

The Economic Activity of Idaho's Endowment Trust Lands

Prepared for the Idaho State Board of Land Commissioners

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Executive Summary

As of the end of fiscal year 2010 it is estimated that Idaho's Endowment Trust Lands contribute \$133 million in annual economic activity and support nearly 2,000 jobs in the State of Idaho.

This economic study is carefully designed to determine the portion of Idaho's total economic activity attributable directly to operations on Endowment Trust lands, the expenditure of income from these operations by the Endowment's beneficiaries, and the statewide recreational activity that occurs on these lands. The above contribution estimate covers the direct, indirect, and induced expenditures from all these activities using county, multi-county, and state level data.

Standard regional economic analysis is employed for this study. The model and data used here are widely accepted for the study of public lands activity. The methodology used for the study of other government agencies managing forest and natural resource programs was applied.

The direct and indirect output multipliers calculated under this methodology are consistent with those found in previous studies of Idaho's forest industry and in studies of US Forest Service activity. The direct and indirect output multipliers calculated for expenditures by the Endowment's beneficiaries are conservative when compared to previous studies of educational institutions. Finally, the direct and indirect output multipliers calculated for recreational activities on Endowment Trust lands are consistent with multipliers used in a study by the US Department of Interior for its lands in Idaho.

The above results do not include the Idaho Department of Land's administrative activities totaling approximately \$4.7 million in 2010. The overall economic activity measured here applies only to recent annual revenue and expenditures for Idaho's Endowment Trust Lands. The estimates of annual economic activity are not useful for predicting future values as the economic effects are likely to vary from changes in industry technology and/or changes in the local labor markets. The Idaho Department of Lands also conducts a variety of regulatory functions throughout the state that were not studied here. These activities contribute to other economic activity on private lands. For example, the Fire Management Bureau works to prevent, prepare for and fight wild fires throughout Idaho.

I. Introduction and Motivation

When Idaho was admitted to the Union in 1890 more than 3.6 million acres of land in the territory were set apart for support of state institutions. The Idaho Constitution requires these lands (hereafter Endowment Trust Lands) to be managed in a prudent manner for long-term financial returns to these institutions, which include public schools, Idaho universities, and many charitable institutions across the state. Monies generated from activities on these lands, or the sale thereof, are deposited into a fund and invested on behalf of the beneficiaries. The constitutionally-appointed State Board of Land Commissioners manages these lands through its administrative arm, The Idaho Department of Lands (hereafter the Department). This study seeks to measure the gross level of local area economic activity attributable to Idaho's Endowment Trust Lands.

Economic impact studies of this type are designed to determine the economic effect (in terms of dollars and/or jobs) on the immediate region stemming from an organization's varied activities. The information reported here represents the level of economic activity from the Endowment Trust Lands operations in terms of aggregate dollars and jobs. Other measures of economic benefit used in some studies of this type, such as wage income, value added, or gross domestic product, are not used here because of measurement issues and questions of interpretation.

In the 2010 Annual Report, State Board of Land Commissioners Secretary and Department of Lands Director George Bacon says the Department works hard to “ensure a steady stream of revenue is provided from our state trust lands for the benefit of Idaho's public schools, colleges and other endowed institutions,” and “...As a side benefit, Idaho industries have grown with the opportunities we provide. Private enterprise remains a key

in helping us manage the land, chiefly through contract services (2010 Annual Report page 4). This study supports these goals by measuring the gross level of economic activity in local Idaho communities from operations on Endowment Trust Lands, the expenditure of the income from these operations, and the statewide recreational activity that occur on the lands.

This economic impact study estimates the contribution of these activities to Idaho's overall economy by calculating direct, indirect, and induced expenditures. Using a 3-year average of expenditures and revenue ending June 2010 it is estimated that Idaho's Endowment Trust Lands contribute \$133 million in annual economic activity and support nearly 2,000 jobs in the State of Idaho. This result is before consideration of administrative expenditures and does not measure regulatory and other functions of the Department.

The next section reviews the methodology used in this study, with comparisons to previous work done for similar organizations. Section III covers the data collected for each aspect of the study and Section IV reports the results. Section V concludes with comments and suggestions for further study.

II. Methodology for Measuring the Economic Impact of Public Land Activities.

A. Regional Input-Output Models

The most widely accepted approach for measuring local area economic activity, called Input-Output (I-O) analysis, is used here. Such economic analysis tracks the interdependence between producing and consuming sectors in the geographic area under

study. I-O models measure the relationship between the demand for final goods and services in the area and the production of inputs, such as labor employment and raw materials, required to meet that consumption demand. By entering spending into the I-O model for a given entity the gross level of total economic activity in the area associated with that entity is determined. This value is the sum of the organization's direct expenditures, indirect expenditures in affected industries, and induced expenditures from spending by the employees of these affected industries. The model produces two multipliers, one for direct and indirect expenditures and one for direct, indirect, and induced expenditures.

