The Economic Impact of Montana Film Production

An Analysis of the Industry and the MEDIA Act, 2019-2020

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Submitted to the Montana Film Office

ECONSULT SOLUTIONS INC.

economics | strategy | insight

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FILM IN MONTANA

The Economic Impact of the Film Production Industry in Montana and the MEDIA Act · 2020

The production of feature films, television series, and commercials can generate significant economic activity for their host communities, drawing out-of-town spending, generating jobs, and supporting local businesses. Because of this potential boost to local economies, many states provide incentives to attract productions as an economic development initiative. In 2019, the Montana State Legislature passed the Montana Economic Development Industry Advancement Act (MEDIA Act) to provide an income tax incentive to attract film, television and other media production to the State. This report provides an analysis of the economic, fiscal, and societal impacts from film and television production in the State and specifically evaluates the impacts associated with the MEDIA Act Tax Credit Program.

Media Production in Montana by the Numbers

Productions that Have Filmed, January 2019- June 2020

Number of Productions	Local Spending	Total Impact	Total Jobs	Employee Compensation	Total Tax Revenue
117	$23.9 Million	$47.6 Million	280 FTE*	$17.6 Million	$1.3 Million

Impact of the MEDIA ACT

	Other MT Productions (Have Filmed)	Certified Productions (Have Filmed)	All Productions that Have Filmed	Certified Productions (Not Yet Filmed)
Productions count	112	5	117	5
Total economic impact ($M)	$35.8	$11.9	$47.6	$25.9
Direct Jobs Supported (FTE*)	75	25	100	55
Total Compensation ($M)	$9.7	$2.6	$12.3	$5.9
Indirect/Induced Jobs (FTE*)	135	45	180	95
Total Compensation ($M)	$4.0	$1.2	$5.3	$2.8
Estimated Total Tax credits ($M)	-	$1.8	$1.8	$4.4

*FTE is full-time job equivalents

State of Montana

MEDIA Act

The Montana Economic Development Industry Advancement Act (MEDIA Act) was passed by the Montana Legislature to provide an income tax incentive applicable to expenditures related to film, television and other media production activities for eligible productions that take place in Montana. The legislation became effective July 1, 2019 and extends through 2029.

The program provides a 20 percent transferable income tax credit on production expenditures that are within the state with additional amounts that can increase the credit up to 35 percent of the production company's investment per year.

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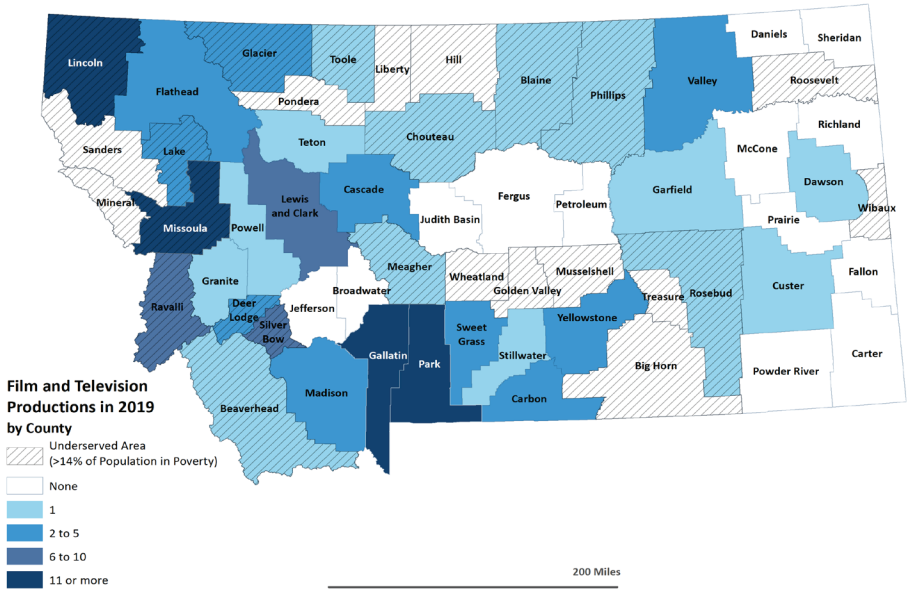
The benefits to local communities from the film and entertainment industry are considerable. During filming, production often hires local businesses to help support their operations. From caterers, to hotels, and hardware stores to transportation, the film industry can have a significant economic impact on various sectors of the local economy. Even one day of shooting can have a significant impact on local business. And following a successful on-screen production, tourism is often boosted which can further stimulate the local community and economy.

In addition to direct economic benefits, long term benefits include development and establishment of spin off film production activities such as editing, sound production, creative and artistic activities, development of permanent facilities such as sound stages and studios, and industries related to independent filmmaking, documentaries, music videos, and interactive media production. Regions with thriving film activity also fuel a creative and culturally vibrant local economy, attracting additional interest in the area through capital investment and increased tourism. As an economic driver, the arts community provides thousands of jobs throughout the State, creating a diverse and resilient local economy.

Localized Impacts of Film Production in Montana

"Never in a million years would we have built Yellowstone Film Ranch without the MEDIA Act. We didn't start building until the Act was approved"

Richard Gray, Montana-based producer



Broader Impacts of Film Production in Montana

In addition to economic impacts, there are additional social benefits to local communities

Film-Induced Tourism Research shows that film and TV can influence travel decisions and help to market and grow local visitor economies. This makes the State an attractive tourism destination, attracting visitors who may not have come there otherwise.

Cultivating Arts and Culture Arts and culture communities serve as an amenity that not only improve quality of life but also add to the overall appeal of an area. A robust film industry helps support broader employment in the sector and can help make Montana a more attractive place for recent graduates.

Capital Investment Infrastructure investment supports a growing and sustainable production industry. Investment in physical studios can create virtuous cycles that induce future production activity that occurs in the local economy rather that outside the State.

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1. Introduction

1.1. Purpose of Study

The production of feature films, television series, and commercials can generate significant economic activity for their host communities, drawing out-of-town spending, generating jobs, and supporting local businesses. Because of this potential boost to local economies, many states provide incentives to attract productions as an economic development initiative. In 2019, the Montana State Legislature passed the Montana Economic Development Industry Advancement Act (MEDIA Act) to provide a transferable income tax incentive to attract film, television and other media production to the State.[1]

This report provides an analysis of the economic, fiscal, and societal impacts from film and television production in the State and specifically evaluates the impacts associated with the MEDIA Act Tax Credit Program (described in more detail below). Impacts were evaluated for film, television, and other production activity over an 18-month period (January 2019–June 2020).

