

Insights and Applications

Multiscale Socioeconomic Assessment Across Large Ecosystems: Lessons from Practice

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Implementation of ecosystem management projects has created a demand for socioeconomic assessments to predict or evaluate the impacts of ecosystem policies. Social scientists for these assessments face challenges that, while not unique to such projects, are more likely to arise than in smaller scale ones. This article summarizes lessons from our experiences with five socioeconomic assessments associated with ecosystem management projects in the western United States. Progress has been made toward developing appropriate methods to assess socioeconomic conditions at the community level and integrating those data into regional analyses. However, we still lack robust theoretical constructs that link socioeconomic conditions to changes in management policies. Engaging community members, land managers, and policymakers facilitates research and improves the quality of findings. However, inadequate funding and the lack of long-term commitment on the part of natural resource agencies remain key obstacles to integrating socioeconomic assessments into adaptive management efforts.

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In the past two decades, ecosystem management—the practice of managing large-scale landscapes to maintain or enhance the integrity of ecosystems—has gained a foothold in many parts of the world. From the North American temperate rain forest, to Australia's coral reefs, to the Florida Everglades, public agencies and private land managers are engaged in experiments to translate ecosystem management theories into practice. Often these experiments and associated policies are developed using information obtained from large-scale biophysical and socioeconomic assessments (Forest Ecosystem Management Team [FEMAT] 1993; Quigley et al. 1997; Southern Appalachian Man and the Biosphere Cooperative (SAMAB) 1996; Center for Water and Wildland Resources 1996; Struglia et al. 2001, USDA 1999). Some ecosystem management projects include monitoring or post facto assessments that analyze the impacts of policies and management practices on resource-based communities (Charnley 2006b; Forest Community Research 2002). We use the term "assessment" here to refer to both pre-and postplan evaluations. The socioeconomic portions of both kinds of assessments typically produce information about changes in socioeconomic conditions as well as possible links between those conditions and ecosystem management. Scientists who design and conduct these assessments face challenges that are more likely to arise than in smaller scale assessments. Some of these challenges arise because large-scale ecosystem management is relatively new. Others result from pressures to rapidly produce policy-relevant information at multiple scales in a large geographical area. Still others arise because funding is inadequate to accomplish the desired work.

An emerging body of literature documents the many challenges social scientists face when implementing these assessments (Cordell and Bergstrom 1999; Donoghue and Sturtevant 2007; Sepez et al. 2006; Sturtevant and Donoghue 2008). We add to this literature by identifying four major lessons we learned from implementing five large-scale socioeconomic assessments in the western United States. Many other lessons can be drawn from these and other assessments, but we limit our discussion to those lessons we collectively identified as common to our experiences. We share these lessons to help researchers anticipate challenges they may face in future assessments.

We limited our analysis to assessments in which at least one of our five team members had been involved in the design, implementation, or postcompletion review, and that were complex in scope and scale (see Table 1). The assessments selected are among the largest conducted in the United States to date. Previous studies have noted the shortcomings of large-scale assessments that did not include community-level analyses (i.e., Jackson et al. 2003). A feature common to the five assessments discussed here is that they were explicitly designed to address this shortcoming and thus incorporated multiple units of analysis ranging from communities to multistate regions. Consequently, our discussion highlights the challenges associated with integrating community-level analyses into multiscale socioeconomic assessment.

We began our analysis with two brainstorming sessions. First we developed a list of lessons learned from each assessment, grouping them into three categories: policy drivers, methods, and connections. Next we developed a series of questions to elicit more detail about each category. For each assessment, we circulated the question set

