

Ecosystem Workforce Program

S U M M E R 2 0 1 1



Quick Guide to Monitoring Economic Impacts of Ecosystem Restoration and Stewardship



INSTITUTE FOR A SUSTAINABLE ENVIRONMENT



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Ecological restoration can provide significant economic benefits by supporting businesses and workers. Although many groups that work on forest and watershed restoration aim to create local jobs and other local economic opportunities, few groups have economic monitoring programs.

1. Why should you monitor the economic impacts of restoration?

Monitoring can help you and your partners:

- Understand, articulate, and share the economic impacts of restoration work in your community
- Create economic development goals
- Track progress toward meeting your goals
- Adapt and improve restoration opportunities to better meet your economic development goals
- Increase investment in restoration programs
- Increase your capacity for understanding and promoting the economic impacts of restoration

2. What can monitoring the economic impacts of restoration help you understand and track?

- Job numbers
- Wages
- Job quality
- Contracting opportunities
- Local capture of contracts and jobs

3. What does this guide do?

This guide will help you develop an economic monitoring program by setting goals, selecting monitoring measures, collecting data, and reporting and using monitoring results. Specifically, it describes how to obtain and utilize detailed information about job numbers, job quality, wages, contracting and subcontracting opportunities, and other related economic impacts of restoration.

4. Who should use this guide?

This guide is intended for community-based organizations like watershed councils, soil and water conservation districts (SWCDs), forest and watershed

restoration collaboratives, tribal natural resource managers, and other land managers and agencies who are interested in developing a better understanding of the jobs and economic opportunities that forest and watershed restoration support.

This guide is a companion to *A Quick Guide to Conducting an Ecosystem Workforce Assessment*, which describes how to conduct a workforce assessment and *A Quick Guide for Planning a Quality Jobs Program*, which describes how to use assessment tools to create an action plan for improving local economic benefit from restoration. The guide can be used with economic forecasting tools such as the Ecosystem Workforce Program's *Restoration Economic Impact Calculator for Oregon Counties*¹ and the U.S. Forest Service's *Treatments for Restoration Economic Analysis Tool (TREAT)*². Links to additional monitoring resources are provided in Appendix A.

Monitoring Economic Impacts: A Real World Example

Since its formation in 1996, Wallowa Resources has worked with the people of Wallowa County in eastern Oregon to blend the ecological needs of the land with the economic needs of the community.

Wallowa Resources reports that over the last fifteen years their work promoting stewardship and conservation of the county's natural resources has resulted in:

- \$12 million in total revenue through projects and administration
- Over 40 percent (\$5 million) has gone to local contractors and another 10 percent has gone to local business supply and service companies
- About \$4 million (31 percent) has supported local salaries and benefits for Wallowa Resources employees

¹ These guides and other useful resources are available online at: <http://ewp.uoregon.edu/economy>.

² This tool is available online at the USDA Forest Service Collaborative Forest Landscape Restoration website at: <http://www.fs.fed.us/restoration/CFLR/submittedproposals.shtml#tools>.

The Restoration Economy at a Glance

a. How does the restoration economy work and what are its benefits?

Economic benefits derived from restoration are a result of how and where money is spent (Figure 1).

1. Most funding for restoration projects on both private and public land comes from state, federal, and tribal land management agency budgets as well as philanthropic and other private entities. In some cases private landowners will fund their own restoration projects. The potential economic benefits created by these funds depend on to whom these funds are allocated and where the recipients are located.