One of the requirements of the MEDIA Act Tax Credit Program is a third-party evaluation of the economic profile of the program and the film industry more broadly. This report provides that evaluation and covers the following metrics required by the MEDIA Act:

- The overall impact of the tax credits;
- The dollar amount of tax credits issued;[2]
- The number of net new jobs created;
- The amount of compensation paid;
- The economic impact of the film industry in the State;
- The names of all State-certified productions eligible to claim tax credits; and
- Any other information that describes the impact of the tax credits.

Beyond the quantitative, calculable impacts of the industry, it is important to understand the additional underlying economic values of the program. This report describes some of the broader ways in which film production generates positive returns for Montana and its residents.

During the writing of this report, Montana was significantly affected by the global pandemic caused by the novel coronavirus. In addition to causing thousands of fatalities, the pandemic has halted travel, forced people to shelter in place, and brought about a dramatic decline in most commercial activity. Film production activity, like many other non-essential industries, was halted by the State's mid-March stay-at-home order. Many productions, like *God's Country,* shut down immediately after the emergency

[1] The MEDIA Act Tax Incentive Program provides certified productions with transferable tax credits (not a tax rebate). Once certified, productions are able to sell these credits to other businesses, banks, and investors.
[2] As of the production of this report , no production has received a tax credit. However, ten productions have been certified to receive the credits. Therefore, the dollar amount of tax credits issued are estimates.

declaration, causing delays in the production and programming schedule. This report recognizes that its analysis includes a time period of unprecedented economic disruption.

1.2. About the Montana Department of Commerce and the Montana Film Office

The Montana Department of Commerce is dedicated to promoting economic growth in Montana. The Department works alongside private industry, local government, and nonprofit organizations to create jobs, grow businesses, develop affordable housing, and support the development of vibrant communities. The Department promotes Montana as a destination for travel and film production; supports the growth and development of small businesses through technical assistance and grants; supports the development of critical infrastructure; and provides access to affordable homes through homeownership and rental assistance programs. The Department relies on three divisions— Montana Housing, Community Development, and Tourism and Business Development—to achieve its mission.

The Montana Film Office (MFO), part of the Office of Tourism and Business Development, was established in 1974 to enhance the State's economy by drawing film production to the State, increasing job opportunities in the industry, promoting the growth of small businesses, and attracting tourism. The MFO's primary task is connecting producers to serve as an ambassador for productions to work with the State and its local residents and businesses. The Office assists in all stages of the production process, including navigating the permitting and regulation processes, scouting locations, and connecting to available local resources, equipment, and crew.

In addition to providing guidance on the MEDIA Act Tax Credit Program, the MFO administers the Big Sky Film Grant Program, which strives to enhance the marketing efforts of Montana's tourism sector and to promote the State's local history, culture, and residents' wellbeing.

1.3. Scope and Methodology

Within this report, Econsult Solutions Inc. (ESI) uses data provided by the Montana Film Office, information collected through outreach to the Montana production community, and spending details from independent producers on production activity within the State during the January 2019–June 2020 timeframe. Local production spending data includes the local purchasing and payroll that took place within the State. The data were verified through independent research into industry standards on localized spending and interviews with filmmakers, studio managers, and business owners in the Montana community. This production activity was used to calculate the direct activity occurring in Montana. Economic impact results are calculated for the State of Montana, using the industry-standard input-output model IMPLAN. Key outputs include total economic output, employment (FTE) supported, and earnings supported.

Figure 1.1: Economic Impact Methodology



Source: Econsult Solutions, Inc. (2020)

In addition to economic impact outputs, tax revenue impacts are calculated for the State. Fiscal modeling accounts for which types of economic activity are and are not subject to taxation specific to the taxing jurisdiction. The direct economic activity generated by film production, in addition to its spillover impacts, generates taxable activity (for example, jobs and retail development) for Montana. The Appendix to this report describes this approach and methodology in detail.

1.4. Report Outline

Econsult Solutions, Inc. (ESI) was commissioned through a competitive RFP process through the Department of Commerce, as required by the MEDIA Act, to complete an analysis of the economic impacts of the MEDIA Act Tax Credit program in the State of Montana. The purpose of this analysis is to estimate the direct economic footprint and the spillover activity related to the spending from these productions. In addition, this report describes the many ways in which the film industry broadly supports and enriches the Montana economy. The organization of the report is as follows:

- **Chapter 2: The Value of Film Production Tax Credits and the MEDIA Act Tax Credit Program:** reviews the historical context of the value of production tax credits for attracting investment as well as the genesis of the MEDIA Act Tax Credit Program.
- **Chapter 3: The Economic and Fiscal Film Industry in Montana:** examines the direct footprint of film production spending and reviews the overall context of the industry within the State. This section describes the extent and size of the program, provides a historical perspective of the film industry in the State, and quantifies the impact of the 2019–2020 film tax credit recipients as well as the film industry as a whole.
- **Chapter 4: Broader Impacts of Film Production in Montana:** examines some of the qualitative ways that film production benefits an economy, including increasing tourism, supporting the creative economy, and driving future investment into the industry.
- **Chapter 5: Conclusion:** summarizes key findings and recommendations related to the MEDIA Act Tax Credit Program.

2. Film Production Incentives and the MEDIA Act Tax Credit Program

2.1. National Context of Film Incentives Programs

The production of feature films, television series, and commercials generates significant economic activity for their host communities. **In 2019, the American motion picture and television industry was comprised of 93,000 establishments which supported 892,000 direct jobs and generated $77 billion in annual wages. The industry contributed $242 billion in sales to the overall economy and made $49 billion in payments to over 280,000 businesses.** When considering the indirect and induced jobs supported by the film industry, its annual economic impact supports 2.5 million jobs and $181 billion in annual wages.[3]

International sales of U.S.-produced film and television entertainment are also a significant and growing component of the United States' overall trade surplus. Export revenues from U.S. productions have been on the rise since the 1990s as foreign demand has increased significantly. The U.S. international trade surplus in film and television reached $11.9 billion in 2015, a figure that has doubled since 1998.[4] According to the Motion Picture Association (MPA), the film and television industry's surplus exceeds that of the telecommunications, transportation, mining, legal and insurance industries.[5] While the economic impact of the film industry across the country is impressive, it varies widely from state to state.

