



# **Montana Agriculture Conservation Easements Economic Impact Analysis, 2014-2021**

Technical Report

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For  
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*Cover photo: Courtesy Five Valleys Land Trust*

## Introduction

The 2014 Farm Bill established the Agricultural Land Easement (ALE) program as part of the Agricultural Conservation Easement Program, which is administered by the Natural Resources Conservation Service (NRCS). The ALE program provides funding through a collaboration among landowners, land trusts and the NRCS. Records maintained by the NRCS show that, between 2014 and 2021, federal Farm Bill ALE program investments in conservation easements have helped to permanently protect nearly 289,000 acres of private agricultural land in Montana, and secured \$109 million in 2021 inflation-adjusted dollars<sup>1</sup> for farmers and ranchers in 23 counties across the state.<sup>2</sup>

Montana's land trusts leverage federal dollars to receive local, state and private funds for conservation easements. From 2014 through 2021, roughly 60¢ of value from other sources, including landowner donations, combined with each dollar of federal funding to support 92 ALE program conservation easements with a value exceeding \$173 million.

An agricultural conservation easement, including one formed under the Farm Bill ALE program, uses private property rights to create a voluntary, negotiated, typically permanent agreement between a landowner and a land trust (or public agency) that limits certain types of development and maintains the land in private ownership and agriculture. The landowner transfers specific development rights to the land trust or agency that holds the easement, and in return, typically receives a payment to compensate for those development rights. The organization that holds the easement agrees not to use those rights. The conservation easement becomes part of the property deed, governing the use of the property in perpetuity.

The conservation value of these easements is well documented: Conservation easements promote continued agricultural use, forest stewardship and forest health, securing land for production agriculture that may otherwise be vulnerable to residential and commercial development. Since 1990, across Montana, 1.3 million acres of undeveloped land—most of it agricultural—have been converted to housing. Nearly half the homes built since then have been constructed on lots that average larger than 10 acres. One quarter of all homes in Montana were constructed since 2000.<sup>3</sup> Most of residential development in Montana has been on land that was formerly in cropland and rangeland use.<sup>4</sup>

Conservation easements can help farm and ranch lands remain in production, and help farm and ranch families stay in business. They enable farmers and ranchers to tap the value of what

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<sup>1</sup> All dollar figures in this report are inflation adjusted to 2021.

<sup>2</sup> Counties that contain land under ALE easement include Beaverhead, Broadwater, Carbon, Choteau, Dawson, Fergus, Flathead, Gallatin, Golden Valley, Granite, Lake, Liberty, McCone, Madison, Missoula, Musselshell, Phillips, Prairie, Ravalli, Rosebud, Stillwater, Teton, and Valley.

<sup>3</sup> Headwaters Economics, based on an analysis of county tax assessor data through 2018.

<sup>4</sup> Dan Bigelow, [Land Use in Montana: A Current Snapshot and Recent Trends](#), Dec. 2020

is most often their largest asset, their land, to stabilize, secure and expand their farm and ranch operations. Research conducted for this study shows that Montana landowners invest roughly 95 percent of the ALE funds they receive into their agricultural operations, debt retirement, and making strategic land purchases or leases. Some of these investments support succession planning, which can include consolidating ownership by buying out ownership shares that may result when land and the farm business are handed down to family members through inheritance.

Not only can these easement payments make an impact on the financial health of agricultural businesses and the retention of land in productive agriculture, they also can have a broader economic impact. Federal payments like these are an infusion of funds into the state’s economy, which have a stimulating effect on economic activity as measured in terms of production, sales, jobs and other measurements of economic performance. The bulk of these payments contribute to Montana’s economy and have important direct and multiplier effects to the state’s economy, particularly in rural areas where most ALE easement funds are directed and their effects are more pronounced.

This study estimates the impact of ALE conservation easement payments on the Montana economy, establishing a baseline understanding of the magnitude of this impact.