Table 1. Social assessments in ecosystem management

Parameter	Social assessments				
	Federal Ecosystem Management Team (FEMAT)	Interior Columbia Basin Ecosystem Management Project (ICBEMP)	Sierra Nevada Ecosystem Project (SNEP)	Northwest Economic Adjustment Initiative Assessment (NEAI)	Northwest Forest Plan Socioeconomic Assessment (NWFP)
References	FEMAT 1993	Donoghue and Schneider 2000; Harris et al. 2000; Quigley et al. 1997	Doak and Kusel 1996; Kusel 1996; Kusel 2001; SNEP 1996	Forest Community Research 2002	Charnley 2006a,b USDA and USDI 1994
Objective	Assess socioeconomic conditions in the region's forest communities and their capacity to respond to different forest management options (FEMAT 1993).	Assess the characteristics and conditions of small, rural communities and provide better understanding of these communities in the wake of current and possible future changes in natural resource management and land allocations (Harris et al. 2000).	Assemble and assess data on communities to improve management of the Sierra Nevada ecoregion (SNEP 1996).	Assess the NEAI to help federal, state, and local agencies and others learn what types of economic development assistance worked and what types did not (Forest Community Research 2002).	Evaluate whether changes occurred in community socioeconomic conditions and evaluate the degree to which those changes were linked to the implementation of the Northwest Forest Plan (USDA and USDI 1994).
Year(s)	1993	1994–1998	1994–1996	2000–2002	2002–2005
Region	Western Oregon, western Washington, and northwest California	Parts of Idaho, Montana, Nevada, Oregon, Utah, Washington, and Wyoming	Sierra Nevada ecoregion in eastern California	Western Oregon, western Washington, and northwest California	Western Oregon, western Washington, and northwest California
Authors involved	Kusel McLain	Postcompletion review by Donoghue	Kusel	Kusel, Buttloph, McLain	Charnley, Donoghue, McLain, Buttloph

to the authors on our team who had participated in that assessment or in the review of that assessment. We combined the responses into one data set covering all five assessments, which we used to develop the following lessons.

Lesson 1: Theoretical constructs exist for determining what socioeconomic variables to describe and analyze, but disagreements over those constructs continue, and linking socioeconomic conditions to resource management policies remains challenging.

FEMAT was the first of the five assessments to be implemented, and a number of issues that emerged during the FEMAT process fundamentally shaped each of the four subsequent assessments. Among the many challenges FEMAT scientists faced were (a) lack of consensus as to what should be measured (i.e., community well-being, resiliency, capacity) in order to assess impacts of management practices and policies on forest communities, and (b) lack of consensus on how to measure those core theoretical constructs. Some researchers suggested that levels of timber harvest, number of jobs, and the estimated value of spin-off economic activities were adequate proxies for community well-being, with high levels of harvest implicitly linked with high levels of well-being. Others disagreed, arguing that harvest levels and the value of related economic activities are neither clearly nor causally linked to community well-being. These debates reflected the lack of scientific consensus regarding theory about the relationship between natural resource policies and activities and socioeconomic conditions. The assessments and articles that followed FEMAT partially addressed these theory limitations, as reflected in the extensive refinement of concepts such as community capacity, well-being, and resiliency (Kusel 2001; Harris et al. 2000; Center for Water and Wildland Resources 1996). Nonetheless, debate continues about what to measure and how to do so (Donoghue and Sturtevant 2007; Sturtevant and Donoghue in press).

Researchers have made much less progress in clarifying the relationship between socioeconomic conditions and ecosystem management policies. The Northwest Forest Plan (NWFP) researchers developed a socioeconomic well-being index based on six socioeconomic census indicators. However, they found that using quantitative indicator data to analyze changes in the socioeconomic well-being of communities and larger social units of analysis did not permit teasing out the effects of forest policy from other factors that contribute to these conditions. From qualitative interviews with community members and local land managers, the NWFP team identified numerous ways in which forest management policy had contributed to specific community conditions relative to other factors. However, a mandate to conduct monitoring rather than research prevented the team from exploring these connections in depth.

Lesson 2: Community-scale analysis is essential and feasible, but challenging to design, implement, and integrate into other levels of analysis.

Adapting Census data to Community-level Analysis. Community-level analysis is hampered by the lack of readily available secondary data, such as national census data, broken down by community. Census data are available for rural communities categorized as "census places," a category that includes incorporated areas and some unincorporated localities. However, they leave out many rural communities, especially those with dispersed populations.