2. Restoration projects are typically implemented on public lands by government land management agencies or on private lands by local collaborative organizations, like watershed councils and SWCDs, as well as by landowners themselves. On public lands, agency managers often use appropriated funding to issue contracts to private firms to implement the work. On private lands, local organizations often receive grants to hire staff members and contractors to undertake outreach and planning, develop restoration priorities, and implement projects. At the local level, government and tribal agencies also hire contractors to do the same. How and where these entities choose to spend these funds determines:

- a. The quantity and type of work available for contractors
- b. How many contractors are offered work
- c. If local contractors obtain local work opportunities

3. Contractors hired to implement projects as well as local organizations hire employees to perform restoration work and make purchases for supplies and materials. Contractors also hire subcontractors. How and where these contractors and organizations choose to make expenditures determines:

- a. How many jobs are created or supported
- b. Total wages
- c. What kinds of jobs are created or supported

- d. Whether local workers are supported
- e. Quality of jobs (see part b)
- f. Number and location of purchases and subcontractors

b. What is a “quality job” in the restoration context?

Quality jobs are important because they contribute to the overall dependability and productivity of the workforce and community well-being. Quality jobs typically provide:

- Family-supporting wages
- Health and other benefits
- A healthy and safe workplace
- Opportunities for learning and skill development
- Consistent supply of reliable work
- The chance for workers and businesses to work near where they live

Developing an Economic Monitoring Program

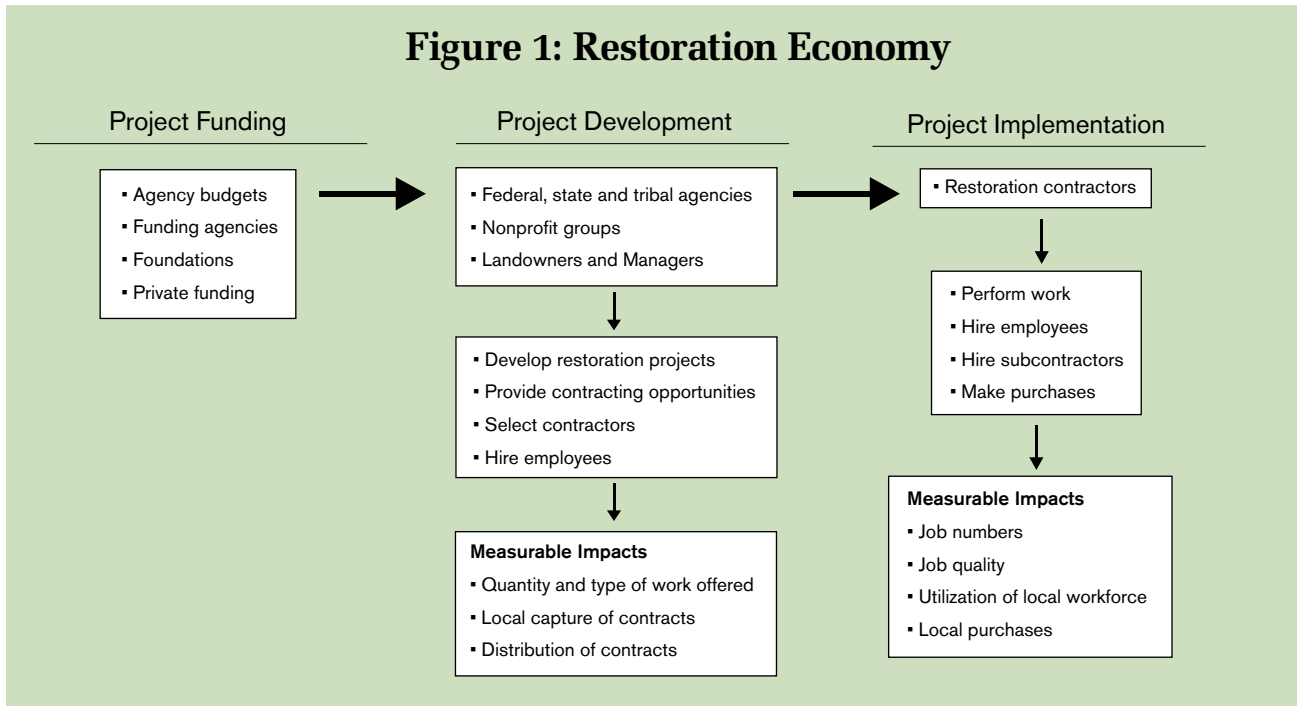
1. Setting Goals and Context

a. What are your economic goals and objectives?

