A Research Paper by

HEADWATERS ECONOMICS

The Economic Impacts of Restoration

Custer and Lemhi Counties, Idaho

April 2014

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PUBLISHED ONLINE:
http://headwaterseconomics.org/land/reports/idaho-restoration-impacts

ABOUT HEADWATERS ECONOMICS

Headwaters Economics is an independent, nonprofit research group whose mission is to improve community development and land management decisions in the West.

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ACKNOWLEDGEMENTS

Gina Knudson and Michelle Tucker with Salmon Valley Stewardship conducted the restoration survey and spent untold hours ground-truthing project data used in this report. Their forthcoming and related report—Restoration Means Jobs in Central Idaho—will be available here: http://www.salmonvalley.org.

Neal Christensen with Christensen Research conducted the IMPLAN analysis and provided invaluable guidance on technical aspects of this study.

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I. EXECUTIVE SUMMARY

This report describes the economic impacts of documented restoration activities from 2008 to 2013 in Custer and Lemhi counties, Idaho. The restoration projects studied cover a mix of project types, ranging from riparian, wildlife and fish habitat, native plant species, and forest restoration. Most projects focused on riparian and fish habitat restoration. The largest single project was a mine reclamation project.

An economic impact model was developed using data from 140 restoration projects that could be fully documented and occurred in the study area. These projects represent a subset of all projects undertaken in the region. The data were used as inputs for an IMPLAN economic impact analysis that relies on localized industrial sector data to develop economic impact estimates.

Expenditures on documented restoration projects during the study period in Custer and Lemhi counties averaged $6.8 million annually, resulting in an average of $9.1 million in total output each year. On average, restoration activities directly supported 47 jobs and, accounting for local multipliers, a total of 70 jobs in the two counties.

Table 1. Average Annual IMPLAN Restoration Results, Custer & Lemhi Counties, 2008 to 2013

Impact Type	Employment	Labor Income ($2014)	Value Added ($2014)	Output ($2014)
Direct Effect	47	$2,605,534	$2,868,486	$6,783,167
Indirect Effect	12	$393,207	$644,617	$1,246,173
Induced Effect	11	$286,789	$654,302	$1,070,551
Total Effect	70	$3,285,531	$4,167,405	$9,099,892

Note: Results are indexed to 2014 dollars.

The restoration economy in Custer and Lemhi counties grew throughout the study period. From 2008 to 2013, expenditures on restoration projects in this study grew on average 14 percent annually and associated employment grew on average 18 percent annually.

In 2013, restoration expenditures were $8.2 million, resulting in $11 million in total output and creating a total of 89 jobs in the two counties. For perspective, the components of the restoration industry measured in this report are about half as large as the manufacturing sector (181 jobs in 2011) and slightly larger than the wholesale trade sector (87 jobs in 2011) in Custer and Lemhi counties.

A variety of local economic sectors benefited from the restoration projects. These include businesses that planned and executed restoration projects in these industries: agriculture and forestry; mining; construction; engineering; environmental and technical services; and the public sector. They also involve businesses that either provided source materials or benefited from restoration spending in the local economy, including manufacturing; wholesale trade; retail trade; transportation; finance and insurance; arts, entertainment and recreation; and accommodation and food services.

The lead entities on surveyed restoration efforts included nongovernmental organizations, federal and state government, and private parties. The principal funder for restoration projects was the federal government, though privately funded mine reclamation was also significant.

II. INTRODUCTION

As more private and public dollars are directed to restoring natural systems, there is growing interest in understanding the local economic impacts of these recovery efforts. This report provides a straightforward way to calculate the economic impacts of natural resource restoration activities to nearby communities that should be helpful to local officials, agency staff, policy analysts, and others.

A widely accepted definition of ecological restoration is "the process of assisting the recovery of resilience and adaptive capacity of ecosystems that have been degraded, damaged, or destroyed."[1] Restoration efforts cover a diversity of project types, ranging from forest and rangeland to watershed and aquatic health, and often involve public-private partnerships.