Attracting productions remains highly competitive, with most location decisions driven by cost. Well-known productions like *Legends of the Fall* are set in Montana but shot in Alberta, Canada. Other domestic productions like Netflix's *Juanita* have used Montana as its backdrop but are filmed in other states like New Mexico and Utah. Through a mix of favorable exchange rates and tax breaks, competitive places like Calgary and Georgia have increasingly drawn film and television production away from the State of Montana, and at times the United States as a whole, along with the economic impact it generates.[6]

Telling a Montana Story in Montana.
"It's disheartening when you have shows and movies that are set here but can't afford to film here …. they go somewhere else, [it's disheartening] not only for the story itself, but for the people that could've worked on it."

-Richard Gray, Montana-based producer

[3] Motion Picture Association, 2020. https://www.motionpictures.org/wp-content/uploads/2020/02/MPA_Economic_contribution_US_infographic_2019_Final.pdf
[4] National Endowment of the Arts, "Taking Note: The Film Industry's Contributions to National and State Economies."2018. https://www.arts.gov/art-works/2018/taking-note-film-industry%E2%80%99s-contributions-national-and-state-economies
[5] Ibid.
[6] https://www.montanarightnow.com/all_abc_fox/for-the-love-of-film-the-controversial-project-that-could/article_b0437982-4bb0-11ea-a504-cbc8d7c0948a.html

Growing Interest in Montana. While still early, the MEDIA Act Tax Credit Program has already attracted the interest of out-of-town producers.

Steve Grover, the owner of Montana Studios, notes that because of the MEDIA Act, he anticipates ***"between 6–10 projects in 2020–2021 that wouldn't have looked at Montana before the incentive."***

That activity is anticipated to will draw around $20 million in local direct spending.

However, tax incentive programs offered by states can help make locations more attractive when productions are deciding where to shoot. Currently, there are 33 states offering some form of film tax credit in the United States.[7] These programs can level the playing field with places that have lower costs of living and doing business, enabling productions to choose without concern for huge cost differential. The volume of workforce and wealth generation attributable to the film industry at the national level represents untapped opportunities for states like Montana that do not yet have a robust film industry but are currently leveraging their resources by strategically incentivizing investment and industry growth.

While the MEDIA Act Tax Credit program is still in its nascent stages, renewed interest in the State as an attractive location for film and television production indicates that the tax credit is achieving the intended effect. Based on interviews conducted by ESI with Montana film industry stakeholders, there has been a growing interest in Montana by out-of-town producers at the end of 2019 and during the first quarter of 2020.

2.2. Comparable State Film Tax Incentive Programs

This section details the type of tax incentive programs offered by other states with robust film industries. Their experiences show that, when implemented properly, tax incentive programs can have positive economic impacts.

Georgia

Georgia currently has a thriving film industry primarily due to attractive and broad-based tax incentives. The State hosted 455 film and television productions during fiscal year 2018, creating $9.5 billion in total economic impact, a calculation derived from $2.7 billion in direct spending.[8] However, Georgia was not always a center of film production. In 2007, a year before its tax incentive was passed, direct spending within the film industry was $93 million, only three percent of its current industry. The current tax credit includes a 20 percent base credit for filming, post-production work, and video game development and animation, with a minimum expenditure of $500,000 in a year. An additional 10 percent credit is available if productions include a Georgia logo or similar placement in the final project.

Colorado

Colorado was the first state to create a film commission in the late 1800s and was home to many well-known productions over the years that followed. A few notable examples include *Dude Ranch*, *Indiana Jones,* and *The Shining*. Production dwindled due to competition with states like New Mexico, Utah, and

[7] https://www.productionincentives.com/wp-content/uploads/pdf/booklet.pdf
[8] https://www.georgia.org/newsroom/press-releases/georgia-was-home-record-455-film-and-television-projects-fy-18-0

Michigan that offered better tax incentives at the time. Responding to the demand for more in-state production, lawmakers enacted a Colorado Film Incentive program in 2012. Following the enactment of this bill, film production-related employment increased by 43 percent between 2012 and 2016, which is more than double the total U.S. growth rate of 19 percent.[9]

Colorado's film incentives offer qualifying productions a 20 percent cash rebate for production costs taking place in the state. To be eligible, a Colorado production company must have qualified local expenditures of at least $100,000 and an out-of-state production company must have at least $1 million in qualified local expenditures. In addition, a production company must employ a workforce of at least 50 percent Colorado residents for production activities in the State. There is an additional component of the program that potentially finances up to 20 percent of the entire production budget for qualifying film productions. A production may be eligible for both the performance-based incentives and the loan guarantee programs.

Utah

Utah enjoyed steady success in the entertainment industry in the 20th century as the site of the Sundance Film Festival and several high grossing films including *Footloose* and *Forrest Gump*. Production slowed in the State in the early 2000s as other states introduced more competitive incentive programs. However, Utah has seen considerable growth in its television and film productions since the introduction of its Motion Picture Incentive Program in 2012. According to the Utah Film Commission, total dollars spent by productions more than doubled by $87 million since 2015.[10] Recently, Utah has served as the backdrop for several popular movies and television productions, including *Hereditary*, *Westworld*, and *Andi Mack*. This growth in production activity can be accredited to its strategy to court bigger production companies to the State.

Utah's Motion Picture Incentive Program is a tax credit or cash rebate of production dollars spent in the State. Incentives provide a 20 percent tax credit or cash rebate for qualified in-state spending between $500,000 and $1 million, and a 20 to 25 percent credit or cash rebate for spending over $1 million in the State. [11] Additionally, when productions stay in Utah for 30 consecutive days or longer, they receive a transient room tax exemption, which provides for tax advantages on lodging. In-state productions also qualify for point-of-purchase sales tax exemptions on machinery and equipment.

New Mexico

In New Mexico, incentives provide a 30 percent refundable tax credit for qualifying TV productions and a 25 percent refundable tax credit for film and standalone post-production projects. In 2019, the State more than doubled its annual cap on incentives, boosting the annual statewide budget from $50 million to $110 million, making New Mexico one of the nation's most competitive destinations.[12] One of the most significant developments in the film industry occurred in 2019, when Netflix announced it had chosen Albuquerque Studios as its new production hub. Netflix reports that it expects to spend $100

[9] Colorado Office of Film Television, and Media. 2019.
[10] Michael Loclear. *As Movie Shot in Utah Premieres, a Look at the Money Taxpayers Spend to Attract Filmmakers*. 2019.
[11] Utah Film Commission.. *Film Incentive Programs*.2020.
[12] Associated Press. 2019. *New Mexico Speeds up Tax Rebates to Film Industry*.

million every year on production in New Mexico for the next ten years.[13] Projects recently shot in the state include *Logan*, *The Goldfinch*, and *Sicario: Day of the Soldado*.