The Forest Ecosystem Management Assessment Team (FEMAT) identified the lack of community-level census data as a problem. The team worked under extreme time pressure, and did not have time to adapt census data to community-level analysis. Instead, they supplemented county-level census data with data obtained from focus groups composed of experts familiar with communities in the ecoregion. Based on the FEMAT experience, and having more time and support to complete their assessment, the Sierra Nevada Ecosystem Project (SNEP) experimented with customizing census data sets. They consulted county planning departments to identify communities by aggregating census block groups and then convened focus groups of key informants from the communities to correct the maps. This work enabled the SNEP social assessment team to analyze census data at the community level and to aggregate census data upward from the community to the subregion and to the Sierra Nevada region as a whole. The subregional boundaries established through this process continue to be used for regional planning.

The NWFP socioeconomic assessment used a variation of the SNEP approach of aggregating census block groups into communities. Because the NWFP researchers had several thousand more block groups to aggregate, time and budget constraints precluded them from including intensive local-level input. Instead, they aggregated the block groups into communities using geographic information system analysis and visual reviews combined with information about school districts, roads, population, and geographic features. They verified some aggregated census block group boundaries during interviews with community members and agency personnel. Land management agencies have subsequently used the NWFP community data set in other planning. Researchers on the SNEP and NWFP teams concur that the customized data sets are useful, but note that their construction is time consuming and costly.

Amalgamated Data-Gathering Approaches. Although census block group aggregation approaches make community-scale analysis of census data feasible, census data have serious limitations. They are available only in 10-year increments, and their use becomes more problematic the further one gets from the last decennial. Additionally, census data cover only a small number of the social and economic variables needed to assess the impacts of large-scale ecosystem management projects. Other types of socioeconomic data can be obtained from a variety of existing statistical data sets (school lunch program enrollment figures, incidence of substance abuse, etc.). However, secondary statistical data below the county level can be unreliable, difficult to compare across communities, and time-consuming to obtain (Jackson et al. 2003; Kusel 2001). To capture the complexity of social and economic conditions at the community level, researchers on all five assessments adopted an amalgamated approach to data gathering using a combination of census and other secondary data, as well as gathering primary data through community focus and feedback groups, semistructured key informant interviews, community resident surveys, and community workbooks.

Lesson 3: Active engagement of community members, policymakers, land managers, and other relevant stakeholders in large-scale socioeconomic assessments over the short and long term is crucial.

Researchers working on large-scale socioeconomic assessments face the challenge of producing data that is both accurate and meaningful to managers,

policymakers, community members, and other stakeholders so that findings become integrated into broader management processes. We found that the ability (and willingness) of managers, policymakers, community members, and other stakeholders to effectively use assessment findings depended strongly on how engaged researchers were with these groups throughout the assessment process. Close involvement facilitated feedback loops that promoted mutual understanding, self-reflection, trust, and learning. This involvement influenced whether and how assessment results were used; it also improved the assessment process itself by helping teams identify relevant questions, and by facilitating data collection and interpretation.

Researchers established connections with stakeholders in a variety of ways. The Interior Columbia Basin Ecosystem Management Project (ICBEMP) social scientists held frequent community meetings and found that community members were interested in the periodic presentations of results. Community members seemed to appreciate seeing themselves on paper, in graphs, and on maps, even if they didn't always agree with what was presented. Their high level of interest in the study resulted in the successful lobbying of Congress for additional funds to support research on isolated communities.

In the SNEP assessment, regional and county representatives participated in delimiting community boundaries. The SNEP team's work with county- and community-level stakeholders in the evaluation of community capacity led participants to think about natural resource-community relationships in new ways. Focus group sessions helped the research team ground truth the community boundaries, identify critical community issues, and improved public understanding of and participation in resource management.