Several precursor efforts gave rise to this report. In 2012, Salmon Valley Stewardship in Salmon, Idaho calculated the economic benefits of the Hughes Creek forest restoration project on the Salmon-Challis National Forest. In 2014, Salmon Valley Stewardship completed a survey of restoration projects in Custer and Lemhi counties to document restoration activities in the region.[2]

This study examines the 140 local restoration projects from this recent survey that could be fully documented and covers the period from 2008 to 2013. It offers a useful view of the types of economic impacts that resulted from area restoration activities, but because of incomplete or missing data does not offer a complete view of the scale of the restoration economy in the two-county region.

An economic impact model was developed using data from the documented restoration projects. The data were used as inputs for an IMPLAN economic impact analysis that relies on localized industrial sector data to develop economic impact estimates.

The goal of this report is threefold:

- To document the economic impacts and trends of restoration activities in the two-county area from 2008 to 2013;
- To provide a better picture of the local industries that are engaged in and benefit from restoration activities; and
- To outline an approach to tracking future restoration activities and economic impacts.

This study did not measure the downstream effects of restoration projects such as the economic benefits of healthier rivers, forests, and rangelands. These ongoing economic benefits include the economic value of outdoor recreation, such as hunting and angling, and ecosystem services, such as flood control and clean water. These broader benefits represent a larger return on investment and may well be more significant than the one-time economic impacts measured in this report.

[1] For more information on restoration-related terms and definitions, see: http://www.fs.fed.us/restoration/CFLRP/glossary.shtml.

[2] The Hughes Creek report is available here: http://www.salmonvalley.org/hughes-creek. The survey of area restoration projects—Restoration Means Jobs in Central Idaho—will be available here: http://www.salmonvalley.org.

III. METHODS AND DATA

Economic Impact Modeling

Economic impact modeling traces the effects of spending as money circulates through a local economy. The spending is generally tied to a specific activity, as with the restoration projects modeled in this study. Spending related to restoration has a direct impact on local businesses that provide goods and services in support of that activity. In addition to these direct impacts, secondary impacts occur as the original dollars continue to be spent in the local economy.

This study used an IMPLAN economic model to estimate the direct and total impacts of restoration activities. IMPLAN is proprietary economic impact modeling software that was originally developed by the U.S. Forest Service and is now owned by the Minnesota IMPLAN Group, Inc. Using the restoration data from this study, the IMPLAN model produced industry-specific estimates of jobs, labor income, value added, and output derived from these activities.[3]

This study did not measure the downstream effects of restoration projects such as the economic benefits of healthier rivers, forests, and rangelands. These ongoing economic benefits include the economic value of outdoor recreation, including hunting and angling, and ecosystem services, such as flood control and clean water. These broader benefits represent a larger return on investment and may well be more significant than the one-time economic impacts measured in this report.

Local IMPLAN Data

This study developed impact estimates resulting from a set of restoration projects within the local economy of Lemhi and Custer counties, Idaho. The local economy was modeled using IMPLAN software and the latest IMPLAN economic data for the two counties, with 2012 being the latest year for which data was available. The county-level IMPLAN data includes demographic and economic variables like employment, value-added, government purchases, and household purchases across 440 industrial sectors.

[3] For more information on definitions, economic impact modeling, and IMPLAN, see: https://implan.com.

Definitions of Key IMPLAN Terms Used in this Report:

Direct effects
The set of expenditures applied to the predictive model for impact analysis. It is a series of expenditures made by producers/consumers as a result of an activity or policy.

Indirect effects
The impact of local industries buying goods and services from other local industries. The cycle of spending works its way backward through the supply chain until all money leaks from the local economy, either through imports or by payments to value added.

Induced effects
The response by an economy to an initial change (direct effect) that occurs through re-spending of income received by a component of value added. This money is re-circulated through the household spending patterns causing further local economic activity.