The film industry has a significant impact in New Mexico. A State-funded study released in 2014 found that film production activity generated an estimated 43 cents in tax revenue for every incentive dollar spent. The study also found that the film industry created more than 15,000 jobs during a four-year period and generated $1.5 billion in total economic output.[14]

Alberta

One of the key factors to incentivizing production companies to shoot in Alberta has been government investments. As of January 2020, Alberta Province in Canada offers funding through refundable tax credits for qualifying productions, amounting to 22 to 30 percent of eligible labor and non-labor costs. Alberta offers productions its tax credit to help cover costs up to a maximum of $10 million per project.

The Albertan film and television industry is vibrant, having flourished since the early 1980s. The cheaper Canadian dollar attracted foreign producers, particularly U.S. studios. As a result, a large talent pool has developed, and facilities have been built and continue to be enhanced. Alberta is still growing in popularity as a filming location, recently hosting *Jumanji: The Next Level* and *Let Him Go*. The television film industry also has significant economic impact, supporting over 7,000 jobs and $225 million in direct production activity.[15] These production levels are possible through the advantages provided by tax incentives, as well as government support through loans, grants, and pools of funds investing in development and distribution.

[13] Associated Press. 2020. *Netflix made Albuquerque its US production hub*.
[14] Dan Boyd. 2019. *NM pays down existing film credit backlog*.
[15] Alberta Screen Industry Action Committee (ASIAC)- *2019 Talking Points.*
http://www.asiac.ca/_sources/ASIAC%20Talking%20Points%20FINAL%20092219.pdf

2.3. Details of the MEDIA Act Tax Credit Program

In 2005, the Big Sky on the Big Screen Act was passed in Montana. This original tax incentive program had sunset in 2015. Throughout this time period, 129 productions were approved to receive the incentive and 48 productions claimed the credit.[16] These productions spent approximately $9 million, of which $6.6 million qualified for a tax credit accruing to approximately $700,000 in tax credits in the form of a rebate.

In 2019, The Montana Economic Development Industry Advancement Act (MEDIA Act) was passed by the Montana Legislature to provide an income tax incentive applicable to expenditures related to film, television, and other media production activities for eligible productions that take place in Montana. The legislation became effective July 1, 2019 and extends through 2029.

The program provides a 20 percent transferable income tax credit on production expenditures that are within the State with additional amounts that can increase the credit up to 35 percent of the production company's base investment per year. Additional incentives include:

- 25 percent of compensation for Montana resident crew
- 15 percent of compensation for non-Montana resident crew
- 20 percent of above-the-line compensation (actor, director, producer, writer)
- 30 percent of compensation paid to a student enrolled in a Montana college/university who works on the production for college credit
- 10 percent of payments to Montana colleges/universities for stage, equipment, rentals, or location fees for filming on campus
- 10 percent of all in-studio facility/equipment expenditures that rents an in-state studio for 20 days or more
- 5 percent of expenditures in an underserved county
- 5 percent for using "Film MONTANA" screen credit
- 25 percent of post-production wages (Not effective until 2021)

While the MEDIA Act Tax Credit Program is in its infancy, from an evaluation perspective, ESI is able to assess the economic footprint and impact of the activity to date and, using available data, provide a baseline of the scale of the current impact as well as the distribution of those impacts across the State. The time frame of productions modeled in this report are productions scheduled to film from January 2019 to June 2020. Due to this compressed timeline, no tax credits have been formally awarded; therefore, the analysis of productions receiving MEDIA Act Tax Credits is based on those that have been certified to receive the credits and preliminary estimates of how much tax benefit that they would receive based on anticipated spending activity.

[16] http://www.tourismmattersmt.org/wp-content/uploads/2015/01/HB-120-Big-Sky-Big-Screen-Act-Background-FAQ.pdf

3. Economic and Fiscal Impact of the Film Industry in Montana

3.1. Section Overview

This section describes the historical and current economic footprint of the film industry in Montana as well as the recent utilization of the MEDIA Act Tax Credit Program since its inception in 2019.[17] Productions that have applied for the MEDIA Act Tax Credit since 2019 include television shows such as *Yellowstone*, web series such as *Sci Show,* and upcoming feature films such as *3,000 Miles to Christmas* and *Zomsters*.

The presence of these productions within the State draws significant outside investment. This injection of spending helps to support existing industries and services in Montana, which helps to bolster the State economy. The total economic impact of these productions in the State is more than just their direct spending within Montana. Direct spending by production companies on wages to local residents and on goods purchased within the State produces subsequent spillover impacts into other industries.

The subsections that follow highlight the total economic impact of film production in Montana between January 2019 and June 2020, focusing on the sector's overall impact as well as the economic activity generated by productions that have or plan to leverage the MEDIA Act Tax Credit Program. **The total economic impact in Montana from productions that have filmed during this time period is estimated to be approximately $47.6 million, supporting 280 FTE jobs with $17.6 million in employee compensation in Montana.** [18]

It is important to note that the MEDIA Act Tax Credit Program is still relatively new, and large productions often make location decisions multiple years in advance. Therefore, the impacts resulting from this incentive program may take a few years to be fully realized. The analysis provided in this section offers an initial snapshot of the industry's current footprint.