The Regional Input-Output Modeling System (RIMS II) produced by Regional Economic Analysis Division, Bureau of Economic Analysis, U.S. Department of Commerce is the source data for this analytical method. The RIMS system was developed in the 1970s to assist policymakers and the public in general when planning programs at the state and local level. The RIMS system provides a systematic analysis of the economic impacts of projects and programs on affected regions (U.S. Department of Commerce, 1997). The 2009 RIMS II data reports \$50.3 billion in inflation-adjusted annual output, or real Gross Domestic Product for Idaho. The study reported here measures what portion of this total state economic activity is attributable to the Endowment Trust Lands.

IMPLAN 3 software, produced by MIG, Inc., incorporates the RIMS II data and is employed here to complete the calculations of the I-O model. The software program determines the indirect and induced expenditures from all direct expenditures by the Department for Endowment Trust Lands. The IMPLAN database contains the RIMS II

data for all Idaho counties and the state overall. Multiple county data can be combined to study the state as a whole. Endowment Trust Lands are located throughout Idaho and the Department incurs expenditures in just about every county. The RIMS II data is specialized at the county and state level, not simply estimated from national averages.

The IMPLAN program uses these data to calculate the effect on the local economy from the current activities of the organization. All expenditures for final use by the agency, such as personnel and equipment, determine the output of the model. Every industry purchases products, raw materials, and services from other companies and industries to create their product or perform their service. Suppliers to the industry under study must also procure goods and services, creating a cycle of economic activity which flows through the local economy, with some funds “leaking” out of the region. IMPLAN's Social Accounting System calculates all the local-area transactions between producers, and the intermediate and final consumers. (MIG, Inc., 2010).

B. Interpreting Regional Input-Output Models

From its Social Accounting System the IMPLAN program calculates output and job multipliers for the defined study area and industries. This economic study reports both output and job multipliers for using a 3-year average (2008-2010) of direct expenditures by the Department on Endowment Trust Lands, expenditures by the Endowment Trust beneficiaries in their respective industries, and estimated annual expenditures by recreational visitors on the land. The multipliers are based on the 2009 (most current) RIMS II data of industry structure in Idaho. An output multiplier is the total overall increase in dollars of business output for all industries per dollar of

expenditure by the organization. The jobs multiplier is the total overall level of employment in all industries supported by the given industry activity. It is important to remember that job counts don't reflect the quality of these employment opportunities in terms of wages, skills, or any other benefit to the community.

The gross contribution to the area economy from the operations and activities on Endowment Trust Lands is not necessarily the same as its net impact, a term often used in studies like this one. The gross level of economic activity, in terms of the jobs or income that is directly or indirectly supported by the activities, is not equivalent to the net impact if other activities can reasonably be expected to move into the area if the existing organization ceased operations. Further, gross economic activity or impact does not include a valuation of all benefits provided from organization under study, in this case the public lands. Specifically, user benefits from the Endowment Trust Lands undoubtedly include quality of life factors like environmental conditions. No attempt to measure these additional factors is made in this study.

Weisbrod (1997) suggests that confusing gross effects like those measured here with a facility or project's net impact on the local economy is one of "*seven deadly sins*" an analyst must avoid when conducting an economic impact study. The methodology employed here is specifically designed to avoid this error. Also, it must be remembered that the measurements reported here are static. Another of the "sins" Weisbrod warns about is confusing time periods. These estimates apply only to current expenditures for the Department, revenues from the products sold off these lands, and the structure of local industry in 2009. The result should be interpreted as immediate activity, not the potential or eventual effects on the economic growth of Idaho's economy. For example,

the dollar figure of economic activity does not account for what may be earned on Endowment Trust Lands from future commodity production such as oil and gas. I-O models assume the continuation of current inter-industry trading and the flow of money into and out of the local area. The gross effects can vary frequently from changes in industry technology or growth in the size of the area economy.

C. Using Input-Output Models for Public Land Activities.

Despite these limitations it is reasonable to measure the contribution of activity on the Endowment Trust Lands to the state economy using the I-O model of the IMPLAN software program. The United States Department of Agriculture has certified the IMPLAN program as an appropriate methodology for economic impact studies. The USDA formed a study group of experts from many different areas, including the USDA's Agricultural Research Service, Forest Service, and Natural Resources Conservation Service. The group concluded that the IMPLAN program best embodies the most appropriate concepts and techniques for regional economic modeling. In an April 2009 letter, John Kort of the USDA's Economic Research Center said that IMPLAN "is one of the most credible regional impact models used for regional economic impact analysis." (Kort, 2009)

The IMPLAN model was used to measure the overall economic impact of all activities under the United States Department of the Interior (DOI). Using the multipliers produced by this software, analysts determined that the DOI supports over 2 million jobs and \$363 billion in economic activity during 2010. This value was found by analyzing activity at national parks, energy produced on US lands and waters, and the agricultural

use of water rights. The analysis was done at both the state and program levels. For example, DOI estimates the output multiplier for its national Timber program at 2.42. This equates to gross US economic activity of \$814.4 million from direct program expenditures of \$337.1 million in 2010. In Idaho, the DOI estimates its Timber program generates \$35.9 million in economic activity from \$18.5 million in direct expenditures; an output multiplier of 1.94.(US Department of Interior, 2011).