**Table 1**  
**Annual ALE Investments in Conservation Easements in**  
**Montana, 2014-2021 (2021\$)**

<b>Year</b>	<b>ALE Funds Disbursed</b>
2014	\$5.4 million
2015	\$4.9 million
2016	\$15.4 million
2017	\$19.1 million
2018	\$8.3 million
2019	\$19.5 million
2020	\$19.5 million
2021	\$11.9 million

## **Background and Methods**

When designing this study, we were fortunate to have a model to adapt from another western state. A 2018 Colorado State University study estimated the economic impacts of federal agricultural easement programs within the state of Colorado.<sup>5</sup> Agriculture and natural resource economist Andrew Seidl and his coauthors found that, between 2009 and 2017, some \$80

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<sup>5</sup> Andrew Seidl, Ryan Swartzentruber, and Rebecca Hill. 2018. Estimated Economic Impact of Federal Agricultural Conservation Easement Programs (ACEP) on Colorado, 2009-2017. July 2018. Colorado State University. 32 pp.

million dollars in federal Farm Bill conservation easement investments had supported the protection of more than 129,000 acres of Colorado farm and ranch lands. They found that these payments to Colorado agricultural producers generated over \$174 million in economic activity in the state, creating 1,102 jobs and almost \$86 million in value-added.

The Colorado study provides a template for a similar analysis of the economic impact of federal funds invested in Montana through the Farm Bill Agricultural Land Easement program from 2014 through 2021. The Colorado economic impact modeling consisted of two steps: the first was a survey of landowners to estimate how conservation easement recipients spend, invest or save their payments; the second was an IMPLAN-based economic impact analysis to estimate total economic activity from those expenditures. Our analysis of the impact of federal agricultural conservation easement investments in Montana used three two basic steps:

1. Interviews with staff at seven Montana land trusts<sup>6</sup> that administered ALE easement funds from 2014-2021 to estimate how conservation easement recipients spend, invest or save their payments;
2. Application of these estimates to the database of ALE conservation easements to determine statewide average proportions of spending in each category; and
3. Application of the economic impact analytic framework and sector-by-sector multipliers established for Colorado federal easement funds to Montana ALE expenditures.

### **Estimating How Conservation Easement Proceeds Are Spent**

A typical ALE conservation easement project takes two to three years (or longer) from its inception to closing. During that time, land trust staff forge close working relationships with landowners, helping them craft an agreement that helps them meet their financial needs and vision for their farm or ranch operations. When we designed a study to examine the economic impact of Agricultural Land Easements in Montana, we identified staff at the seven land trusts that hold ALE easements as uniquely positioned to provide aggregated information about how farmers and ranchers spend or invest the funds they receive from the program.

These land trust staff members were essential partners in our analysis. Consulting with them enabled us to produce aggregated estimates for all of the ALE easements executed in Montana from 2014 through 2021. In contrast, the Colorado approach generated estimates based on survey responses covering just over half of federally funded conservation easements in the state. We are confident that our approach produced reliable data about landowner expenditures, using the same expenditure categories as were used in the Colorado study to allow a straightforward approach to estimating economic impact using the framework established in the Colorado study.

Prior to a remote interview by telephone or video conference with each land trust staff member, we supplied a description of the study process and list of the expenditure categories from the Colorado study. We asked each staff member to estimate, across all of the ALE

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<sup>6</sup> Land trust staff were interviewed from Bitter Root Land Trust, Five Valleys Land Trust, Flathead Land Trust, Gallatin Valley Land Trust, Montana Land Reliance, The Nature Conservancy and Vital Ground.

easements her/his land trust had managed, the average percentage of ALE payments that recipients spent in each category.

The categories are:

- **Invested in Agriculture** – the proportion of their easement payment invested back into their agricultural operation. This can come in the form of the purchase of inputs such as livestock, labor, equipment or other infrastructure such as irrigation equipment.
- **Diversification** – the proportion of their easement payment invested in non-farm land-based enterprise diversification. This can take the form of adding agritourism, hunting/fishing or other outdoor recreation activities to their operation.
- **Land Purchase/Real Estate** – the proportion of their easement compensation invested in the purchase or lease of additional land in order to expand their agricultural operation or facilitate farm or ranch succession planning.
- **Education** – the proportion of their easement compensation used toward the post-high school education of a family member.
- **Savings** – the proportion of their easement payment invested in savings, which could include retirement funds, the stock market, other investments or savings accounts.
- **Debt** – the proportion of their easement compensation used to pay down debt. For our IMPLAN categories, debt and savings were combined in the model, and included a share of funds allocated to consolidating ownership.
- **Purchase of non-business related goods** – the proportion of their easement payment spent on retail goods such as recreational vehicles, vacations or a home.
- **Other** – if this category was selected, respondents provided additional expenditure categories including charitable giving, daily expenses, and attorneys.<sup>7</sup>

For each land trust, this process yielded a table with expenditure percentages in each category, reflecting the estimates developed by land trust staff for all ALE easements (2014-2021) managed by that organization.