The Northwest Economic Adjustment Initiative (NEAI) team took a much different approach to stakeholder involvement. The project team put together an ad hoc advisory committee of federal, state, and local representatives who had been active in implementing the NEAI. Researchers met regularly with this group during the planning, implementation, and write-up phases of the assessment. The committee provided valuable information about projects, programs, and communities; helped researchers gain entry into communities; established support for the assessment and encouraged community members to participate; and facilitated researchers' access to background data. The structured forum ensured that researchers were collecting information relevant to stakeholders.

The NWFP team faced a tight initial time frame and a budget too small to permit the development of the structures and processes needed to facilitate strong community, and local-and regional-level land manager involvement. The team used key informants to connect their work to local managers and community members. They met with local and regional land managers individually and in groups to obtain feedback on the initial research design. Interviews with 223 community members and 82 agency employees, most of whom were decision makers or program managers, helped connect these stakeholders to the assessment process. Assessment team members presented results to Provincial Advisory Committees (local-level groups formed as part of the Northwest Forest Plan and composed of a range of community stakeholders), and sent out draft reports to key informants for feedback. The drawback in the NWFP case was that managers and policymakers did not understand how to use community-scale monitoring results for regional-scale decision-making, despite researcher efforts to explain their significance.

In addition to building in opportunities for input, the assessment teams sought to make their findings accessible by presenting them in formats that land managers and policymakers are used to working with, such as figures, tables, maps, diagrams, and short summary reports. For example, researchers on FEMAT, SNEP, and NWFP found that managers were more receptive to socioeconomic well-being analyses presented in the form of colorful maps and numeric tables than to analyses of qualitative interviews summarized in text formats. Unfortunately, figures and tables that presented only quantitative data shifted managers' attention away from equally important qualitative data. SNEP researchers addressed this problem by mapping both qualitative and quantitative data, thereby raising public awareness about the importance of social issues and placing them on par with ecological issues in the eyes of resource managers.

Lesson 4: Time and budget allocations for large-scale socioeconomic assessments need to better accord with the actual costs and time required to collect and analyze diverse sets of socioeconomic data at multiple scales over large areas.

All researchers wrestle with trade-offs. What is different about large-scale ecosystem assessments is that the research task is so much larger and more complex in scope and scale relative to the funding and time allocated, such that the sum total of trade-offs risks diluting data quality to the point where the research has limited usefulness. Researchers on the five assessments adopted various strategies for addressing the problem of inadequate time and budget allocations.

Funding was not a limiting factor for FEMAT, but the timeline was unrealistic for a comprehensive assessment. To save time, the team convened expert panels to estimate impacts of different management options on communities than gathering data from community focus groups or through interviews with community members. The trade-off was that the panels produced very coarse-grained community-level information. Time constraints were less severe on the other assessments, but still short relative to the scope of the work. The NWFP research team addressed time and budget limitations by keeping the number of community case studies small (12 of 1,314 communities), with the trade-off being that it was difficult to make generalizations about resource management impacts at the regional scale. The NEAI research team conducted more case studies (31 of 1,314), but spent less time in each community. ICBEMP researchers initially faced the prospect of having to limit their community self-assessment workshops to a small number of communities, but community members stepped in and persuaded Congress to allocate additional funds so that a larger number of communities (198) could be included.

Grossly inadequate funding for social science assessments is due in part to a persistent belief among land managers that social and economic conditions and impacts can be adequately and inexpensively summarized using existing secondary data and that no field component is necessary. However, even using secondary data in a meaningful way is both time-consuming and costly. For example, the director of the SNEP assessment estimates that his team spent \$250,000 developing theory and a methodology to test the use of census block group aggregates. Similarly, it cost between \$250,000 and \$350,000 for NWFP researchers to develop and test the census block group aggregation method that allowed comparison of a small number of socioeconomic variables at the community-level using 1990 and 2000 census

data. Furthermore, many of the questions managers want answered can only be addressed by field research using a combination of qualitative and quantitative methods. The point here is not to deny the importance of secondary or quantitative data, but rather to emphasize that alone they cannot capture the complexity of socio-ecological systems. Funding for gathering primary data, including qualitative data, is critical. The shortfall in socioeconomic funding is exacerbated by existing biases within land management agencies and natural resources academic departments toward biophysical programs and research.