The IMPLAN model was also used to measure the overall economic impact of all US Forest Service activities. The Forest Service used IMPLAN to study economic activity attributable to agency salaries, non-salary expenditures, and output in the Range Management, Timber, Minerals, Recreation, and Wildlife and Fish Forest Service programs. All multipliers in the study were calculated at the national level. The economic activity attributable to Forest Service was estimated using expenditure data by budget object code under each program. That is, expenditures are delineated by the industry in which they were spent. The IMPLAN system uses industry groupings based on The North American Industry Classification System (NAICS) codes. The Forest Service found output multipliers and jobs multipliers of 1.634 and 2.24, respectively in its State and Private Forestry program (Alward, *et al*, 2003). The study of overall economic activity for the Endowment Trust Lands reported here follows the methodology of these two national agencies and the results are benchmarked against these studies.

IMPLAN modeling is also used for state-level studies. Gustanski, Harris, and Van Tassell (2005) estimate the economic activity of Washington State's Department of Natural Resources Grazing Program using IMPLAN. The authors found that the grazing program was responsible for up to \$3.9 million in economic activity from \$2.8 direct

expenditures in just the Northeast and Southeast areas of Washington State. This amounts to an output multiplier of 1.4. BBC research of Denver, CO used the IMPLAN system to analyze the State of Colorado's Wildlife programs. BBC Researchers found that approximately \$60 million in direct spending by the Colorado Division of Wildlife and \$1 billion in spending from hunters and anglers yielded over \$1.8 billion in total economic activity in 2007 (BBC Research and Consulting, 2008).

In Idaho, the Policy Analysis Group from the College of Natural Resources at the University of Idaho found that Idaho's forest products make a significant contribution to the state economy. Specifically, Cook and O'Laughlin (2006) find a 2.01 output multiplier for Idaho's forest products business using 2002 data. The employment multiplier for same period was found to be over 3. The authors noted that industries like this one may not grow quickly but have strong "ripple" effects in the overall economy.

In summary, regional economic analysis using IMPLAN's I-O model is widely accepted for study of public lands. The study reported here follows the same methodology outlined above for government agencies operating forest and other natural resource programs. Interpretation of the results will further follow appropriate guidelines for using the results of economic impact studies. Only the current gross economic activity in Idaho supported by direct expenditures on, and revenues from, Idaho's Endowment Trust Lands is measured here. The total economic contribution is found using output and job multipliers calculated for the State of Idaho as a whole. The next section discusses how the data was collected and tabulated.

III. Data

Expenditure and revenue data for this study was found in the annual reports of the Idaho Department of Lands for 2008, 2009, and 2010. Revenue and expenditures from Endowment Trust Lands from the 2010 Annual Report of the Idaho Department of Lands are shown in Appendix 1, and incorporated here for reference. The financial data was further delineated for this study to include expenditures and revenues by program and beneficiaries. An average from three years of data is used here to better gauge normal activity associated with the Endowment Trust Lands. Commodity prices are volatile and therefore revenues can vary dramatically in any single year. The use of an average value further avoids the effects of irregular expenses over the business cycle.

A. Program Expenditures

For purposes of this study, program expenditures are classified under six general areas - agriculture, commercial leases, forestry, minerals, rangeland, and residential leases. The Lands, Minerals and Range Division, headquartered in Boise, ID manages various leasing programs on Endowment Trust Lands. The Farming Lease Program, identified in this study as Agriculture, is a small portfolio of farming leases (approximately 20,000 acres) for wheat, barley, hay and a few other grain crops. Agriculture also includes conservation, or crop set aside programs, managed by the Department.

The Commercial Lease Program, identified in this study as Commercial, includes energy resources, communication sites, retail/office space, recreation, industrial facilities, and military facilities. The majority of all annual program revenue comes from the next

program, Forestry, or the sale of the timber that grows on Endowment Trust Lands. The Department's Forestry and Fire Division is made up of three independent bureaus headquartered in Coeur d'Alene: Forest Management, Forestry Assistance, and Fire Management. The Forest Management Bureau is responsible for general management of the Endowment Trust Lands, as well as other services to the State of Idaho. Expenditures for these additional services are not included in the direct expenditures for Endowment Trust Lands.

The Mineral Lease program, identified in this study as Minerals, manages properties where phosphate, sand and gravel, and other valuable minerals are mined. The Grazing Lease Program, identified as Rangeland, has more than 1,200 grazing leases, covering almost 300,000 acres of timberland and 1.5 million acres of rangeland. The Cottage Site Lease Program is the Department's Residential operation which includes properties at Priest Lake and Payette Lake. (2010 Annual Report)

Spending that occurred out of Idaho (e.g., travel) was also identified and removed from the analysis. For all program areas in fiscal year 2010 out-of-state spending was identified by Lisa Johnson, Financial Officer for the Idaho Department of Lands. Payments mailed to out-of-state addresses amounted to approximately 17 percent of all expenditures in 2010. This percentage is deducted from the average annual expenditures so that only in-state economic activity is measured.