Multipliers
The multiplier effect of industrial spending refers to how dollars continue to circulate in the local economy beyond the initial direct expenditures. A multiplier is calculated by dividing the total by the direct measurement.

Jobs
IMPLAN jobs include all full-time, part-time, and temporary positions. A job in IMPLAN is the annual average of monthly jobs in that industry.

Labor income
This is all forms of employment income, including employee compensation (wages and benefits) and proprietor income.

Value added
This is the difference between an industry's total output and the cost of its intermediate inputs. It equals gross output (sales or receipts and other operating income, plus inventory change) minus intermediate inputs (consumption of goods and services purchased from other industries or imported). Value added consists of compensation of employees, taxes on production and imports less subsidies, and gross operating surplus.

Output
Output represents the value of industry production. For manufacturers, this is sales plus/minus change in inventory. For service sectors, production is sales. For retail and wholesale trade, this is gross margin and not gross sales.

Local Restoration Project Data

This study considered data from 140 restoration projects that could be fully documented and occurred within Lemhi and Custer counties from 2008 to 2013. Results only represent impacts from the projects that were included in this study and do not represent economic benefits for the full extent of the local restoration industry. [4]

The analysis relied on key information from each project, including the project type, timeline, and budget. It assumed that the entire reported budget was spent within the local two-county economy. For analysis, each total budget was evenly divided across each project's timeline. Budget estimates for 23 projects that extended beyond 2013 were discounted to reflect only the estimated amount spent within the timeframe of the study.

Restoration Project Details

The restoration projects studied covered a range of activities and goals. These include endangered species habitat recovery, stream protection and restoration, wetland protection from grazing impacts, erosion control, mine reclamation, forest restoration, and fuels reduction. Most projects focused on riparian and fish habitat restoration. The largest single project was a mine reclamation project.

The lead entities on restoration efforts included nongovernmental organizations such as The Nature Conservancy, Trout Unlimited, Salmon Valley Stewardship, and Lemhi Regional Land Trust; the federal government including U.S. Fish and Wildlife Service, and Salmon Challis National Forest; state government including Idaho Department of Fish and Game, and Custer Soil and Water Conservation District; and private parties.

The principal funder for restoration projects studied was the federal government, though privately funded mine reclamation was also significant. Funding sources and programs included Bonneville Power Administration, Pacific Coast Salmon Recovery Fund, Snake River Basin Adjudication, Natural Resource Conservation Service, Forest Service and Bureau of Land Management appropriations, Northwest Wildlife Conservation Initiative, BLM Challenge Cost Share, National Forest Foundation, Central Idaho Resource Advisory Committee, U.S. Fish and Wildlife Partners for Fish and Wildlife, and private parties.

A variety of local economic sectors benefited from the restoration projects. These include businesses that planned and executed restoration projects in these industries: agriculture and forestry; mining; construction; engineering; environmental and technical services; and the public sector. They also involve businesses that either provided source materials or benefited from restoration spending in the local economy, including manufacturing; wholesale trade; retail trade; transportation; finance and insurance; arts, entertainment and recreation; and accommodation and food services.

[4] For a more information on the range of local restoration projects, see the forthcoming report—Restoration Means Jobs in Central Idaho—which will be available here: http://www.salmonvalley.org.

Expenditure Profiles

The economic modeling process required expenditure estimates for each of the restoration projects for each industrial sector. Expenditure profiles were not included in the original project data, so estimates of spending profiles were developed for this study. The budget profile estimates were developed by reviewing prior restoration studies and by consulting with local restoration experts. Recent U.S. Fish and Wildlife Service and University of Oregon studies, which also used IMPLAN models, informed the method used to develop the profiles.[5]

Table 2 shows the restoration activity profiles used in this study, which were adapted from the U.S. Fish and Wildlife Service report noted above. Table 2 also was adapted by adding industries used in the University of Oregon study noted above that were appropriate for this study but were missing from the U.S. Fish and Wildlife Service nationwide data. Table 2 was further adapted by adding grant administrative costs (at 5%) and a "working mine restoration" activity to better reflect local projects. Each of the 140 projects included in this study was assigned between one and four activities from Table 2 as an intermediate step to developing detailed IMPLAN annual budget estimates.