Inadequate funding for socioeconomic components of ecosystem management projects creates a vicious circle. Lack of funding hampers the ability of social scientists to involve community members and land managers. It also threatens the quality of the assessment itself, and restricts the ability of social scientists to do the follow-up research needed to make robust additions to social theory about how communities respond to change and how specific management actions and socioeconomic conditions are related. As a result, the relevance of socioeconomic assessments to local level managers and communities is often limited. Agency managers, who have no ownership in such research and who see limited value to it, are thus disinclined to allocate adequate funding to future socioeconomic assessments.

Conclusion

After reflecting on the lessons learned from these five assessments, we draw the following conclusions

1. Social scientists have the methods needed to gather relevant socioeconomic data, including community-level data. However, applying these methods over large geographic areas is costly and time-consuming.
2. Progress has been made in developing the theoretical constructs needed to measure relevant community characteristics, processes, structures, and change. However, disagreements still exist over many of these constructs, and theories regarding the links between these variables and resource management policy need considerably more work. If adequately funded, large-scale assessments—which have the potential to integrate large-scale and in-depth social analyses in ways conducive to theory development and refinement—could themselves play an important role in reducing these disagreements.
3. Building in processes that explicitly engage a wide range of stakeholders, including community members, land managers, policymakers, and key interest groups, in designing and conducting social assessments improves the quality, relevance, and use of the findings. But doing so requires acknowledgment of, and appreciation for, participatory and adaptive management processes. It is not clear whether today's resource management agencies are willing to make such commitments, or able to provide the resources needed to support deeper engagement of numerous stakeholders.

More time and money alone will not allow researchers to adequately address the challenges associated with assessments of ecosystem management policies. Human-environmental interactions are complex, dynamic, and heterogeneous over time and space. Studying these dynamics at multiple scales across large ecoregions is inevitably a messy and long-term proposition. Our experiences with large-scale socioeconomic assessments highlight the need for a knowledge production

and information sharing infrastructure appropriate for long-term socioeconomic monitoring of large-scale ecosystem management projects. The Long-Term Ecological Research network (LTER), which was established in 1980 to enable ecologists to understand long-term ecological system processes and patterns at multiple spatial scales, and which now links thousands of biophysical scientists around the world (Hobbie et al. 2003), could serve as a model for developing an analogous network focused on social science research and knowledge sharing for ecosystem management. An eventual goal could be to integrate the ecological and social science networks, creating a knowledge production and information sharing infrastructure capable of facilitating the transdisciplinary work needed for long-term sustainable ecosystem management (Haberl et al. 2006). In laying out the lessons learned from a decade of practice we hope to help prepare researchers working on future assessments for some of the challenges they will face. We see the development of a broad-based, long-term social science research network as a potential strategy for addressing these challenges and advancing efforts to develop social theory appropriate for assessing links between socioeconomic conditions and resource management practices and policies.

