

Socioeconomic Contributions of Natural Resource Restoration
in Humboldt County, California

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Presentation for Watershed Restoration and Forest Roads Symposium

April 4, 2008

Greater Tacoma Convention and Trade Center

I Introduction

- I'd like to take this opportunity to thank the sponsors and supporters of this watershed restoration symposium. In particular I would like to thank Mary Scurlock, chair of the planning committee and the other Planning Committee members for inviting me to present. It's an honor to be here.
- Today, I'd like to share with you information about the socioeconomic contributions of the natural resources restoration system that has evolved over the last 30 years in Humboldt County, in northwestern California.²
- I think it is useful to examine the case of restoration in Humboldt County for it contains useful insights into important, but sometimes undervalued, aspects of natural resources restoration work.
- Let me preview the key points of my presentation:
 1. natural resources restoration work in Humboldt County contributes significantly to the local economy, both in terms of the dollars it brings into the county and the jobs those dollars create and sustain
 2. the restoration experience in Humboldt County has produced a significant body of knowledge about restoration, much of which has been codified and now guides restoration work in other regions
 3. community-based forms of restoration practice are important not only because of their positive ecological effects, but also because of the ways in which they support and strengthen community and stewardship ethics
 4. the successful implementation of restoration projects, on private and public lands, involves the coordination of complex relations amongst a diverse network of entities that includes landowners and managers, state, federal and local government agencies, restoration nonprofit organizations, private contractors, tribes, and environmental

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² The study on which most of this presentation is based is: "Socioeconomic Characteristics of the Natural Resources Restoration System in Humboldt County, California (Baker, J.M., 2004, Forest Community Research, Taylorsville, CA). A shorter version of this report was published under the same title in Ecological Restoration 23(1):5-14(2005).

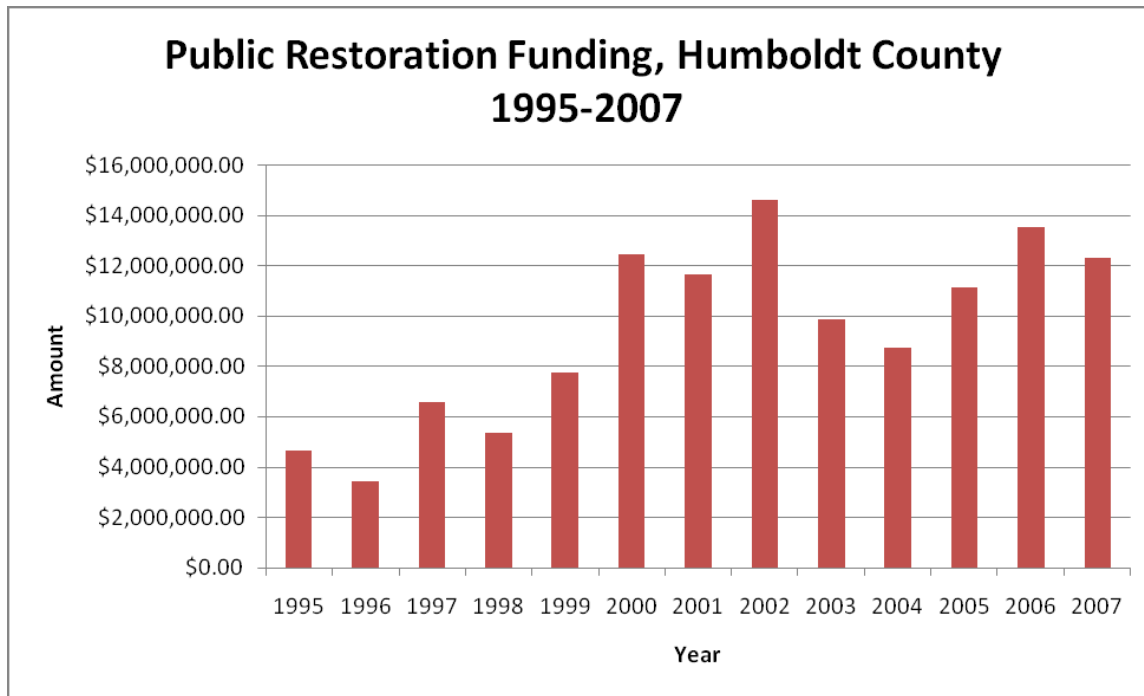
organizations. In Humboldt County these relationships comprise the institutional infrastructure that enables restoration to occur. Much like the physical infrastructure of the forest products industry in rural areas, which once lost is difficult to bring back, so also the institutional infrastructure of the restoration system is an important form of capital that uncertain or highly fluctuating levels of funding can undermine or weaken.