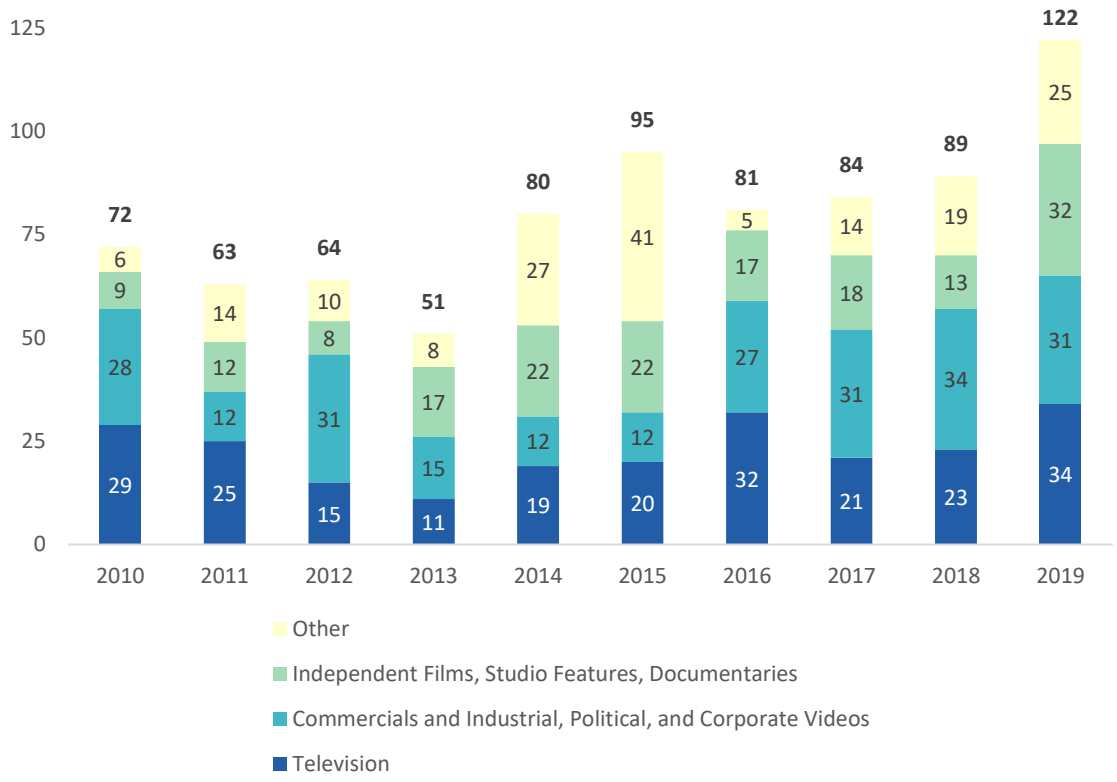
[17] This study analyzes economic impact over the 18-month time period from January 2019 to June 2020.
[18] ESI's input-output model generates job estimates based on the term "job-years", or how many jobs will be supported each year. For instance, if a construction project takes two years, and IMPLAN estimates there are 100 employees, or more correctly "job-years" supported, over two years, that represents 50 annual jobs. Additionally, these can be a mix of a full and part-time employment. Consequently, job creation could feature more part-time jobs than full-time jobs. To account for this, IMPLAN has a multiplier to convert annual jobs to full-time equivalent jobs.

3.2. Sizing of the Industry

Historic Film Production

Over the past decade, there has been an average of 80 productions in Montana each year. Revenue from these productions is estimated to be between $2.7 million and $7.8 million annually.[19] Montana averaged approximately 23 television productions, 14 commercial shoots, 10 documentaries, and 6 feature films per year from 2010 through 2019. Notable films and television shows in this production set include *The Revenant*, *Dark Money*, *Nebraska*, and *Yellowstone*.

Figure 3.1: Montana Productions from 2010 to 2019[20]



Source: Montana Film Office (2020), Econsult Solutions, Inc. (2020)

According to analysis completed by the National Endowment of the Arts (NEA) and the U.S. Bureau of Economic Analysis, the motion picture industry in Montana supported over 850 direct jobs and generated nearly $30 million in annual wages in 2017.[21,22] The industry contributed over $61 million to

[19] These values are based on revenue estimates produced by the Montana Film Office's production lists. The Film Office's production estimates are based on the Association of Film Commissioners International (AFCI) and Bureau of Labor Statistics' (BLS) on-location production averages. They are based on an analysis of studio and television network accounting records, commercial production companies, exit reports, and generally accepted estimates from film commissioners with experience on a wide range of film, television, and other media projects.
[20] For 2019, this includes the time frame of productions filmed and scheduled to film from January 2019 to June 2020, which represents the time period modeled in this report.
[21] Direct jobs could be a combination of full-time, part-time, and contract jobs so are therefore a larger total than the FTE jobs articulated in other parts of the report.
[22] Arts and Cultural Satellite Account Data can be accessed here: https://www.bea.gov/data/special-topics/arts-and-culture

the State's GDP. While this economic activity accounted for less than one percent of the State's total GDP, it realized significant growth over the year (21.4 percent). Notably, this growth outpaced that of the arts and cultural sector as a whole (4.6 percent).

Footprint of Current Film Production in the State

This report separates film production in Montana into three categories:

- Productions that did not apply for the MEDIA Act Tax Credit Program, either because the incentive was not available during the time of filming, the production did not qualify for the incentive, or the production qualified but did not apply;
- Productions that have been certified to receive the credit and have filmed; and
- Productions that have been certified to receive the credit and have not filmed. [23]

As of the writing of this report, there were 122 total productions with filming in the State during the 18-month time period analyzed (January 2019 to June 2020). Of this activity, ten productions were certified to participate in MEDIA Act Tax Credit Program (see Figure 3.2). The Appendix includes a list of all known productions that were filmed in Montana during this time period, with the productions that were certified by the State as eligible for the tax credit incentive identified. The estimated tax credits indicated in the figure below represent preliminary credits based on the productions' initial local spending estimates.

Figure 3.2: Summary of Film, Television, and Other Media Productions in Montana, January 2019 to June 2020

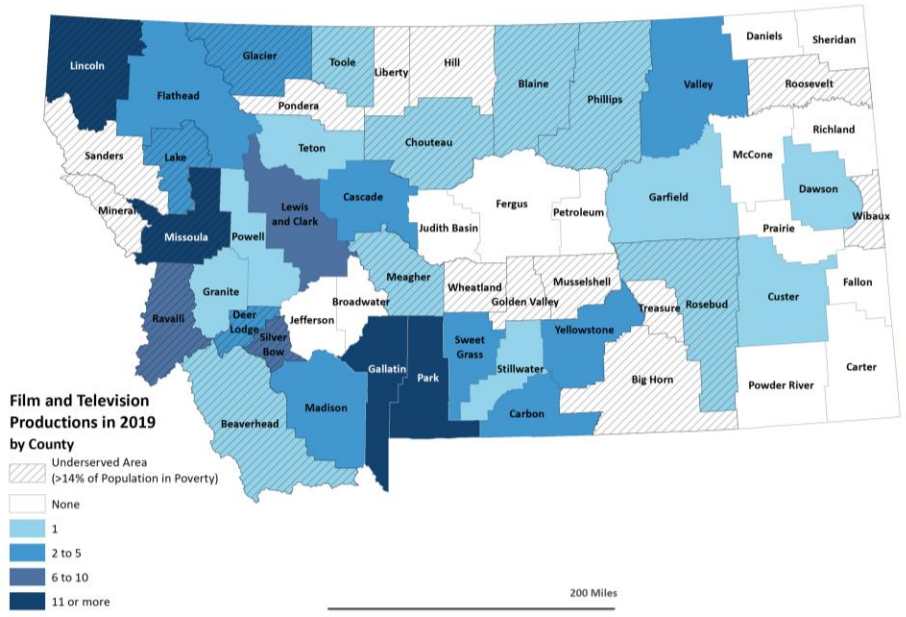
Production Type	Number of Productions	Production Spend	Estimated Tax Credit
Other MT Productions – Have Filmed	112	$17.7	--
Certified Productions – Have Filmed	5	$6.2	$2.6
Certified Productions – Have Not Filmed	5	$13.4	$5.9