[5] Restoration Returns: The Contribution of Partners for Fish and Wildlife Program and Coastal Program Restoration Projects to Local U.S. Economies. Drew Laughland, Division of Economics; Linh Phu & Joe Milmoe, Branch of Habitat Restoration, U.S. Fish and Wildlife Service, September 2013; and Economic and Employment Impacts of Forest and Watershed Restoration in Oregon. Max Nielsen-Pincus and Cassandra Moseley, Institute for a Sustainable Environment, The University of Oregon, Eugene. Ecosystem Workforce Program Briefing Paper Number 24, Spring 2010.

Table 2. Restoration Activities with Sector-Specific Budget Allocations

Treatment Type	Allocation (%)	IMPLAN Industry	IMPLAN Sector Number
Assessment	95.0	Environmental and other technical consulting services	375
	5.0	Admin	*
Fencing	14.3	Environmental and other technical consulting services	375
	80.8	Construction of other new nonresidential structures	36
	5.0	Admin	*
Fire Management	47.5	Forestry, forest products, and timber tract production	15
	47.5	Support activities for agriculture and forestry	19
	5.0	Admin	*
Fish/Aquatic Species Passage	7.2	Architectural, Engineering, and related services	369
	7.2	Environmental and other technical consulting services	375
	80.8	Construction of other new nonresidential structures	36
	5.0	Admin	*
Grazing/Farm Management	9.5	Environmental and other technical consulting services	375
	85.5	Cattle ranching and farming	11
	5.0	Admin	*
Human Use Exclusion	95.0	Construction of other new nonresidential structures	36
	5.0	Admin	*
Infrastructure Removal	4.8	Architectural, Engineering, and related services	369
	4.8	Environmental and other technical consulting services	375
	85.5	Waste management and remediation services	390
	5.0	Admin	*
Instream Modification	7.2	Architectural, Engineering, and related services	369
	7.2	Environmental and other technical consulting services	375
	80.8	Construction of other new nonresidential structures	36
	5.0	Admin	*
Invasive Control	9.5	Environmental and other technical consulting services	375
	42.8	Forestry, forest products, and timber tract production	15
	42.8	Support activities for agriculture and forestry	19
	5.0	Admin	*
Planting	9.5	Environmental and other technical consulting services	375
	85.5	Support activities for agriculture and forestry	19
	5.0	Admin	*
Vegetation Management	9.5	Environmental and other technical consulting services	375
	42.8	Forestry, forest products, and timber tract production	15
	42.8	Support activities for agriculture and forestry	19
	5.0	Admin	*
Water Management	9.5	Environmental and other technical consulting services	375
	85.5	Construction of other new nonresidential structures	36
	5.0	Admin	*
Wildlife Habitat Structures	4.8	Architectural, Engineering, and related services	369
	4.8	Environmental and other technical consulting services	375
	85.5	Construction of other new nonresidential structures	36
	5.0	Admin	*
Working Mine Restoration	95.0	Support activities for other mining	30
	5.0	Admin	*

* Grant administration, sector depending on grant administrator

Allocating Budgets

The purpose of assigning activities to the projects was to provide a systematic way to allocate the overall project budgets across specific IMPLAN economic sectors. Using this method, detailed annual budgets were developed for each project by giving each assigned activity equal weighting and then allocating the overall annual budgets to the IMPLAN sectors according to the percentages listed in Table 2. This process resulted in the ability to estimate annual, sector-specific budgets for the overall restoration industry represented by the projects in this study.

Table 3 lists the annual combined budgets for the 140 projects along with their allocations to specific IMPLAN sectors. These expenditures, representing the direct effects of the restoration industry in Lemhi and Custer counties, provide the basic inputs to the IMPLAN impact model.