II Let's begin with a definition of restoration

For the purposes of this study, restoration includes 1) upslope watershed restoration activities such as road decommissioning, removal/stabilization of timber harvest landings, landslide stabilization, and other upslope erosion control projects, 2) riparian and instream fisheries habitat improvement projects, 3) invasive exotic species control and removal, 4) restoration of hydrologic flow regimes in streams and estuaries, and 5) fuels reduction efforts. Our definition of restoration does not include restorative activities embedded within more traditional resource management and extraction regimes, such as road upgrades, stormproofing, and decommissioning associated with timber harvesting. While these activities are certainly restoration related, including them would have diluted this study's focus on natural resources restoration as an independent and autonomous field of economic, social, and institutional activity

III How much money does restoration bring into Humboldt County and how much employment does that money generate?

Between 1995 and 2007 the restoration system generated more than \$120 million for restoration work in the county. Almost all of that came in the form of restoration contracts and grants from agencies to support private sector restoration work on private and public lands. The funding levels for restoration in the county have at times exceeded the value of the commercial fishery landings and are comparable to the value of some of the county's agricultural products. While restoration work is related to these other resource-based sectors in a synergistic manner, it clearly is an economic engine in its own right.



These funding flows generate significant local employment. Based on extensive surveys of restoration organizations whose employees work in the county, we determined that natural resources restoration work generated approximately 300 jobs in the private and public sectors and within tribal government in 2002.³ Approximately 240 of these jobs are in the private sector, forty-five jobs are in the public sector, and 15 are with area tribes.

IV Restoration and Knowledge Production

Natural resources restoration in Humboldt County is an interdisciplinary amalgam that combines the insights of science with the art of experienced practitioners within an adaptive management framework. Over the last fifteen years restoration approaches and practices developed in Humboldt County have been standardized and codified. Standard reference texts and restoration manuals have been developed and written, based almost entirely on north coast restoration experiences. Two central texts are the California Department of Fish and Game's *California Salmonid Stream Habitat Restoration Manual* (1991, 1994, 1998) and the 1994 *Handbook for Forest and Ranch Roads* produced by Pacific Watershed Associates whose founding member Bill Weaver is here with us today. Another

³ These are not all full-time jobs. Some are part-time and seasonal. These 300 jobs are the equivalent of 210 fulltime jobs.

important manual is the *Water Quality and Stream Habitat Protection Manual for County Road Maintenance in Northwestern California Watersheds*. This manual was developed as part of an innovative multi-county program to restore salmonid populations and habitat known as the Five County Salmonid Conservation Program. These and other documents, which now guide restoration work beyond the North Coast, speak to the wealth of expertise that has evolved in the region, and to the productive integration of scientific knowledge and method with field experience-based expertise.

V What are the links between restoration and Community?

For many people involved in restoration, their commitment to it springs from a passionately held vision of healthy watersheds, reinvigorated salmon runs, and resource management practices grounded in stewardship principles. This vision often springs from a deeply rooted sense of place, of relationship to the natural environment that gives meaning, and of connections with other like-minded restoration practitioners and conservationists. This vision inspired those who pioneered many of the restoration practices and techniques that are commonplace today. Often working on shoe-string budgets or sometimes on a volunteer basis, these individuals were the early innovators of community-based fishbox hatcheries, in-stream restoration techniques, and monitoring methods and technologies. For many, the idea of actually earning a living from restoration work came only as an afterthought.

While restoration in Humboldt County has become institutionalized in the last twenty years, the early visions of communities and people, rooted in place, working towards a more harmonious integration of people, watersheds, and working landscapes, still provide a powerful ideological anchor for the restoration system. Some of the many examples of contemporary community-based restoration are the work and activities of the Mattole Restoration Council, the public school education outreach programs funded by the Dept. of Fish and Game, the involvement of public school students in the planning, implementation, and monitoring of restoration projects, the community-based restoration efforts of nonprofit organizations such as the Friends of the Dunes, and the community-based fire planning efforts of many of the county's Fire Safe Councils.