References

- Center for Water and Wildland Resources. 1996. *SNEP final report to Congress: Assessment summaries and management strategies*, Vol. I. Davis: University of California.
- Charnley, S. 2006a. The Northwest Forest Plan as a model for broad-scale ecosystem management: A social perspective. *Conserv. Biol.* 20(2):330–340.
- Charnley, S. (Tech. Coord.). 2006b. *Northwest Forest Plan: The first 10 years (1994–2003). Socioeconomic monitoring results* [6 volumes]. Portland, OR: USDA-Forest Service, Pacific Northwest Research Station, Gen. Tech. Rep. PNW-GTR-649.
- Cordell, H. and J. Bergstrom, eds. 1999. *Integrating social sciences with ecosystem management: Human dimensions in assessment, policy, and management*. Champaign, IL: Sagamore.
- Doak, S. and J. Kusel. 1996. Well-being in forest-dependent communities, Part II: A social assessment focus. In *Sierra Nevada Ecosystem Project: Final report to congress, vol. II. Assessments and scientific basis for management options*, ed. Center for Water and Wildland Resources, 375–402. Davis: University of California.
- Donoghue, E. and V. Sturtevant. 2007. Social science constructs in ecosystem assessments: Revisiting community capacity and community resiliency. *Society Nat. Resources* 20(10):899–912.
- Donoghue, E. and A. Schneider. 2000. *Review of the social assessment for the Interior Columbia Basin Ecosystem Management Project*. USDA-Forest Service, Pacific Northwest Research Station. Photocopy. Portland, OR: Unpublished manuscript.
- Forest Ecosystem Management Team. 1993. *Forest ecosystem management: An ecological, economic, and social assessment*. Portland, OR: USDA and USDI.
- Forest Community Research. 2002. *Assessment of the Northwest Economic Adjustment Initiative*. Taylorsville, CA: Forest Community Research. Document available online at <http://www.sierrainstitute.us/neai/NEAIindex.html>. November 21, 2005.
- Haberl, H., V. Winiwarter, K. Andersson, R. U. Ayres, C. Boone, A. Castillo, G. Cunfer, M. Fischer-Kowalski, W. R. Freudenburg, E. Furman, R. Kaufmann, F. Krausmann, E. Langthaler, H. Loetze-Campen, M. Mirtl, C. L. Rdman, A. Reenberg, A. Wardell, B. Warr, and H. Zechmeister. 2006. From LTER to LTSE: Conceptualizing the socioeconomic dimension of long-term sociological research. *Ecol. Society* 11(2):13. <http://www.ecologyandsociety.org/vol11/iss2/art13/>. November 15.

- Harris, C., W. McLaughlin, G. Brown, and D. Becker. 2000. *Rural communities in the Inland Northwest: An assessment of small rural communities in the Interior and Upper Columbia River Basins*. Portland, OR: USDA-Forest Service, Pacific Northwest Research Station, Gen. Tech. Rep. PNW-GTR-477.
- Hobbie, J., S. Carpenter, N. Grimm, J. Gosz, and T. Seastedt. 2003. The US Long Term Ecological Research Program. *Bioscience* 53(1):21–32.
- Jackson, J., R. Lee, and P. Sommers. 2003. Monitoring the community impacts of the Northwest Forest Plan: An alternative to social indicators. *Society Nat. Resources* 17:223–233.
- Kusel, J. 1996. Well-being in forest-dependent communities, Part 1: A new approach. In *Sierra Nevada Ecosystem Project: Final report to congress, vol. II, Assessments and scientific basis for management options*, ed. Center for Water and Wildland Resources, 361–373. Davis: University of California.
- Kusel, J. 2001. Assessing well-being in forest dependent communities. *J. Sustain. For.* 13(1–2): 359–384.
- Quigley, T. and S. Arbelbide (Tech. Eds.). 1997. *An assessment of ecosystem components in the Interior Columbia Basin and portions of the Klamath and Great Basins*, Vol. IV. Portland, OR: USDA-Forest Service, Pacific Northwest Research Station, Gen. Tech. Rep. PNW-GTR-405.
- Sepez, J., K. Norman, A. Poole, and B. Tilt. 2006. Fish scales: Scale and method in social science research for North Pacific and west coast fishing communities. *Hum. Organ.* 65:280–293.
- Southern Appalachian Man and the Biosphere Cooperative. 1996. *The Southern Appalachian Assessment: Social, cultural, economic technical report*. Atlanta, GA: USDA-Forest Service, Southern Region.
- Struglia, R., P. Winter, and A. Meyer. 2001. *Southern California socioeconomic assessment: Sociodemographic conditions, projections, and quality of life indices*. Riverside, CA: USDA, Forest Service, Pacific Southwest Research Station, Gen. Tech. Rep. PSW-187.
- Sturtevant, V. E. and E. M. Donoghue. 2008. Social assessment of forest communities: For whom and for what? In *Community and forest connections: Implications for research, management, and governance*, eds. E. Donoghue and V. Sturtevant. Washington, DC: Resources for the Future.
- U.S. Department of Agriculture, Forest Service. 1999. *Ozark-Ouachita Highlands Assessment: Social and economic conditions*. Asheville, NC: USDA-Forest Service Southern Research Station, Gen. Tech. Rep. SRS-34.
- U.S. Department of Agriculture, Forest Service, and U.S. Department of the Interior, Bureau of Land Management. 1994. *Record of decision for amendments to Forest Service and Bureau of Land Management planning documents within the range of the northern spotted owl*. Washington, DC: USDA-Forest Service and USDI-Bureau of Land Management.