Table 1 shows the counties included in each of the Department's 14 supervisory areas. Although each program on Endowment Trust Lands operates in specific counties, all Idaho counties are represented in the 14 supervisory areas. This result supports the

use of statewide study area. The economic activity on Idaho’s Endowment Trust Lands occurs throughout the state.

Next, the industry classification for each of the six program areas and administrative activity was determined. The IMPLAN program provides for over 400 industry classifications based on the North American Industry Classification System (NAICS) codes. Consulting with Deputy Director Kathy Opp and following classifications used in the US Forest Service and Department of Interior studies outlined above, the following industry classifications were determined for each of the six program areas and the administrative function:

<u>Industry</u>	<u>IMPLAN Code</u>	<u>Description</u>
Agriculture	2	Grain farming
Commercial	39	Maintenance and repair - nonresidential structures
Forestry	16	Commercial logging
Minerals	26	Mining and quarrying
Rangeland	11	Cattle ranching and farming
Residential	40	Maintenance and repair - residential structures
Administration	432	Other state and local government enterprises

The multipliers are determined for the expenditures in each program based on the 2009 RIMS II estimates of the industry structure so described. These categories may be broader than the specific activities under each program and on all Endowment Trust Lands, but best described the operation of these programs. The associated multipliers from each industry classification best describe the flow of funds from expenditures by the Department. The output multipliers give the total overall increase in dollars of business output for all industries per dollar of expenditure by the Department for Endowment Trust Lands. The jobs multiplier is the level of employment in all industries affected by activity on Endowment Trust Lands.

Table 1

Idaho counties located in each of 14 Department Supervisory Areas

<u>Cataldo</u>	<u>Eastern Idaho</u>	<u>Kootenai Valley</u>	<u>Pend Oreille Lake</u>	<u>Southcentral</u>	<u>Southwestern</u>
Kootenai	Bannock	Bonner	Bonner	Blaine	Ada
Shoshone	Bear Lake	Boundary	Boundary	Camas	Boise
<u>Clearwater</u>	Bingham	<u>Maggie Creek</u>	<u>Ponderosa</u>	Cassia	Canyon
Clearwater	Blaine	Clearwater	Benewah	Custer	Elmore
<u>Craig Mountain</u>	Bonneville	Idaho	Clearwater	Elmore	Gem
Idaho	Butte	Lewis	Latah	Gooding	Owyhee
Lewis	Caribou	<u>Mica</u>	Nez Perce	Jerome	Payette
Nez Perce	Clark	Kootenai	<u>Priest Lake</u>	Lincoln	Valley
	Custer	<u>Payette Lakes</u>	Bonner	Minidoka	<u>St. Joe</u>
	Franklin	Adams	Boundary	Owyhee	Benewah
	Fremont	Idaho		Power	Clearwater
	Jefferson	Valley		Twin Falls	Kootenai
	Lemhi	Washington			Shoshone
	Madison				
	Oneida				
	Power				
	Teton				

B. Beneficiary Expenditures

As stated in the introduction, monies generated from activities on Endowment Trust Lands are deposited into a fund and invested on behalf of the beneficiaries. The annual allocation of funds for the beneficiaries is determined by Idaho's Endowment Fund Investment Board. This study does not consider performance of the fund, only the economic activity related to Endowment Trust Lands. Therefore, the net income from these lands is used to measure statewide economic activity. Net income attributable to each beneficiary may not be the actual funds these beneficiaries receive and expend but represent potential economic activity attributable to Idaho's Endowment Trust Lands.

Net income attributable to each beneficiary is found in the Idaho Department of Lands annual reports. As with program expenditures, an average from the most recent three years is used here to better gauge normal activity on Endowment Trust Lands. Commodity prices are volatile and the revenues attributable to each beneficiary vary each year and over the business cycle. The income values used here are net of administrative expenses for each beneficiary. Net income attributable to Endowment Trust Land beneficiaries was \$55,329,904, \$42,452,953, and \$25,591,017, in 2008, 2009, and 2010, respectively. The 3-year annual average of \$41,124,625 from 2008 to 2010 used for this study is lower than average net income of nearly \$47 million for 2001 to 2010 according to Department data. The use of a more current estimate provides for a more conservative estimate of economic activity attributable to these activities.

Consistent with the program expenditure data, the state controller of Idaho has indicated that approximately 17 percent of all Idaho government agency expenditures occur out of state. Therefore, the average annual net income to each beneficiary was

reduced by 17 percent to determine in-state expenditures within their respective industries.