Community engagement with the restoration process serves to build connections between people and the natural environment, while simultaneously achieving the ecological goals and objectives of restoration. In some contexts, restoration is as much a social process as it is an ecological practice. Freeman House, in Totem

Salmon, writes about community, place and restoration in the Mattole River watershed in southern Humboldt. He notes that, “engaging the lives of wild salmon in a single watershed has created a situation wherein the peoples of our place have begun to experience themselves as functional parts of the place itself. Engaging the lives of any part of the wild in any self-defined natural area will lead to the same experience” (1999:198). In a similar vein, Carol Vander Meer, Executive Director of Friends of the Dunes – a local restoration nonprofit - has written, “By participating in restoration I find a way to actually be a positive part of the ecology of the dunes....joining together with other community members who care about this place completes my sense of connection and belonging” (2001). This statement clearly invokes William Jordan’s notion that restoration provides opportunities for both creating community and negotiating the relationship between community and nature (2000:27).

VV Institutional Capital – Restoration as a Coherent System

Restoration in Humboldt County, whether on private, public, or tribal lands, involves common sets of relationships, skills, expertise, resources, and people - all loosely linked together. These common elements comprise restoration’s institutional infrastructure. Part of the restoration infrastructure derives from the fact that a self-identified restoration community exists. This community is comprised of individuals who know each other and understand that only through their concerted actions and mutual cooperation will restoration work be sustained.

Many of the agencies, organizations, and individuals that comprise the restoration system participate in one or more formalized or quasi-formalized network organizations. Founded almost without exception on principles of collaboration and mutual exchange, these organizations include the Collaborative Learning Circle, the Humboldt Bay Watershed Advisory Committee, the Redwood Regional Watershed Center, the Humboldt Bay Scientific Advisory Committee for Estuary Restoration, and the newly emerging Humboldt Bay Stewards, among others. These network organizations facilitate information exchange and enhance organizational capacity, promote resource sharing and partnering, enable collective prioritization of restoration needs and priorities, provide opportunities for coordination of restoration activities, and facilitate technology transfer.

VI Lest I be accused of painting too rosy a picture of restoration in Humboldt County, let me quickly review some current constraints:

- Restoration contractors and nonprofits face significant cash flow challenges because of their dependence on grant funding that comes in fits and spurts while their fixed costs and overhead accrue on a regular basis.
- There is a lack of coordination and complementarity amongst the multiple programs and agencies that fund restoration work.
- Permitting challenges - achieving compliance with permitting requirements can be extremely costly and time consuming.
- The very multiplicity and complexity of restoration funding sources represents a barrier. Many have suggested the creation of more coordinated and stable funding mechanisms to finance restoration work.
- Providing quality jobs in restoration that pay living wages with benefits is difficult given the structure of the funding process. Policies and programs that support the provision of quality jobs need to be strengthened and expanded.
- Integrating acquisition, restoration, and management activities is an ongoing challenge. While this study examined restoration as an independent sector, its long term sustainability depends on integrating restoration within broader regimes of natural resource management on both public and private lands.

VII In conclusion, let's review some of the lessons that can be drawn from Humboldt County's experience with restoration:

1. restoration is an economic engine in its own right; especially in rural, resource dependent communities, restoration can provide much needed employment both in terms of direct investment and the multiplier effects of that investment within the local economy;
2. there exists a significant, standardized and codified knowledge base regarding best practices for various forms of restoration that is either directly applicable or can be easily modified for other regions; let's not reinvent the wheel;
3. restoration improves watershed conditions and strengthens community and stewardship ethics, which in turn help generate the requisite public support for maintaining and hopefully increasing public and private funding for restoration;
4. effectively and efficiently utilizing restoration dollars entails coordination and cooperation across numerous diverse entities; the institutional infrastructure that evolves to enable restoration is a resource in and of itself that needs to be recognized and sustained
5. significant constraints persist concerning the structure of restoration funding processes, provision of quality jobs, and the integration of restoration into

landscape-scale resource management regimes. These require concerted attention.

My hope is that by the end of today we will have perhaps identified strategies and approaches for addressing some of these continuing challenges.

Thank you very much.

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