Setting economic goals and more specific objectives for what you would like to see your restoration program accomplish will give you something you can use to track your progress.

When setting goals you and your partners should:

- Decide what economic impacts (see Restoration Economy Section) are most important to you and make a list.
- Create a vision for what you would like your program to accomplish based on the list of impacts that are most important to you and your partners.
- Develop broad goals that reflect your vision.
- Develop specific objectives for each goal that can be measurably achieved such as an increase in opportunities for local contractors to conduct restoration work.

Figure 1: Restoration Economy

Your goals and objectives should reflect economic processes that you control, such as structuring contracts or workforce training programs. Although you may not know right away what exactly it is you would like your program to accomplish, starting with a broad vision will help you further define your economic goals and objectives once you start collecting data.

b. What are you monitoring?

You will need to decide if you are going to focus your monitoring on the impacts of individual projects (project-level monitoring) or the cumulative impacts of an entire restoration program (programmatic monitoring). Programmatic monitoring often involves gathering information about individual projects and aggregating these results to draw conclusions about your entire program. Unlike project-level monitoring, programmatic monitoring allows you to track progress over time.

c. What does “local” mean in your monitoring?

If you want to measure local economic benefits you will need to develop your own definition of local. The meaning of local may vary considerably from

place to place and can also vary from purpose to purpose. “Local” usually reflects geographical, social, and economic connections and implies a shared sense of place among people. Sometimes local is defined using established political boundaries such as a county or biogeographical features like a watershed. Many rural communities may also have social and economic connections across a broader region or market.

Your definition should strive to balance people in your community’s vision of “local” with the practical considerations about the availability of contractors and workers in your area. Common definitions of local include:

- County boundaries
- National forest or BLM district and surrounding counties
- Single or multiple watersheds or other geographic features

Common determinations of local include using the following:

- Zip codes of project locations, contracts, and worker residences
- Distance to project sites and business locations

2. Selecting Monitoring Measures

a. What makes a good measure?

You will need to develop specific measures that you can track over time. When developing and selecting measures, start with the goals and objectives you have created and think about how you can turn these into tangible measures. Your measures should:

- Reflect economic processes over which you or

your partners have some influence.

- Be measurable over time to track your progress towards meeting your goals.
- Come from accessible, or obtainable, and reliable data sources.

The following sample measures are provided for you to use and track the economic impacts discussed in the Restoration Economy section of the quick guide (Table 1). The data sources that are mentioned will be discussed in section 3.

Table 1: Sample Measures

What You Want to Know (Indicators)	Measures to Use	Data Sources
Contracting and Local Capture		
Quantity and type of work offered <ul style="list-style-type: none"> ▪ By you if you are a project manager, or ▪ By the agency whose work you are monitoring 	<ul style="list-style-type: none"> ▪ Total number and dollar value of contracts ▪ Number of contracts offered, organized by work type ▪ Dollar value of contracts, organized by work type 	Your contracts and federal databases
How contracts and dollars are distributed among contracting firms	<ul style="list-style-type: none"> ▪ Number of firms receiving contracts and total amount for each firm 	Your contracts and federal databases
If local firms are capturing work	<ul style="list-style-type: none"> ▪ Percentage of contract and agreement dollars captured by local firms 	Your contracts and federal databases
Jobs and Local Capture		
Job creation and retention	<ul style="list-style-type: none"> ▪ Number of jobs supported by restoration work ▪ Total worker hours supported by restoration ▪ Total wages ▪ Average wage per worker 	Contractor reporting form or surveys
How many workers are local	<ul style="list-style-type: none"> ▪ Percentage and number of workers that are local 	Contractor reporting form or surveys
Job Quality		
Benefits	<ul style="list-style-type: none"> ▪ Percentage of workers receiving benefits or payments in lieu of benefits 	Contractor reporting form or surveys
Worker safety	<ul style="list-style-type: none"> ▪ Percentage and number of contracts without job-related injuries or illness that result in lost work time 	Contractor reporting form or surveys
Opportunities for learning and advancement	<ul style="list-style-type: none"> ▪ Percentage of contracts with on-the-job training 	Contractor reporting form or surveys
Subcontracting and Purchases		
Contributions to the local subcontracting market	<ul style="list-style-type: none"> ▪ Percentage and number of subcontractors that are local 	Contractor reporting form or surveys