There are nine primary beneficiaries of the Endowment Trust Lands: Public Schools, the Agriculture College, Charitable Institutions, Normal School, Penitentiary, the School of Science, State Hospital South, the University of Idaho, and the Capitol. The charitable institutions are Idaho State University, the Juvenile Correction Center, State Hospital North, the Veterans Home, and the School for the Deaf and Blind. The Normal School comprises Lewis-Clark State College and Idaho State University. These nine beneficiaries span five industries across the state: Public Schools, Higher Education, Penitentiary, Hospitals, and building maintenance for the Capitol. The following classifications were determined for each of these five industries:

<u>Industry</u>	<u>IMPLAN Code</u>	<u>Description</u>
Public Schools	391	Elementary and secondary schools
Higher Education	392	Junior colleges, colleges, universities, and prof. schools
Penitentiary	432	Other state and local government enterprises
Hospitals	397	Hospitals
Capitol	39	Maintenance and repair - nonresidential structures

The Public Schools category includes expenditures for K-12 education throughout the state. The Higher Education category includes expenditures for the University of Idaho, Idaho State University, and Lewis-Clark State College. The Penitentiary category includes expenditures for the State Penitentiary and the Juvenile Correction Center. The Hospital Category includes the State Hospital North, State Hospital South, and the Veterans Home. Note that IMPLAN's industry codes do not include public schools, universities, or hospitals. Output and employment multipliers for industry codes 391,

392, and 397 are constructed for private enterprises. Standard convention is followed here by adjusting these multipliers to correspond to government-operated enterprises. Specifically, the effects of proprietor income and business taxes are removed. For example, the direct, indirect, and induced output multiplier under industry code 391 using the 2009 RIMS II Idaho data is 1.63 when adjusted for a public school, as opposed 1.67 for private elementary and secondary institutions.

C. Recreational Activity Expenditures

Data was also collected to estimate the annual economic activity attributable to the many recreational activities that occur on Idaho's Endowment Trust Lands. In conjunction with the Idaho Department of Fish and Game, the Department estimated the number of visits to Endowment Trust Lands for recreational purposes. For 2006, it was estimated that public recreational use of Endowment Trust Lands was 637,000 visitor days per year. These visits were projected to grow by 21.4%, to 773,000 user days in the year 2010. This growth rate equates to average annual visitor days per year of 739,000 for 2008, 2009, and 2010.

The use of Endowment Trust Lands by recreationists includes hunting, fishing, camping, hiking, and the use of off-highway vehicles such as motorcycles and ATVs. Specific expenditures for each of these activities were not available at the time of this study. However, the DOI study referenced early used US Forest Service survey data to estimate daily expenditure values for recreational activity. The report indicates that recreationists in Idaho spend \$43.83 on average across all activities for each daily visit.

Using the average annual visitor days per year of 739,000 the estimated annual expenditures for recreation on Idaho's Endowment Trust Lands is \$32,390,370.

In summary, the data for this study are delineated at a level consistent with the accepted techniques for regional input-output modeling. Expenditures are listed for specific industries, expenditures not occurring in Idaho are eliminated, and a conservative average value is used to smooth out fluctuations over the business cycle. The administrative expenses for the Department are also treated separately as a local government function so that only the contribution from direct activity on Endowment Trust Lands is measured.

IV. Results

Table 2 presents the overall economic activity in Idaho attributable to the state's Endowment Trust Lands. The direct, in-state expenditures by the Department's programs average \$14,410,762 annually and contribute \$26,716,911 in economic activity, supporting 218 jobs across the state. The estimated in-state expenditures by the beneficiaries of the Endowment Trust Lands average \$34,216,181 annually and contribute \$56,119,437 in economic activity, supporting 915 jobs across the state. Expenditures from recreational activity on Endowment Trust Lands are estimated at \$32,390,370 annually and contribute \$50,071,567 in economic activity, supporting 821 jobs across the state. In total, it is estimated that Idaho's Endowment Trust Lands contribute \$132,907,915 in annual economic activity supporting 1,954 jobs across the state.

Table 2

Annual Economic Activity and Jobs Supported by Idaho’s Endowment Trust Lands

	Expenditures	Output	Total Jobs
Programs	\$ 14,410,762	\$ 26,716,911	218
Beneficiaries	34,216,181	56,119,437	915
Recreation	<u>32,390,370</u>	<u>50,071,567</u>	<u>821</u>
Total	\$ 81,017,313	\$ 132,907,915	1,954

The next three tables show how the above estimates of annual economic activity and jobs supported were calculated. Table 3 provides the average annual, in-state expenditures by the Department for each of the six programs described earlier. These programs support nearly \$27 million in annual economic activity and 218 jobs across the state. The Department’s Forestry program is by far the largest, contributing \$22 million each year to Idaho’s economy and supporting 174 jobs. The Agricultural program is the smallest with only \$75,256 in in-state expenditures and \$111,491 in annual economic activity. The direct and indirect output multipliers range from a low of 1.27 in the Agricultural programs to a high of 1.63 in the Rangeland programs. The broader multipliers, which add induced expenditures, range from a low of 1.48 in the Agricultural programs to a high of 1.91 in the Forestry programs. The relatively higher multiplier effect in Forestry lines up with the DOI study described earlier and is consistent with the findings for this industry in Idaho by Cook and O’Laughlin (2006). Idaho’s forestry industry is highly developed and supportive of relatively more businesses and wages throughout the state.