Source: Montana Film Office (2020), Econsult Solutions, Inc. (2020), AFCI (2007)

In 2019, 31 counties in Montana were home to a production. This represents about 55 percent of all the counties in the State. Over half of all production occurred in Missoula, Gallatin, and Park Counties.

[23] Productions apply for the Tax Credit through the Montana Film Office. If they are approved for the tax credit based on program guidelines, they are considered "certified." However, being certified does not mean that the production has received the tax credit. As of the production of this report, no production has received a tax credit yet.

Figure 3.3: Locations of Productions in Montana, January 2019 to June 2020[24]



Source: Econsult Solutions, Inc. (2020)

3.3. Economic Impact of Film Industry and MEDIA Act Tax Credit Program

Activity by the film industry in Montana serves as an injection of outside spending that creates jobs and improve economic growth in the State. **The spending from film and television productions touches many Montana-based industries, as these industries supply the means needed to run a production. For example, cast and crew members eat at restaurants, shop at local businesses, stay in hotels, and procure goods and services from local vendors.**

To determine the economic impact of film activity in Montana, ESI examined the direct spending footprint of productions with locations in the State. ESI collected information from the Montana Film Office regarding the 2019-2020 list of all productions, indicating those that were approved and certified for the Montana Film Tax Credit Program, from January 2019 to June 2020.[25] ESI independently verified this list, which captures the vast majority of production (and its spending) activity occurring in Montana.[26]

When available, specific expenditure data from productions that have filmed in the State were used. Since detailed data were not available for every production, ESI utilized industry standard daily spending and production length estimates from the Association of Film Commissioners International (AFCI) to serve as a baseline of the analysis. Together, these data were used to estimate the total local

[24] An underserved county is defined by the Census Bureau as a county whose population is 14 percent or greater in poverty.
[25] Note that major economic disruptions due to COVID-19 in the first half of 2020 meant that little new activity has been recorded in 2020.
[26] While some minor productions may not be included in this list, the vast majority of spending is captured in this report.

expenditures of all productions in Montana.[27] The total estimated direct spend of all production in Montana over this time period was $37.2 million including $18.2 million in employee compensation.

Figure 3.4: Estimated Production Spend and Employee Compensation in Montana by Production Type for All Productions, January 2019 to June 2020

Production Type	Number of Productions	Production Spend ($M)	Employee Compensation ($M)[28]
Commercials	24	$3.2	$1.7
Documentaries	21	$2.6	$1.6
Independent Features	11	$16.7	$7.7
Industrial/Corporate	2	$0.3	$0.1
Live Events	3	$0.0	$0.0
Network Television	3	$4.8	$2.0
Online/Web Content	8	$0.7	$0.4
Political	5	$0.7	$0.3
Short Films	7	$1.8	$1.1
Still Photography	7	$0.2	$0.1
Television	31	$6.2	$3.2
All Productions	**122**	**$37.2**	**$18.2**

Source: Montana Film Office (2020), AFCI (2020), Various Productions (2020), Econsult Solutions, Inc. (2020)

Of the productions summarized in the figure above, five have been certified for the MEDIA Act Tax Credit Program and completed filming. Figure 3.5 below shows the total direct expenditures of this subset of productions. Data on spending activity was provided to ESI directly from the production companies. These productions include a commercial (for car company Kia), independent features (*God's Country* and *Two Eyes)*, network television series (*Yellowstone)*, and short film (*Two or Three Things I Know about Edward Hopper*). In total, the direct spending of these productions is approximately $6 million with nearly $3 million in employee compensation (see Figure 3.5).

Figure 3.5: Production Spend and Employee Compensation in Montana for Certified Productions that Have Filmed

Production Category	Number of Productions	Production Spend ($M)	Employee Compensation ($M)
Certified – Have Filmed	5	$6.2	$2.6

Source: Various Productions (2020), Montana Film Office (2020), Econsult Solutions, Inc. (2020), AFCI (2020)

[27] See Appendix 6.2 for further detail on methodology.
[28] Employee Compensation is a subset of the total Production Spend.



Image from Kia 2019 Commercial That Leveraged the MEDIA Act Tax Credit and Filmed in Bannack Ghost Town. Source: Kia Motorsports (2019)

Since the introduction of the MEDIA Act Tax Credit program, five other productions—feature films *3,000 Miles 'til Christmas, Zomsters*, *Murder at Emigrant Gulch*, *The Last Son of Isaac LeMay*, and web series *SciShow*—have been certified to receive the credit but have not yet completed filming. Figure 3.6 below shows the estimated direct spend of those productions. Because these productions have yet to film or complete filming, estimated production expenditure amounts are from preliminary budget data provided by the producers to the Montana Film Office and then compared with industry-average local spending estimates. In total, the estimated direct spend of these productions is approximately $13 million, with nearly $6 million in employee compensation.

Figure 3.6: Estimated Production Spend and Employee Compensation in Montana for Certified Productions that Have Not Filmed

Production Category	Number of Productions	Production Spend ($M)	Employee Compensation ($M)
Certified – Have Not Filmed	5	$13.4	$5.9

Source: Montana Film Office (2020), Econsult Solutions, Inc. (2020), AFCI (2020)

Figure 3.7 below shows the estimated expenditures of all other productions that have filmed in the State. These productions were not certified to receive the tax credit either because the incentive was not available during the time of filming, the production did not qualify for the incentive, or the production qualified but did not apply. Because budget or expenditure data were not available for these productions, industry standard daily spending and production length estimates were utilized to arrive at

these figures. In total, the estimated direct expenditure is nearly $18 million with $10 million in employee compensation for these productions. A total list of all productions tracked in this analysis can be found in the Appendix.