3. Collecting Monitoring Data

How and where you collect data depends on if you are managing your own projects or if you are monitoring work conducted by a government agency.

a. Collecting direct project management data

For organizations that hire contractors directly, you can collect some basic monitoring data from your existing contracts. However this information will usually be limited to the following:

- Contract amount and duration
- Scope of work and project description
- Project location
- Contractor location

For your monitoring program to provide more detailed results you will need to develop a system for collecting necessary economic information from contractors. You can structure your contracts to require contractors to report the following periodically or at the close of a project:

- Description of completed tasks
- Job titles and number of workers
- Total wages and hours worked
- Number of local workers
- Benefits
- On-the-job training
- Job safety
- Subcontracting
- Purchases

When collecting information from contractors or workers, make sure to tell them why you are asking for this information and how it may help them in the future. You should be mindful of any sensitive information that you gather about individuals or businesses and think carefully about what information you really need. You should create a system where you keep your raw data in a secure place and report data in such a way that does not reveal the identity of any particular contractors or workers.

A sample contractor reporting form is included in Appendix B to show what kinds of information could be collected through contractor reporting or

contractor surveys. You could use the information collected on this form to analyze the economic impacts of a particular restoration project or an entire restoration program. Organizing the information you collect from your contractors in a Microsoft Excel spreadsheet will make it easier for you to sort and analyze your data.

b. Monitoring work on public lands

For collaborative groups and other organizations monitoring work conducted on federal lands the publicly available government database USAspending.gov (www.usaspending.gov) (see Appendix C for instructions for using this website)³ can provide you with the following basic contract information:

- Contract amount and duration
- Scope of work and project description
- Project location
- Contractor location

This basic information may also be available from your local contracting officer (USFS, BLM, etc.). Your local ranger district can also provide information about timber sales from the Timber Information Manager (TIM).

c. Surveying other contractors

To get at the job quality measures that would not be available from contracting officers or the online databases, you will have to survey contractors using a survey similar to the contracting reporting form provided in the appendix.

You can develop a list of contractors based on a review of the available online databases mentioned above or from your agency partners and survey a sample of contractors from this list. As with contractor report forms, consider the sensitivity of this information and how you will collect and store it. Organizing the information you collect from your surveys in a Microsoft Excel spreadsheet will make it easier for you to sort and analyze your data.

³ More detailed information about contracts is available from the Federal Procurement Database System (FPDS): <https://www.fpds.gov>

4. Reporting and Using Monitoring Results

a. Reporting data and results

Your monitoring data and interpreted results can be made available to community members, funders, and other important decision-makers, as well as the business owners and workers involved in your restoration program. When reporting the economic impacts of your restoration program it is important that you think about the following:

- Who are you trying to reach (i.e. community members, funders, government officials, landowners, contractors, workers), and what kind of information they might be most interested in seeing?
- Some easy ways to report your findings are to include them in newsletters, annual reports, or a presentation and discussion at a meeting. Posting results on your website is another good way to make your economic impacts publicly available to anybody who might be interested.



b. Steps to learning and adapting

- For you and your partners to learn from the results of your monitoring program and adapt and improve your restoration program to better meet your economic goals, you will need to evaluate your findings in the light of your original goals:
- If you are not meeting your goals, you and your partners should ask why and what actions could be taken to better help you meet your goals. Make a list of recommendations for future actions based on this discussion.
- Over time, track your progress. Are you headed in the right direction? The wrong direction? Are your impacts inconsistent over time? Whatever the result, try to figure out why, and what actions may help set you on or keep you on the right track.
- Include your findings in strategic planning discussions you have so all of the hard work and time you have invested in your monitoring efforts can be incorporated in future planning.