Table 3

Annual Economic Activity and Jobs Supported by Direct Expenditures on Idaho's Endowment Trust Lands by Program

	Program Expenditures						
	Agriculture	Commercial	Forest	Minerals	Rangeland	Residential	Total
Average Direct Expenditures	\$ 90,670.00	\$ 1,818,500.67	\$ 13,847,823.67	\$ 346,541.00	\$ 993,844.00	\$ 264,984.33	\$ 17,362,363.67
Estimated Out-of-State Expenditures	15,413.90	309,145.11	2,354,130.02	58,911.97	168,953.48	45,047.34	2,951,601.82
Net Direct Annual Expenditures	75,256.10	1,509,355.55	11,493,693.64	287,629.03	824,890.52	219,937.00	14,410,761.84
Direct and Indirect Multiplier	1.2710	1.2755	1.5608	1.2724	1.6309	1.3024	
Direct, Indirect, and Induced Multiplier	1.4815	1.6031	1.9130	1.3779	1.7515	1.6263	
Direct and Indirect Expenditures	95,651.98	1,925,189.89	17,938,853.93	365,991.43	1,345,289.43	286,452.96	21,957,429.62
Direct, Indirect, & Induced Expenditures	111,491.35	2,419,694.56	21,986,887.11	396,328.13	1,444,824.10	357,685.80	\$ 26,716,911.06
Direct Jobs (per \$MM of output)	11.9481	11.6794	7.5453	7.8833	5.0499	10.9736	
Direct and Indirect Multiplier	1.2499	1.2274	1.5173	1.2553	1.8290	1.2755	
Direct, Indirect, and Induced Multiplier	1.4326	1.5178	2.0008	1.5874	2.0763	1.5811	
Direct Jobs	1	18	87	2	4	2	114
Direct and Indirect Jobs	1	22	132	3	8	3	168
Direct, Indirect, & Induced Jobs	1	27	174	4	9	4	218

Table 4

Annual Economic Activity and Jobs Supported by Expenditures of Income from Idaho's Endowment Trust Lands by Beneficiary

Beneficiary Expenditures by Industry						
	Public Schools	Higher Education	Penitentiary	Hospitals	Capitol	Total
Average Net Income	\$ 21,402,132.92	\$ 11,229,564.71	\$ 2,097,675.38	\$ 6,076,898.66	\$ 318,353.00	\$ 41,124,624.67
Estimated Out-of-State Expenditures	3,595,301.58	1,886,432.15	352,384.30	1,020,846.07	53,479.48	6,908,443.59
Net Direct Annual Expenditures	17,806,831.35	9,343,132.56	1,745,291.08	5,056,052.58	264,873.52	34,216,181.08
Direct and Indirect Multiplier	1.2408	1.3523	1.4650	1.2857	1.1914	
Direct, Indirect, and Induced Multiplier	1.6298	1.6665	1.7046	1.6144	1.4715	
Direct and Indirect Expenditures	22,094,195.97	12,634,470.58	2,556,798.08	6,500,736.08	315,567.57	44,101,768.29
Direct, Indirect, & Induced Expenditures	29,021,950.54	15,570,141.91	2,975,055.19	8,162,526.36	389,762.92	\$ 56,119,436.91
Direct Jobs (per \$MM of output)	29.1853	13.5152	4.0371	7.2656	11.6794	
Direct and Indirect Multiplier	1.0965	1.2240	2.0451	1.4197	1.2274	
Direct, Indirect, and Induced Multiplier	1.2300	1.4568	2.6595	1.8727	1.5178	
Direct Jobs	520	126	7	37	3	693
Direct and Indirect Jobs	570	155	14	52	4	795
Direct, Indirect, & Induced Jobs	639	184	19	69	5	915

Table 4 shows the estimated in-state expenditures for each of five beneficiary industries from revenue produced on Idaho's Endowment Trust Lands. Spending by the beneficiaries supports over \$56 million in annual economic activity and 915 jobs across the state. Idaho's public schools are the largest beneficiary (52%) and account for most of the expenditures. Public school spending from Endowment Trust Land income supports on average each year more than \$29 million in economic activity and 639 jobs across the state. This result is despite the industry having the smallest multiplier of the five industries. Recall, IMPLAN's basic industry multipliers do not include public schools, universities, or hospitals. The output and employment multipliers for each of these three industries were adjusted to best match state-run enterprises. The effects of proprietor income and business taxes are removed.

The multipliers shown in Table 4 are relatively conservative. For example, the 1.67 multiplier for Higher Education spending is well below that found in many economic impact studies of universities. Output multipliers in such studies tend to be closer to 2 (See University of California Santa Cruz, 2006, and University of Delaware, 2007). Income to, and expenditures by, the Capitol Endowment Funds is measured as routine maintenance. However, Idaho's capitol building has recently undergone major renovations. Expenditures for major construction projects such as these have higher multipliers.

