of Environmental Conservation (DEC) Hudson River Estuary Program invited the Coastal Services Center (CSC) to become a partner in the emerging social science assessment component of our Hudson River ecosystem management approach. We asked the CSC to contribute technical assistance to help develop a social science program to enable a deeper understanding of the human context for ecosystem management. We were pleased to partner with Tom Fish and other staff of the CSC in carrying out this project.

This work built upon previous CSC investments in the Hudson River Estuary in biophysical characterizations of the ecosystem, including funding for the pilot mapping of our extensive submerged aquatic vegetation beds, and the provision of technical assistance to the Hudson River Benthic Mapping Program. CSC also helped build resource management capacity through delivery of several training courses through the Hudson River Estuary Training Program (for instance, Project Design & Evaluation, and Managing Visitor Use). Prior to this project, we also explored the potential contributions of social assessment to Hudson River estuary management work with Tom Fish and other social scientists.

Under this procurement, we sought to (1) develop a community characterization describing the Hudson River NERR and surrounding area; and (2) convene a regional roundtable workshop of natural resource management professionals and applied social scientists from and/or working in the Hudson River watershed and estuary to develop a master plan for of action for applied social science activities that will support ecosystem-based decision-making in our region. This work was done under the sponsorship of the Hudson River Greenway Conservancy.

## Community Characterization

Shawn Dalton, a social ecologist and Director of the Environmental and Sustainable Development Research Centre of the University of New Brunswick, joined our team to complete the community characterization, which is attached as a separate document. It is intended to serve as a companion piece to the NERR system site profiles, and uses a standard set of maps to detect and display demographic and socioeconomic trends at three scales of analysis – state (counties displayed), region (counties displayed), and areas around research reserve sites and their watersheds (census block groups displayed). Methods for developing a standard approach and format to community profiles were tested in three case studies within the National Estuarine Research Reserve System in 2005: Old Woman Creek, OH; Wells, ME; and Chesapeake Bay, MD.

The Hudson River NERR is composed of four sites in New York State: Piermont Marsh and Iona Island in Rockland County, Tivoli Bays in Dutchess County, and Stockport Flats in Columbia County (see Figure 1). These sites are distinguishable in terms of geography, area, biophysical conditions, socioeconomic and demographic characteristics, and governance arrangements. Three of the four sites were selected for

analysis in the community characterization, based on priority research needs of NERR managers: Piermont Marsh, Tivoli Bays, and Stockport Flats. Iona Island was not included in this study due to resource constraints and the fact that it is surrounded by large blocks of federal and state lands, which tend to isolate it from neighboring communities.

This document characterizes, at a broad scale, socioeconomic conditions of communities around the three sites. Information for these summaries was derived primarily from the publicly available 2000 decennial census data, which were downloaded and displayed on a series of maps. The maps are included in this community characterization; each sheet includes text interpreting the findings at different scales for the variable it depicts, including state/county, and region/locale around the Reserve.

Because the Hudson River National Estuarine Research Reserve comprises distinct sites, three distinct community characterizations were created. All three sites are represented on each of the maps in the attached report, which also summarizes the findings by variable for the three sites comprising this study: Piermont Marsh, Tivoli Bays, and Stockport Flats. The relationships among these variables are then discussed, by site, to provide a synthesis of findings.

### Roundtable Workshop

Our initial plan was to hold a workshop with two main groups: social scientists engaged in research and resource managers engaged in management of the Hudson River estuary and its watershed. The purpose of the workshop was to develop a social science research agenda.

Melissa Everett, a social scientist and the director of Sustainable Hudson Valley, joined our team to informally assess social science activity in the Hudson Valley region, and to provide names of possible participants from the social science research community. Hudson River NERR manager Betsy Blair and training coordinator Emilie Hauser did an informal assessment of the status of resource manager knowledge of and interest in social science as a management tool.

During these up-front assessments, we discovered two key factors. The first was that there we lacked a well-established corps of social scientists whose work was focused on the interaction of humans and their environment on topics that related to estuary and watershed management, although given the richness of universities and other academic institutions, the potential clearly exists to develop such a group. The second discovery was that most natural resource management professionals lacked a clear understanding of what social sciences could contribute to their work.

We adjusted our plan in consultation with Tom Fish, having determined that it was most appropriate under these circumstances to offer a workshop that would be directed to resource managers and seek to build their capacity to engage in the future in development of a social science research agenda. The workshop was recast to focus on three things:

social science applications in natural resource management, using social indicators to understand local communities, and community-based social marketing to empower voluntary change. An audience needs assessment was developed by Hudson River NERR staff, with input from Melissa Everett, and administered by Hudson River NERR, to further refine the agenda. The findings were:

- The audience for our workshop was larger than anticipated, diverse, and well motivated. Many were educators and trainers in their own right;
- Participant desires and learning styles were highly diverse. For example, some brought specialized interdisciplinary background in sociology, anthropology and economics, while others characterized themselves as novices;
- While the formal disciplinary backgrounds were diverse, most participants had a useful layperson's grasp of the material. In spite of that, there was an undercurrent of anxiety at the lack of a theoretical framework to fit their ideas into;
- Based upon the needs assessment, many were articulate in identifying the watershed protection goals of their participation (such as pollution prevention or ecosystem-based management) *in environmental terms*, but much less articulate in identifying the human behavior changes and social dynamics that would give rise to these goals;
- Their feedback reflected a desire for more exposure to the spectrum of materials we covered – including more time for understanding basic concepts, and then approaching community applications.

The final process agenda for this workshop is attached as part of the final report. The workshop was held on September 26, 2007 at the Norrie Point Environmental Center. A participant list is attached.

In a post-workshop evaluation, the audience showed interest in learning about social science in more depth in at least three areas:

- Improving their overall foundation in social science in order to be more discerning in charting their own courses in education and professional development;
- Characterizing communities in terms of their demographics and psychographics, and using this to inform voluntary behavior change campaigns;
- Designing those campaigns in detail using social marketing and/or community-based social marketing;

## Next Steps

Melissa Everett summarized the workshop in the attached “Summary Report of Hudson River Social Science Roundtable.” Her proposal for next steps is to create a simple framework for group education and self-study that achieves continuity and engages the participants further in setting their common agenda, builds a common language and raises the bar of social science understanding. She recommended that we develop an ongoing study/work group bringing together social scientist mentors with natural science-trained environmental managers for regular education and problem-solving. In light of the regional distribution of both groups, she suggested this might be approached on two levels:

- (1) A shared online space for posting documents and asking questions;
- (2) Regular meetings (e.g., a quarterly late afternoon followed by dinner) for seminars, each with a case discussion.

She suggested that if there is agreement on the strategy of deepening participant understanding of the initial topical scope, then four sessions for 2008 might be built around:

- a. The Human Ecosystem Framework: Understanding the Interplay of Social, Economic and Environmental Factors
- b. Community characterization methods and data sources: Census data and beyond
- c. Characterizing communities for change potential: analyzing psychographics and social networks
- d. Community based social marketing: using social data to craft successful campaigns

## Conclusion

During the course of this project, we observed a significant increase in resource manager interest in developing and using social science tools, approaches and research. We are pursuing funding and partnerships to implement recommendations of the initial workshop. Although we did not succeed in developing a social science research agenda, we believe this work laid the foundation for the development of such an agenda over the next 18-24 months, and certainly advance the breadth and depth of discourse in the resource management community about the potential contributions of the social sciences to ecosystem management of the Hudson River Estuary and its watershed.