Table 3. Annual Restoration Budgets by IMPLAN Sector for the Combined 140 Study Projects

IMPLAN Sector Description	First Year ($2008)	Second Year ($2009)	Third Year ($2010)	Fourth Year ($2011)	Fifth Year ($2012)	Sixth Year ($2013)	Average Year ($2011)
Cattle ranching and farming	$8,666	$8,666	$11,499	$2,833	$29,201	$26,368	$14,539
Forestry, forest products, and timber tract production	$77,206	$116,995	$178,775	$222,779	$258,619	$271,051	$187,571
Support activities for agriculture and forestry	$96,310	$141,252	$313,406	$265,208	$325,131	$300,714	$240,337
Support activities for other mining	$2,190,353	$2,190,353	$2,190,353	$2,190,353	$2,190,353	$2,190,353	$2,190,353
Construction of other new nonresidential structures	$1,306,488	$1,464,561	$1,973,402	$2,382,638	$2,668,410	$3,123,190	$2,153,115
Architectural, Engineering, and related services	$148,610	$160,582	$199,022	$210,072	$234,413	$239,665	$198,727
Environmental and other technical consulting services	$164,819	$212,096	$278,058	$421,214	$501,074	$600,438	$362,950
Office administrative services	$230,563	$231,659	$230,563	$230,563	$230,563	$230,563	$230,746
Waste management and remediation services	$591,395	$652,633	$646,682	$648,770	$759,184	$1,011,151	$718,303
Grantmaking, giving, and social advocacy organizations	$3,667	$49,768	$87,496	$123,201	$129,635	$88,729	$80,416
Other Federal Government enterprises	$10,358	$18,352	$26,143	$17,524	$22,755	$16,803	$18,656
Other state and local government enterprises	$0	$1,331	$1,331	$0	$21,098	$109,880	$22,273
Total:	**$4,828,436**	**$5,248,247**	**$6,136,731**	**$6,715,156**	**$7,370,436**	**$8,208,905**	**$6,417,985**

Note: Average year results are in 2011 dollars.

IV. RESULTS

Economic Impacts

The direct expenditures by the restoration industry in Custer and Lemhi counties have a compounding influence, or multiplier effect, on the local economy. The effects on the local economy are categorized by direct, indirect, and induced rounds of spending, and can be measured in terms of jobs, labor income, value added, and output.

Table 4 shows the IMPLAN modeling results of average annual expenditures from the restoration industry in the study area. Expenditures on documented restoration projects during the study period in Custer and Lemhi counties averaged $6.8 million annually, resulting in an average of $9.1 million in total output each year. On average, restoration activities directly supported 47 jobs and, accounting for local multipliers, a total of 70 jobs in the two counties.

Table 4. Average Annual IMPLAN Restoration Results, Custer & Lemhi Counties, 2008 to 2013

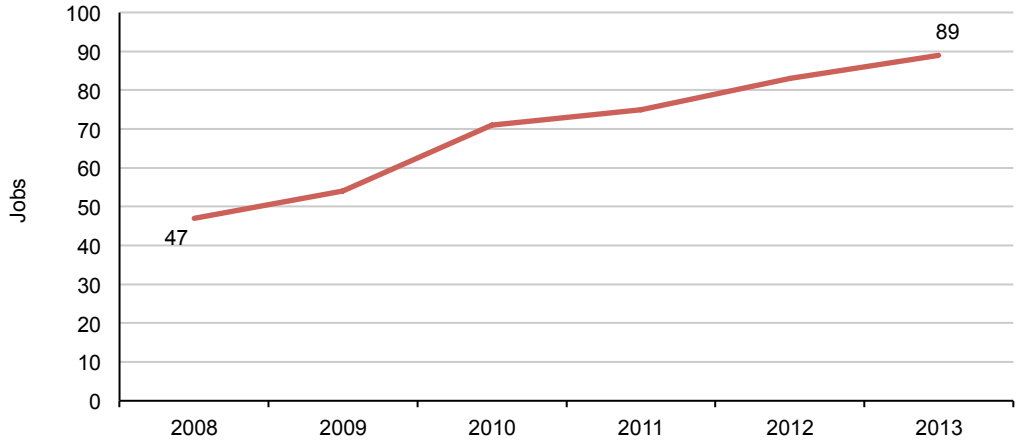
Impact Type	Employment	Labor Income ($2014)	Value Added ($2014)	Output ($2014)
Direct Effect	47	$2,605,534	$2,868,486	$6,783,167
Indirect Effect	12	$393,207	$644,617	$1,246,173
Induced Effect	11	$286,789	$654,302	$1,070,551
Total Effect	70	$3,285,531	$4,167,405	$9,099,892