Table 5 reports estimated in-state expenditures by recreationists on Idaho's Endowment Trust Lands. Recreational activity on the nearly 2.5 million acres of Endowment Trust Land support over \$50 million in annual economic activity and 821 jobs across the state. The US Department of Interior (DOI) study is used here for the

estimated daily expenditure value of \$43.83. Given approximately 739,000 day users, annual expenditures for recreation amount to \$32,390,370. The multiplier applied here is for industry classification 410, other amusement and recreation industries. This classification covers NAICS codes 71391-3 and 71399 and comprises establishments primarily engaged in providing recreational and amusement services. The multiplier found using the 2009 RIMS II data is lower than that of the DOI study. The DOI calculated a 1.61 multiplier for Idaho’s recreation industry (See United States Department of Interior, 2010, Table A7-1 page 121).

Table 5

Annual Economic Activity and Jobs Supported by Expenditures by Recreational Visitors to Idaho’s Endowment Trust Lands

Recreational Activity on Endowment Lands	
Estimated Recreational User Days	739,000
Estimated Expenditure per User Day	43.83
Estimated Recreational Expenditures	\$ 32,390,370.00
Direct and Indirect Multiplier	1.2377
Direct, Indirect, and Induced Multiplier	1.5459
Direct and Indirect Expenditures	40,089,613.89
Direct, Indirect, & Induced Expenditures	\$ 50,071,566.60
Direct Jobs (per \$ M of output)	19.6374
Direct and Indirect Multiplier	1.1279
Direct, Indirect, and Induced Multiplier	1.2903
Direct Jobs	636
Direct and Indirect Jobs	717
Direct, Indirect, & Induced Jobs	821

Recall also that the measurements reported here are static. The overall economic activity in each of these areas applies only to the current expenditures and is based on local-area industry structure in 2009. These values are not useful for predicting any effect on the economic growth of Idaho's economy. It is possible that these industries will change and the current patterns of inter-industry trading will change. The gross effects are likely to vary from changes in industry technology and/or changes in the local labor markets.

Results for the administrative activity are reported in Table 6. Net direct, in-state expenditures amounting to approximately \$3.9 million in 2010 create gross economic activity in Ada County of more than 7 million. The most recent annual expenditure is used, the multiplier for this activity (IMPLAN industry code 432) is based on a structure of general governmental office activities, and the study area is only Ada County. Most of the effect measured here comes from personnel expenses. Adding this economic activity to that reported in Table 2 gives approximately \$140 million in annual economic activity attributable to Idaho's Endowment Trust Lands.

Table 6

Annual Economic Activity from the Idaho Department of Lands Administrative Expenditures

	Administration
Direct Expenditures	\$ 4,719,909.23
Identified Out-of-State	802,384.57
Net Direct Expenditures	\$ 3,917,524.66
Direct and Indirect Multiplier	1.5348
Direct, Indirect, and Induced Multiplier	1.8309
Direct and Indirect Expenditures	6,012,703.69
Direct, Indirect, & Induced Expenditures	\$ 7,172,728.57

V. Conclusions and Suggestions for Further Study

In accordance with the Idaho Constitution, the Idaho Department of Lands manages the Endowment Trust Lands in a prudent manner for a long-term financial return to the benefit of public schools and many other institutions around the state. This work obviously benefits Idaho's economy. From the estimates obtained for the three-year period ending June 2010, Idaho's Endowment Trust Lands contribute \$133 million in economic activity each year and support nearly 2,000 jobs in the state.

This study was carefully and specifically designed to determine the gross level of state economic activity (in terms of dollars and jobs) attributable to the nearly 2.5 million acres of Endowment Trust Lands in Idaho. The values reported here represent the best estimate of how these activities contribute to the overall state economy. The output and job estimates include the direct, indirect, and induced expenditures at the state level, but do not include administrative activities related to the management of these lands. Care was taken in this study to insure that the multipliers were appropriate for the study area and calculated against in-state expenditures only. These estimates are for current expenditure levels and the 2009 structure of local Idaho industry. The results represent current activity, not the potential or eventual output of the public lands under management.

Two caveats to the results presented here provide suggestions for further research. There is no factor in this current study that can assess the efficiency of any program or the capacity of the lands to produce revenue for the beneficiaries. Direct program expenditures are used to assess current economic activity, but no measure of current

output is studied. It is not known from this study if Idaho's Endowment Lands are producing the maximum level of output.

Second, there is no measurement of the other state-wide activity supported on the Department's lands and operations. Consider the Fire Management Bureau as an example. The 2010 Annual Report states that the Fire Management Bureau "establishes and implements policies to prevent, prepare for, and fight wildland fires over six million acres of Idaho's public and private forest and rangelands. These responsibilities include regulating the elimination of fire hazards caused by timber harvesting on state and private lands within Idaho." Such responsibilities obviously support other economic activity in the state, including tourism and recreation on private lands. No measures of the contribution to overall economic activity from this important managerial function, or the Fire Management Bureau's regulatory functions are accounted for in this study. Further research on the Endowment Trust Lands or the Idaho Department of Lands will benefit from analysis of the efficiency of each program and other staff activities in Idaho.