Figure 3.7: Estimated Production Spend and Employee Compensation in Montana for All Other Productions that Have Filmed

Production Category	Number of Productions	Production Spend ($M)	Employee Compensation ($M)
Other MT Productions – Have Filmed	112	$17.7	$9.7

Source: Montana Film Office (2020), Econsult Solutions Inc. (2020), AFCI (2020)

The direct economic footprint of these feature films and commercials produced spillover impacts into other industries. For example, direct spending by film companies on goods and services such as lighting equipment or catering produces subsequent indirect impacts. The direct spending on wages generates induced spending in other industries; for example, when the crew subsequently spend money earned on set at a local store or restaurant.

The total economic impact of the film production activity that occurred within the State between January 2019 and June 2020 is shown in Figure 3.8 below. In aggregate, for productions that have filmed, these productions have a total economic impact of $47.6 million, supporting 280 FTE jobs with $17.6 million in employee compensation.[29]

Certified productions (i.e. those that have leveraged the MEDIA Act Tax Credit) that have already filmed (a subset of all productions that filmed) had a total economic impact of nearly $12 million, supporting 70 FTE jobs with nearly $4 million in employee compensation.

Figure 3.8: Annual Economic Impact of 2019-2020 Productions in Montana

	Other Productions - Have Filmed	Certified Productions - Have Filmed	All Productions that Have Filmed	Certified Productions - Have Not Filmed
Direct Output ($M)	$17.7	$6.2	$23.9	$13.4
Indirect and Induced ($M)	$18.1	$5.7	$23.8	$12.6
Total Impact ($M)	**$35.8**	**$11.9**	**$47.6**	**$25.9**
Direct Jobs Supported (FTE)	**75**	**25**	**100**	**55**
Indirect and Induced Jobs Supported (FTE)	**135**	**45**	**180**	**95**
Total Employee Compensation Supported	**$13.7**	**$3.8**	**$17.6**	**$8.7**

Source: IMPLAN (2018), Econsult Solutions, Inc. (2020)

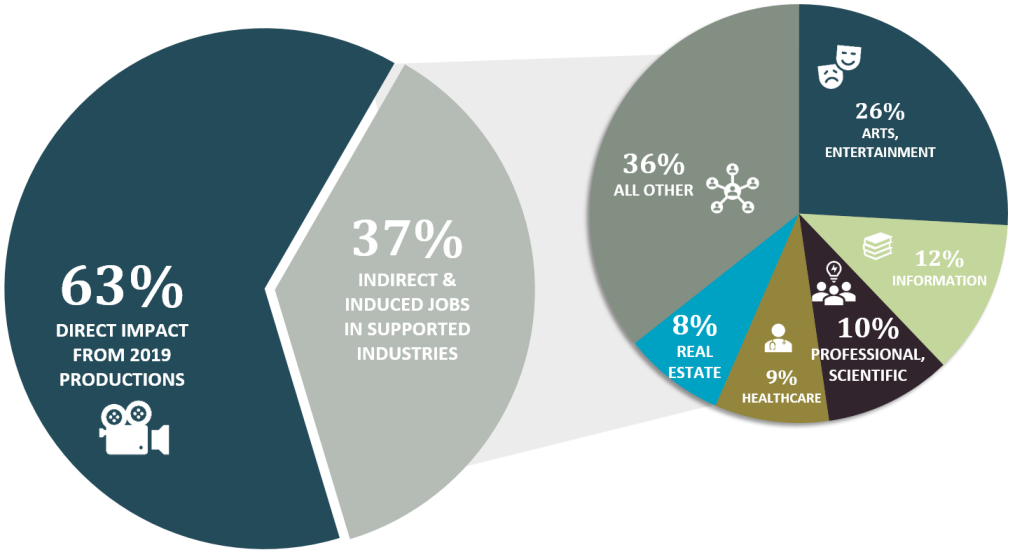
[29] The economic impacts for certified productions that have not filmed are shown separately and not included in the total economic impacts, as these productions have not filmed yet and may be subject to change.

3.4. Industry Distribution of Jobs Supported by the Industry

The economic impacts associated with film production extend beyond direct employment in the film industry. Other sectors including health care services, professional and scientific professions, administrative services, accommodation and food services, and finance and insurance services also see benefits from the indirect (supply chain) and induced (labor income) impacts of the activity (see Figure 3.9).

Overall, 37 percent of the total employment supported by these economic impacts occurred in sectors outside of the film industry. In other words, the industry distribution pie chart shows the sum of indirect and induced jobs created by the economic activity generated by the productions. Direct spending such as consulting services, purchase of healthcare and other benefits for its employees, and purchase of other required services are categorized in industries such as arts, entertainment, and recreation, information (publishing), and professional and scientific services.

Figure 3.9: Industry Distribution of Employment Generated from 2019-2020 Productions in Montana



Source: IMPLAN (2018), Econsult Solutions, Inc. (2020)

3.5. Local Economic Impacts

During filming, production often hires local businesses to support their operations. From caterers to hotels, and hardware stores to transportation, the film industry can have a significant economic impact on various sectors of the local economy. Several producers interviewed echoed these sentiments, stating that it was not hard to see the impact of film production locally. For example, there was significant impact with *Robert the Bruce;* because the filming for this production occurred during the

winter months, its presence made a substantial impact on the local community.[30] The cast and crew of the film enabled a local hotel to stay open through the winter when it typically shut down, employing 12 residents full-time and injecting roughly $100,000 into the local economy.

To quantify the impact of this local spending in a normalized way, the average daily production spend by county was calculated. The estimated daily spend was then proportioned by the respective county's daily gross domestic product (GDP). Calculating the share of daily GDP by county translates monetary sums into meaningful measures. [31]

Even one day of shooting can have a significant impact. For example, during a one-day commercial shoot in Park County, MT the crew employed a local caterer as part of their craft services offering. The order for this one-day production accounted for approximately three weeks of industry average revenue for the family-run, small business. This exemplifies how procurement activity can have significant impacts on the local economy.