Appendix A.

Additional Monitoring Resources

Handbook Five: Monitoring Social and Economic Effects of Forest Restoration. Derr, T., A. Moote, M. Savage, M. Schumann, J. Abrams, and K. Lowe. 2005. Ecological Restoration Institute, Flagstaff, Arizona. www.eri.nau.edu/en/information-for-practitioners/monitoring/

Multiparty Monitoring for Sustainable Natural Resource Management. Moseley, C. and L.J. Wilson. 2002. Ecosystem Workforce Program, Eugene, Oregon, and Watershed Research and Training Center, Hayfork, California. www.ewp.uoregon.edu/resources/community-guidebook/

Multiparty Monitoring and Stewardship Contracting: A Tool for Adaptive Management. Prepared by Moote, A. and edited by P. Shannon. Sustainable Northwest, Portland, Oregon. www.sustainablenorthwest.org/resources/publications/multiparty-monitoring-and-stewardship-contracting-guide/



Appendix B.

Restoration Contractor Reporting and Survey Form

Contractor name _____ City and state _____ ZIP code _____

Project title _____ Contract no. _____ Contract amount _____

Project location _____ Start date _____ End date _____

1) Scope of work (limit to forty words)

2) Please fill in the following table for each type of job paid for using project funds

Job title	Number of employees	Number of local employees (provide your definition of local)	Health insurance or payments in lieu of benefits provided (yes or no)	Total person hours	Total wages paid

3) As part of this project, did you offer on-the-job training activities? (circle one) YES or NO

YES or NO, if yes, please describe:

4) Were there any job-related injuries or illnesses that resulted in lost work time while performing tasks related to this contract? (circle one) YES or NO

If yes, please describe

5) Please fill in the following table for each subcontractor paid using project funds

Description of work	Business ZIP code	Subcontract Amount (\$)

Appendix C.

Instructions for using usaspending.gov

USA Spending.gov was established by the Federal Funding Accountability and Transparency Act (FFTA) of 2006 to provide the public with free access to information about federally sponsored projects. For each award, the searchable website provides information including:

1. The name of the entity receiving the award
2. The amount of the award
3. Information on the award including transaction type, funding agency, and so forth
4. The location of the entity receiving the award
5. A unique identifier of the entity receiving the award

Instructions for retrieving data from usaspending.gov

1. Go to usaspending.gov/ and click on “Prime Award Advanced Search” (Figure C.1 on page 11 is a picture of the search page).
2. Under the “Basic Criteria” section
 - a. Click on “Prime Award Advanced Search”
 - b. Select the type of spending you are interested in (contracts, grants, and so forth) in the “Spending Type” field (Note: agreements are included with grants).
 - c. Select the major agency and subagency for the contracts you are interested in. For example, “Department of Agriculture” and then “USDA–Forest Service”
 - d. Select the fiscal year
3. Under the Place of Performance, your search can be narrowed down by the following:
 - a. State (encompasses all results for your state so once you have completed your search you will have to eliminate the results that are not in the geographic area you are interested in)
 - b. Congressional District (a narrower search than your state but will still require you to eliminate the results that you are not interested in)

- c. Zip Code (the most specific search but you will have to repeat searches for each zip code you are interested in)
4. At the top or bottom of the page click “Search.”

If you have searched by state or congressional district, your search will probably return a large amount of data (Figure C.2 on page 12 is a picture of the search results page). To manage and eliminate the results that you are not interested in, you can export this data to Excel and analyze it there.

Instructions for exporting data

1. Click on the “Export” button that appears below the map.
2. Choose “Complete,” “All Pages” as the data selection, and CSV to export the data to an Excel file.