Appendix 1

Accountants' **STATEMENT**

We have examined and prepared the data presented in this annual report in accordance with generally accepted accounting standards and affirm it is true and accurate and reflects the activity of the Idaho Department of Lands and the State Board of Land Commissioners during fiscal year 2010.

Signed,



Lisa Johnson
Financial Officer

Accounts and Funding Revenue and Expenditures

	Revenue	Expenditures
General Fund	647,043	4,079,339
Misc. Pass Through Funds	204,936	0
Dedicated Land Funds		
Forest Resources	509,130	477,198
Lands, Minerals, Range	1,159,346	112,711
Fire Management	5,107,977	4,147,382
Board of Scaling	140,936	168,075
Support Services	13,713	835,639
Indirect Cost Recovery	574,578	363,037
Community Forestry Trust	11,028	11,489
Land Bank	42,225	382,438
Total Dedicated Funds	\$ 7,558,933	\$ 6,922,178
Fire Suppression	2,243,680	5,325,099
Federal Funds	6,768,022	6,922,178
Endowment Funds		
Earnings Reserve	45,261,601	22,685,271
Permanent	3,014,686	0
Total Endowment Funds	\$ 48,276,287	\$ 22,685,271
Revenue and Expenditures	\$ 65,698,902	\$ 45,509,856

Source: Idaho Department of Lands 2010 Annual Report

References

- Alward, Aaron (1999), "Estimating the Contribution of a Current Industry Using IMPLAN Version 3.0", MIG, Inc. Hudson, WI, February.
- Alward, Gregory S., Arnold, Ross, Niccolucci, Michael J., and Winter, Susan A. (2003), "Evaluating the Economic Significance of the USDA Forest Service Strategic Plan (2000 Revision): Methods and Results for Programmatic Evaluations", United States Department of Agriculture Forest Service, Inventory and Monitoring Institute Report No.6., May.
- BBC Research and Consulting (2008), "The Economic Impacts of Hunting, Fishing and Wildlife Watching in Colorado", BBC Research & Consulting, Denver, CO, September. Retrieved June 2011 <http://wildlife.state.co.us/About/Reports/EconomicImpacts/>
- Cook, Philip S. and O'Laughlin, Jay (2006), "Idaho's Forest Products Business Sector: Contributions, Challenges, and Opportunities", Policy Analysis Group, College of Natural Resources, University of Idaho, Moscow, ID, Report No. 26 August.
- Gustanski, Julie Ann, Harris, Charles C. and Van Tassell, Larry (2005), "Washington State Department of Natural Resources Grazing Program Assessment and Economic Impact Analysis", Resource Dimensions, Gig Harbor, WA, March.
- Idaho Department of Lands 2010 Annual Report, Boise, ID. Retrieved June 2011 http://www.idl.idaho.gov/news/annual_reports/index_ar.htm
- Idaho Department of Lands 2009 Annual Report, Boise, ID. Retrieved June 2011 http://www.idl.idaho.gov/news/annual_reports/index_ar.htm
- Idaho Department of Lands 2008 Annual Report, Boise, ID. Retrieved June 2011 http://www.idl.idaho.gov/news/annual_reports/index_ar.htm
- Idaho State Board of Land Commissioners (2007), "State Trust Lands Asset Management Plan", Idaho Department of Lands, Boise, ID December.
- Kort, John (2009), Letter to Minnesota IMPLAN Group, Inc., United States Department of Agriculture Economic Research Service, Washington D.C., April.
- MIG, Inc. (2010), IMPLAN System (data and software), 502 2nd Street, Suite 301, Hudson, WI 54016, www.implan.com
- O'Laughlin, Jay (1990), "Idaho's Endowment Lands, a Matter of Sacred Trust", Policy Analysis Group, College of Natural Resources, University of Idaho, Moscow, ID, March.

U.S. Department of Commerce (1997), “Regional Multipliers: A User Handbook for the Regional Input-Output Modeling System (RIMS II)”, Washington D.C., March.

United States Department of Interior (2011), “The Department of Interior’s Economic Contributions”, Washington, D.C., June.

<http://www.doi.gov/news/pressreleases/upload/DOI-Econ-Report-6-21-2011.pdf>

University of California, Santa Cruz (2006), “Economic Impact Report for 2004-05”, Office of Planning and Budget, http://planning.ucsc.edu/budget/economic_impact

University of Delaware (2007), “The Economic Impact of the University of Delaware on Newark and the State of Delaware”, Institutional Research Study 08-03
<http://www.udel.edu/IR/reports/eci/index.html>.

Weisbrod, Glen and Weisbrod, Burton (1997), “Measuring Economic Impacts of Projects and Programs”, Economic Development Research Group, Boston MA, April.