Charnley Team - FY08 Expenditure Plan and Tracking

As of July WPTR Report (pp 14- ending 7/19/08)

	FRRE			FRF2		
	Planned Expenses	Paid Expenses	Balance Remaining	Planned Expenses	Paid Expenses	Balance Remaining
Net to Team - Base Allocation	\$283,000			Net to Team:		
Transfer from PM for CC student	\$10,000			Portfolio C	\$139,000	
Transfer to Blahna team	-\$52,000			Portfolio E	\$45,000	
Total incoming funds:	\$241,000				\$184,000	
	Planned Expenses	Paid Expenses	Balance Remaining	Planned Expenses	Paid Expenses	Balance Remaining
Salary - Charnley (-18,142 billed to PM)	\$71,744	\$71,744	\$0	\$65,000	\$28,226	\$36,774
Salary - Donoghue	\$61,766	\$61,766	\$0	\$40,000	\$19,671	\$20,329
Salary - Poe (total estimate \$33,500)	\$4,583	\$4,583	\$0	\$28,917	\$17,145	\$11,772
Salary - Malone	\$1,574	\$1,574	\$0			
Salary - Diaz (\$2140 x 5 pps)	\$10,700	\$1,950	\$8,750			
Salary - Tom Spies	\$6,000	\$0	\$6,000			
Travel - Charnley (total \$13K)	\$10,000	\$8,477	\$1,523	\$1,741	\$1,741	\$0
Travel - Donoghue	\$4,000	\$2,555	\$1,445			
Travel - Poe	\$456	\$456	\$0	\$741	\$741	\$0
Misc. (books, phone)	\$5,754	\$5,754	\$0	\$952	\$952	\$0
GTR Printing	\$10,500	\$5,400	\$5,100			
Awards	\$1,923	\$1,923	\$0			
ISA to NRS for Urban Forage contract	\$3,000	\$0	\$3,000			
Agrmt #75-315 OSU Bliss/Fischer	\$17,069	\$0	\$17,069			
Agrmt #75-290 UofO Moseley Mod #2				\$15,000	\$0	\$15,000
Agrmt #75-290 UofO Moseley Mod #3				\$30,000	\$0	\$30,000
Agrmt #75-353 OSU Gosnell	\$19,916	\$0	\$19,916			
Agrmt #75-364 WSU Kirschner	\$7,500	\$0	\$7,500			
Contract - Keith Olsen (see note)	\$2,480	\$2,480	\$0			
Contract - Laura Newlon	\$1,264	\$1,264	\$0			
Contract - Rebecca McLain	\$788	\$788	\$0			
Contract - Richard Haynes	\$500	\$0	\$500			
Huckleberry workshop bus (McLain)	\$511	\$511	\$0			
Contract - Kirschner	\$1,000	\$0	\$1,000	\$1,500	\$0	\$1,500
Contract - Lynnae Sutton	\$2,500	\$0	\$2,500			
	\$245,528	\$171,224	\$74,303	\$183,852	\$68,477	\$115,375
	FRRE Available funds:		-\$4,528	FRF2 Available funds:		\$148
Spent as of late last week (8/7/08)		\$171,224		Combined Available funds:		-\$4,379

Bright yellow fields are potential available (non-agrmt) money.
Keith billed 960 in Feb and 1520 in July