Note: Results are indexed to 2014 dollars; Table 1 and 4 in this report are the same.

Comparing the average direct effects to the average total effects listed in Table 4 provides an indication of the multiplier effect of restoration activities in the local economy. For example, the difference between direct employment (47 jobs) and total employment (70 jobs) shows an employment multiplier of 1.49 for the restoration industry in Custer and Lemhi counties.

The two-county restoration economy grew throughout the study period. From 2008 to 2013, expenditures on restoration projects in this study grew on average 14 percent annually (see Table 3) and associated employment grew on average 18 percent annually (see Chart 1).

Chart 1. Restoration Employment Trends, Custer & Lemhi Counties, 2008 to 2013



Because of this growth the local restoration industry had the largest impact in 2013. Table 5 shows that expenditures in this year were $8.2 million, resulting in $11 million in total output—directly supporting 61 jobs, and, accounting for local multipliers, a total of 89 jobs in the two counties. For perspective, the components of the restoration industry measured in this report are about half as large as the manufacturing sector (181 jobs in 2011) and slightly larger than the wholesale trade sector (87 jobs in 2011) in Custer and Lemhi counties.[6]

Table 5. Annual IMPLAN Restoration Results, Custer & Lemhi Counties, 2013

Impact Type	Employment	Labor Income ($2013)	Value Added ($2013)	Output ($2013)
Direct Effect	61	$3,040,518	$3,427,261	$8,192,103
Indirect Effect	15	$474,917	$776,455	$1,511,883
Induced Effect	13	$336,417	$767,576	$1,252,915
Total Effect	89	$3,851,852	$4,971,292	$10,956,900

Note: Results are in 2013 dollars.

For greater detail on year-by-year results, see the accompanying spreadsheet available here: http://headwaterseconomics.org/land/reports/idaho-restoration-impacts.

[6] U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA25N.

Benefiting Industries

The economic effects of restoration activities in this study are distributed across numerous industries in Custer and Lemhi counties. Table 6 shows the distribution of the total employment and output effects for the average year (listed in Table 4) across major industry types.

The direct effects resulting from restoration activities are shown according to the North American Industry Classification System (NAICS) in Table 6 where data appear in columns showing "Direct" impacts. They include local businesses that planned and executed restoration projects in these industries: agriculture and forestry; mining; construction; engineering; scientific and technical services; and the public sector.

The indirect and induced effects resulting from restoration activities are more widely distributed across the economy. These are shown according to NAICS in Table 6 where data appear in columns showing "Indirect" and "Induced" impacts. They include local businesses that either provided source materials or benefited from restoration spending in the local economy in these industries: utilities; manufacturing; wholesale trade; retail trade; transportation; finance and insurance; arts, entertainment and recreation; and accommodation and food services.