### **Estimating Total Expenditures by Category**

There was some work needed to prepare our data for final analysis:

1. To match our findings to the final categories used in the Colorado economic impact analysis, we combined savings and debt into a single category.

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<sup>7</sup> Seidl, et al, 2018.

2. During interviews, staff at three of the six land trusts identified buyouts of family shares to consolidate ownership and decision-making about the land and business operations as an important investment for some landowners that did not fit neatly into the categories used in the Colorado study. To accommodate this, we split the estimated expenditures for this purpose between the “land purchase/real estate” and “savings/debt” categories.<sup>8</sup>

We also reduced the final figures for the economic impact analysis by approximately \$1.1 million that land trust staff estimated was paid to buy out out-of-state shareholders, and was therefore not spent in the state of Montana.

3. NRCS information was used to create a database of all ALE conservation easements from 2014 through 2021, which included the entity holding each easement, the year completed, the county, ALE funds disbursed, funding from other sources, and the value of landowner donations. We applied each land trust’s breakdown of expenditures by category to the total ALE payments for all of the easements it manages.

**Table 2**  
**Number of ALE Easement Projects Managed (2014-2021)**

Land Trust	Number of ALE Easements
Bitter Root Land Trust	14
Flathead Valley Land Trust	12
Gallatin Valley Land Trust	16
Montana Fish Wildlife & Parks	4
Montana Land Reliance	27
The Nature Conservancy	19
Vital Ground Foundation	1

Because we did not have information about landowner expenditures for four easements held by Montana Fish Wildlife and Parks, we applied the statewide average expenditure proportions for the 88 land trust-held easements to the Fish Wildlife and Parks

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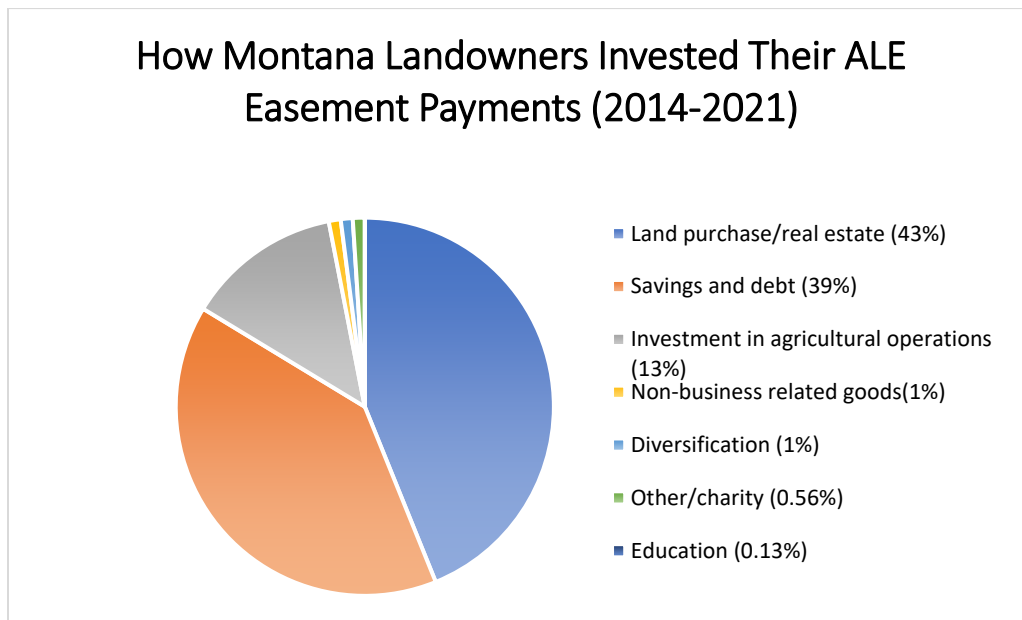
<sup>8</sup> In the Colorado study, some landowners who provided expenditure information in response to the survey “mentioned using easement money to buy out family members, allowing those relatives to leave the business.” The study’s authors combined these as “essentially paying down all kinds of debt.” We took a slightly different approach, allocating ½ of these buyout funds to debt repayment and ½ to land purchase/real estate. We see this as a more conservative approach that may be less likely to inflate estimates of economic impact by loading up the “savings and debt” expenditure category with an outsized share of the expenditures. The Colorado economic impact model allied this spending category closely with the banking sector, which is associated with particularly large economic multipliers. We opted to err in a conservative direction in the Montana analysis by dividing these buyout payments partially to debt retirement and partly to land purchase/real estate, a sector with a lower overall multiplier.