Once you download and open the file to get the results you are interested in, you can do the following to further eliminate the entries you are not interested in tracking:

1. Sort the data by “placeofperformanczipcode” for all of the zip codes you are interested in and eliminate the entries you are not interested in.
2. For contracts sort the data by “productorservicecode,” which are the codes that the government uses to categorize spending, and eliminate those entries with codes that you are not interested in tracking. Product categories begin with numbers and service categories begin with capital letters. Most of the natural resources categories begin with the letter “F.” Spending categories related to environmental assessment and other related studies begin with the letter “B” and road construction and other maintenance categories begin with “Y” and “Z.” (note: grants and agreements do not have product or service codes)
3. For contracts read through the basic project descriptions under the heading “descriptionofcontractrequirement” and eliminate those that do not reflect the work that you are interested in. You can do the same for grants and agreements by reading the project descriptions under the heading “project_description.”

Once you have sorted the data and eliminated those entries that do not meet your criteria for place of performance and project type, you can glean the following information that can be used to monitor restoration projects on federal lands (Excel spreadsheet headings are in parentheses):

1. Contractor or grant and agreement recipient information

- a. Name (recipient_name)
- b. Address including zip code (recipient_addr1, recipient_city_name, recipient_state_code, recipient_zip, and vendor_state_code)
- c. Phone number (phoneno)

2. Contract or grants and agreements information

- a. Contract Number (piid) or federal award number for grants and agreements (federal_award_id). (note: there can be multiple entries for each contract, grant, or agreement so make sure to sort your data by contract or award number to aggregate total project value and capture multiple completed project tasks)
- b. Total value (obligatedamount)
- c. Date signed (signeddate)
- d. Completion date (end_date)

3. Project Location

- a. Principal place of performance zip code (placeofperformancezipcode)

4. Product or service information (for contracts only)

- b. Product service code (productorservicecode)

5. Project description

- a. For contracts (descriptionofcontractrequirement)
- b. For grants and agreements (project_description)

With this information you can determine the following measures:

- a. Total number and dollar value of contracts, grants, and agreements

- b. Number of contracts offered, organized by work type
- c. Dollar value of contracts, organized by work type
- d. Number of firms receiving contracts and total amount for each firm
- e. Percentage of contract and agreement dollars captured by local firms

You can also identify contractors and their contact information for further surveys or interviews.

Figure C.1

USA SPENDING .GOV
Government spending at your fingertips

Prime Award Advanced Search Sub-award Advanced Search Search

Prime Award Spending Data View Sub-award Data

Map Timeline **Advanced Search**

Fill out any or all of the options below to create a custom search. For any free text fields marked with (F), please use double quotes (" ") around your search terms if you would like to conduct an exact search and only return transactions that match the entire phrase.

RESET SEARCH

Search Term (F):

Basic Criteria

Spending Type: Contracts Grants Loans Direct Payments Insurance Other

Recipient (F):

Recipient DUNS Number (F):

Contract/Project Description (F):

Agency: Department of Agriculture
 Department of Commerce
 Department of Defense
 Department of Education

Select a Major Agency to populate the corresponding Sub-agencies below (F):

USDA - Food Safety and Inspection Service
 USDA - Food Safety and Inspection Service (disused code)
 USDA - Foreign Agricultural Service
 USDA - Forest Service
 USDA - Forest Service (disused code; now 1202)
 USDA - Grain Inspection, Packers and Stockyards Administration
 USDA - International Economic Staff

Show Selected Agencies Remove All Agencies

Federal Spending/Original Subsidy Cost (\$): to (F)

Fiscal Year: 2011
 2010
 2009
 2008

Show Selected Fiscal Years Remove All Fiscal Years

Business Fund Indicator: ALL (F)