Table 6. Average Annual IMPLAN Results by Industry, Custer & Lemhi Counties, 2008 to 2013

Aggregate Sector Description	Average Annual Employment				Average Annual Output ($2014)			
	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total
Agriculture & forestry	11.5	0.4	0.0	12.0	$476,219	$34,843	$8,934	$519,997
Mining	5.3	0.1	0.0	5.5	$2,353,274	$52,843	$1,064	$2,407,181
Utilities	0.0	0.0	0.0	0.1	$0	$23,491	$30,487	$53,977
Construction	16.6	0.2	0.1	16.9	$2,237,764	$25,438	$15,939	$2,279,141
Manufacturing	0.0	0.3	0.0	0.3	$0	$66,082	$10,183	$76,265
Wholesale trade	0.0	0.2	0.2	0.4	$0	$33,519	$27,990	$61,510
Retail trade	0.0	0.4	2.1	2.5	$0	$26,413	$125,706	$152,119
Transportation & warehousing	0.0	0.2	0.1	0.3	$0	$24,924	$13,033	$37,958
Information	0.0	0.1	0.1	0.2	$0	$45,329	$29,195	$74,524
Finance & insurance	0.0	0.4	0.2	0.6	$0	$101,996	$45,242	$147,239
Real estate & rental	0.0	0.3	0.5	0.8	$0	$86,516	$326,954	$413,470
Professional, scientific & tech. services	7.8	5.0	0.3	13.2	$607,818	$398,042	$19,675	$1,025,535
Management of companies	0.0	0.1	0.0	0.1	$0	$14,337	$1,772	$16,110
Administrative & waste services	4.4	1.3	0.2	5.9	$1,000,296	$160,969	$16,070	$1,177,335
Educational Services	0.0	0.1	0.2	0.3	$0	$2,965	$9,157	$12,123
Health & social services	0.0	0.0	2.2	2.2	$0	$29	$166,532	$166,560
Arts, entertainment & recreation	0.0	0.2	0.7	0.9	$0	$10,170	$30,607	$40,777
Accomodation & food services	0.0	0.8	2.2	3.0	$0	$38,018	$110,034	$148,053
Other services	1.4	1.2	1.6	4.1	$83,496	$76,793	$54,588	$214,877
Government	0.1	0.2	0.2	0.5	$24,299	$23,455	$27,387	$75,142
Total	**47.1**	**11.5**	**10.9**	**69.8**	**$6,783,166**	**$1,246,172**	**$1,070,549**	**$9,099,893**

Note: Output results are indexed to 2014 dollars.

For more detailed results, including labor income and value added by industry, see the accompanying spreadsheet available here: http://headwaterseconomics.org/land/reports/idaho-restoration-impacts.

Future Results

This study was not able to measure the full economic impact of restoration expenditures in the study region and time period because of incomplete project data. There are generally a variety of parties that initiate and carry out restoration projects and they typically use different methods with varying levels of completeness when tracking restoration project details.

To ease the administrative burden of determining which project details are critical to track and also to ensure consistency between projects, we created a template that can easily be filled out and will capture the basic elements needed to calculate reliable economic impact estimates in the future.

This project tracking template can be downloaded here:
http://headwaterseconomics.org/land/reports/idaho-restoration-impacts.

V. CONCLUSION

This report provides a straightforward way to calculate the economic impacts of natural resource restoration activities to nearby communities that should be helpful to local officials, agency staff, policy analysts, and others.

The results from Custer and Lemhi counties for the period 2008 to 2013 demonstrate that the 140 restoration projects documented in this study distributed economic benefits across a wide range of sectors, generating an average of 70 jobs and $9.1 million in output annually. The impacts of restoration also expanded over time; restoration jobs, for example, grew 18 percent annually during the study period.

These economic benefits would be significant for any rural part of the country, and they are especially important in the two-county study area with its strong ties to industries—agriculture and outdoor recreation, for example—that are closely linked to the health of land and water resources.

Going forward, the ability to demonstrate the economic return from restoration expenditures is needed to expand restoration investment and compete effectively for these dollars. For this study, the lack of basic project information made it more difficult to calculate economic impact estimates and impossible to measure the full extent of restoration activity and impacts. The simple restoration project tracking template created by Headwaters Economics should make future analyses of economic impacts easier and more accurate.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