easements. Then we created a statewide breakdown using weighted averages in each category. This statewide breakdown is detailed in the table below.

**Table 3**  
**How Montana Landowners Invested Their ALE Easement Payments (2014-2021)**

Investment Category	Percent	Total
Land purchase/real estate	43%	\$47,110,000
Savings and debt	39%	\$42,904,000
Investment in agricultural operations	13%	\$14,456,000
Non-business related goods	1%	\$1,398,000
Diversification	1%	\$1,104,000
Other/charity	>1%	\$605,000
Education	>1%	\$136,000

*Note: Percentages do not total 100 due to rounding errors and the omission of buyout payments totaling approximately \$1.1 million to out-of-state family members, which were not included in the impact analysis.*



**Understanding Economic Impact Analysis**

Economic impact studies typically utilize input-output modeling to connect industry sectors with each other and with outside demands, yielding estimates of the impact of an activity or type of spending from outside an area (in this case, federal ALE easement payments) on the area economy (in this case, the state of Montana). In both the Colorado analysis and our study of Montana easements, the economic impacts stem from the farmers and ranchers who receive easement payments spending that money in their state economies.



Economic impact studies measure both direct and secondary economic impacts. The direct impacts are from the “first round” of expenditures made by easement recipients spending money to purchase farm equipment or land, or to pay off debt, for example. The input-output model then traces how that spending flows through related sectors in the economy, producing secondary impacts from additional expenditures that result when the initial direct expenditures, taken in as sales receipts, wages, or payments for services, are then “re-spent” in the local economy by businesses or individual households.

The Colorado study used an input-output model to generate estimates of economic impact. An input-output model is a quantitative economic model that represents interdependencies among different sectors or industries in an economy. As the Colorado study authors state: “The most common approach is to use the IMPLAN software model to examine how much economic activity is generated by easement payments. The IMPLAN software ([www.implan.com](http://www.implan.com)) establishes the characteristics of economic activity in terms of 528 economic sectors. Drawing on data collected by federal and state government agencies, the IMPLAN model uses regional industry purchasing patterns to examine how changes in one industry will affect others. The IMPLAN model has been used as the basis for thousands of economic analyses throughout the United States.”<sup>9</sup>

The IMPLAN model utilizes benchmark tables provided by the Bureau of Economic Analysis as well as other statistical data to model transactions occurring within a specific geographic area. IMPLAN is, in a sense, a general accounting system of the economic transactions taking place between industries, businesses, and consumers in an economy. It estimates the impacts on employment, value added, and total output for the local economy. By expanding its analysis to include the secondary effects as dollars spent locally recirculate in the local economy, IMPLAN provides an in-depth picture of the economic effects of transactions.

In an economic analysis model, the ratio of total impact to direct spending is often referred to as the “multiplier” and can be expressed in terms of dollars or jobs. Economic impacts are typically reported in terms of output (total sales), employment (total jobs) and value-added. Value-added is the impact of an economic activity on Gross Domestic Product (in other words, net revenue, or the difference between the sales cost of a good and what one pays for all of the components used in producing it).