Place of Performance Location

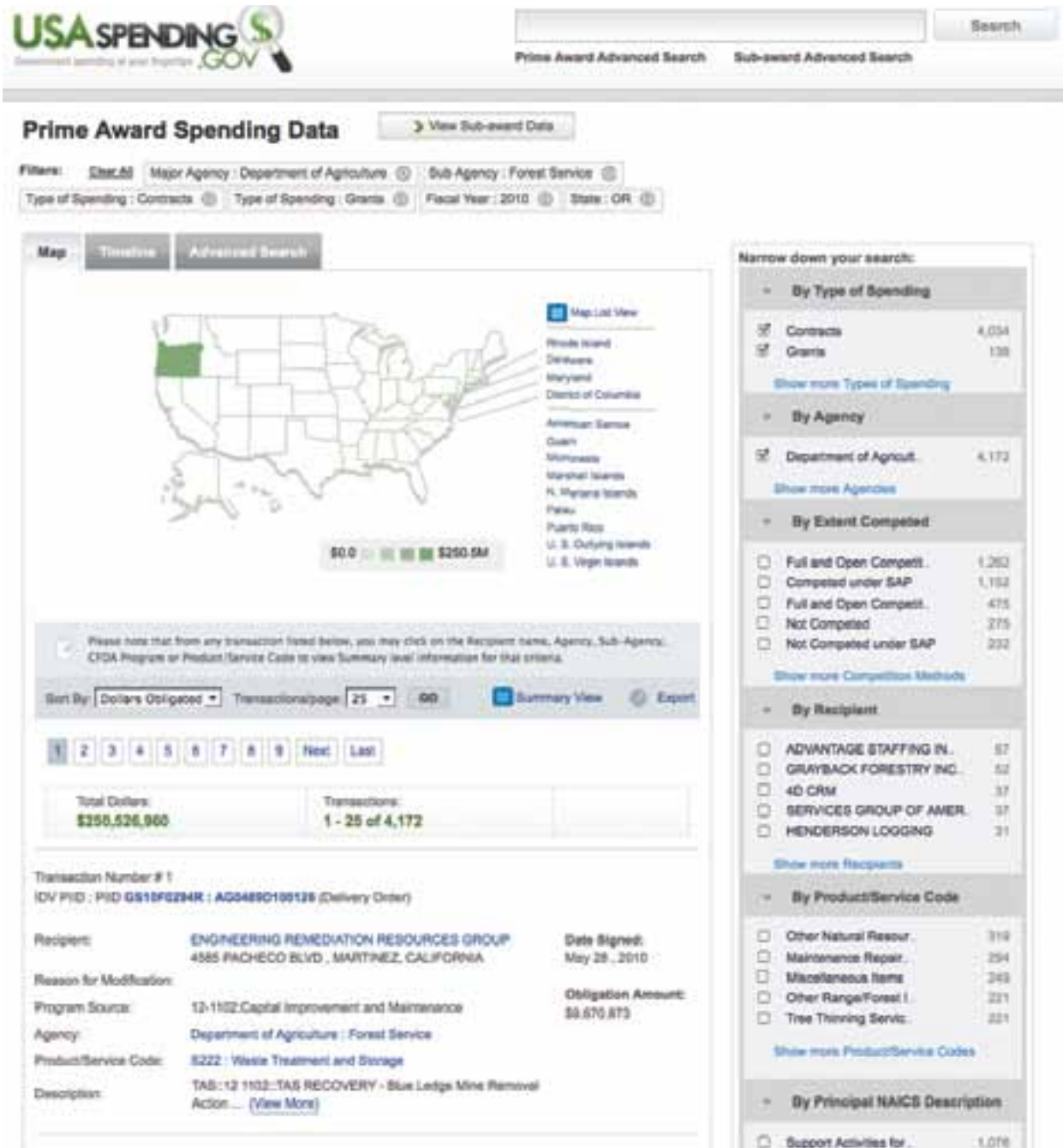
ZIP Code (F):

State: Oregon

Congressional District: All

County: All

Figure C.2





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