### **Applying the Colorado Model to Estimate Economic Impact**

In the Colorado study, ALE easements were located predominantly in rural parts of the state, with “70% of federal easement acreage and 82% of direct expenditures going to rural counties.”<sup>10</sup>

Before applying Colorado’s economic impact model, we first tested to ensure that Montana’s ALE program funds went to landowners in a similarly rural mix of counties. To do this, we used

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<sup>9</sup> *ibid.*

<sup>10</sup> Seidl, et al, 2018

the USDA Economic Research Rural-Urban Continuum Codes (RUCC), which distinguish counties by population, degree of urbanization and, for rural counties, adjacency to metropolitan areas. This system uses a scale from 1 to 9, with a score of 1 signifying a metropolitan county with a population greater than one million. A score of 9 signifies a rural county, not adjacent to a metropolitan county and having an urban population of less than 2,500.

This analysis showed that Montana’s ALE conservation easements were also predominantly in rural parts of the state, with 88 percent of federal easement acreage and 71 percent of direct expenditures going to rural counties with RUCC codes of 7, 8 or 9.

**Table 4**  
**Distribution of Montana ALE Conservation Easements in Rural Counties**  
**Compared to Colorado Easements**

<b>In Counties with RUCC codes 7, 8 or 9</b>	<b>Montana</b>	<b>Colorado</b>
% of ALE easements	52%	61%
% of acres under easement	88%	70%
% of ALE funds committed	71%	82%
<b>% ALE easements in counties with RUCC codes 1, 2 or 3 (urban)</b>	-	6%

We also consulted with Dr. Andrew Seidl, the Colorado study’s lead author, to gain his insights into other factors we might consider that would either require additional adjustments to the Colorado impact model or that might suggest its inapplicability to our Montana analysis. Once we were satisfied with the Colorado model’s general applicability to Montana, we obtained the sector-by-sector multipliers from the Colorado study. We applied them to the Montana spending estimates (see Table 3 on p. 8) to generate statewide total economic impact estimates for ALE payments to Montana farmers and ranchers from 2014 through 2021.

## **Findings**

Between 2014 and 2021, the NRCS, Montana’s land trusts, and agricultural landowners teamed up to invest \$109 million (2021\$) of Farm Bill Agricultural Land Easement (ALE) program funds to permanently protect 289,000 acres of farm and ranch land across 22 Montana counties.

Over the course of those eight years, every federal dollar of conservation easement financing invested in Montana’s farms and ranches through the ALE program yielded \$1.82 of economic activity. All told, this \$109 million investment:

- Produced a total economic impact of \$182 million,
- Supported 1,057 local jobs and \$41.5 million in labor income, and
- Contributed \$99 million to the state’s GDP.

Montana’s land trusts leverage federal dollars to receive local, state and private funds for conservation easements. From 2014 through 2021, roughly 60¢ of value from other sources,

including landowner donations, combined with each dollar of federal funding to support 92 conservation easements with a value exceeding \$173 million.

As Seidl and his coauthors discuss in *Estimated Economic Impact of Federal Agricultural Conservation Easement Programs (ACEP) On Colorado, 2009-2017*, while the economic activity generated by these federal conservation easement payments represent sizable contributions to the state economy, “this value is an underestimate of the potential impacts to rural communities from the conservation easement payments.”<sup>11</sup> There are several reasons for this, and several corresponding ways in which agricultural conservation easements and associated federal payments are likely to contribute greater value to the state of Montana and to the primarily rural communities most directly affected by these infusions of funds. These include:

- This analysis does not account for additional economic activity generated at the local level by funds from state and other sources that also contribute to securing conservation easements funded by the ALE program.
- Conservation easement payments are treated as one-time influxes of dollars into the state economy. This analysis ignores what Seidl et al call “potentially significant investment effects” that could follow from conservation easement payments. For example, if a farmer or rancher invests funds from the easement payment into better technology, upgraded equipment, increased acreage or changes in agricultural production practices, that investment may have additional positive effects on the economy that are not included in this analysis.
- Similarly, the value of increased business stability or solvency are not incorporated into this analysis, but could be substantial.
- This analysis also does not consider economic value related to environmental or habitat improvements, nor from the long-term economic benefits that might result from injecting dollars into rural agricultural communities.

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<sup>11</sup> *Ibid.*