For example, in Beaverhead County, the average daily production expenditure of $106,000 represented ten percent of the county's daily GDP. While the production in this county only shot a total of ten days, the one-time injection of funds can have a significant impact on a small economy. This is especially notable given the county was identified by the State as an underserved area, meaning that economies within this county are considered particularly vulnerable. As shown in the figure below, the impact of productions that took place in 2019 have a notable effect to numerous counties (see Figure 3.10 below).

[30] Robert the Bruce was filmed prior to the passing of the MEDIA Act Tax Incentive. However, because the producers were local to Montana, they felt it important to film within the State even though it would have been cheaper to film elsewhere.
[31] In order to calculate the daily GDP, ESI used all 122 productions, which includes productions that have not yet filmed, in order to capture the full potential of spending.

Figure 3.10: 2019 Productions' Daily Spending Impact on the Daily GDP by County[32]

County	Daily Impact (Production Spending)	Daily GDP	Share of Daily GDP	Shoot Days	Underserved Area
Beaverhead	$106,000	$1,084,440	10%	10	X
Blaine	$12,000	$540,511	2%	10	X
Carbon	$94,000	$812,395	12%	22	
Cascade	$53,000	$11,958,574	0%	9	
Chouteau	$12,000	$634,426	2%	10	X
Cluster	$40,000	$634,426	6%	3	
Dawson	$40,000	$1,285,176	3%	2	
Deer Lodge	$24,000	$842,179	3%	17	X
Flathead	$115,000	$12,175,165	1%	60	
Gallatin	$31,000	$16,541,298	0%	122	
Garfield	$40,000	$132,148	30%	5	
Glacier	$30,000	$1,268,264	2%	24	X
Granite	$34,000	$264,756	13%	5	
Lake	$31,000	$2,306,923	1%	8	X
Lewis and Clark	$123,000	$9,868,781	1%	26	
Lincoln	$40,000	$1,587,435	3%	65	X
Madison	$77,000	$1,587,435	5%	19	
Meagher	$12,000	$210,088	6%	5	X
Missoula	$39,000	$16,178,261	0%	52	X
Park	$61,000	$1,678,065	4%	78	
Phillips	$12,000	$377,483	3%	10	X
Powell	$12,000	$619,148	2%	10	
Ravalli	$105,000	$3,167,693	3%	27	X
Rosebud	$12,000	$2,424,929	1%	10	X
Silver Bow	$26,000	$4,377,903	1%	36	X
Stillwater	$67,000	$1,677,599	4%	2	
Sweet Grass	$14,000	$687,699	2%	11	
Teton	$12,000	$714,537	2%	10	
Toole	$26,000	$811,585	3%	4	X
Valley	$28,000	$919,645	3%	18	
Yellowstone	$38,000	$27,172,651	0%	14	

Source: BEA (2018), Econsult Solutions, Inc. (2020)

The MEDIA Act includes an additional incentive of five percent of expenditures for production activity that occurs within the State's designated underserved areas (counties in which 14 percent or more of its residents are in poverty). This bonus is meant to attract more spending in areas that the Montana Legislature has designated in need of increased economic development focus; in total, 26 counties in the State (46 percent) fall into this category. Based on data provided by the Montana Film Office and research completed by ESI, 51 productions were in an underserved area for some portion of their filming. Notably, 15 of these productions took place in Missoula.

[32] The gross domestic product (GDP) figures are reported in 2018, the most recent year that data are available. The GDP figures have been inflation adjusted to $2020.

Of those productions that have been certified and have not yet filmed, productions were located in five counties (Beaverhead, Deer Lodge, Ravalli, Silver Bow, and Missoula) designated as underserved areas. Because the MEDIA Act Tax Credit Program is still in its infancy and production decisions are sometimes made years ahead, it is not possible to conclude how impactful the MEDIA Act's bonus incentive is on these communities, but it is likely that as the program progresses, more data will be available to determine how much additional film activity is happening in these locations due to the added benefit.

3.6. Tax Impact of Film Industry

The economic impacts from the 2019–2020 productions also grow the tax base by supporting taxable economic activity through the procurement of goods and services and employee spending. It is estimated that the total economic impact from 2019–2020 productions that have filmed generates $1.3 million in personal income and business tax revenues to the State of Montana (see Figure 3.5 for production spending totals).

Figure 3.11: Annual Tax Revenue from 2019 Productions to the State of Montana by Production Category

Tax Type	Other Productions - Have Filmed	Certified Productions - Have Filmed	All Productions that Have Filmed	Certified Productions - Have Not Filmed
Income Tax ($M)	$0.3	$0.1	$0.4	$0.2
Business Tax ($M)	$0.7	$0.2	$1.0	$0.5
Total ($M)	**$1.0**	**$0.3**	**$1.3**	**$0.7**

Source: State of Montana CAFR (2019), IMPLAN (2018), Econsult Solutions, Inc. (2020)

In addition, some productions take place in areas that impose a local resort tax, which is a tax of up to a four percent on lodging, restaurants, and other related services.[33] ESI identified 13 productions that took place in these areas, which are Big Sky, Whitefish, Gardiner, Red Lodge, and Virginia City. Based on production days and hotel stays, these productions generate an additional $32,000 in resort tax revenues to these designated areas.[34]

[33] The 2019 Legislature approved resort communities/areas to levy an additional 1 percent (above the statutory max of 3 percent) for targeted projects. ESI has calculated the 3 percent levy since it is not yet known if resort areas have levied the additional 1 percent.
[34] ESI estimated the resort tax by estimating the average room nights based on the production schedule and estimated a portion of the production toward towards catering and craft services.

4. Broader Impacts of Film Production in the State

4.1. Section Overview

The film industry creates numerous social benefits for local communities – beyond direct economic activity and tax revenue generation – that are often overlooked. This section examines these additional advantages, described in three categories: capital investment, talent, and tourism. These benefits are described broadly, with some examples from cities across the U.S. as well as examples of how Montana and its residents have experienced these benefits resulting from film production in the region. **These examples of broader impacts are important because they demonstrate tangible ways in which film production in Montana, which would potentially increase in the coming years as a result of the MEDIA Act Tax Credit Program, could generate further economic benefits beyond what was quantified in the previous section's analysis.**

4.2. Capital Investment in Production Facilities

The ability to attract and stimulate capital investments in film infrastructure is a vital aspect of establishing a successful and sustainable film industry. Attracting capital requires states and municipalities to create a business-friendly environment that will eventually pave the way for long term investments in infrastructure such as the construction or expansion of soundstages and studios. In the case of the film industry, national patterns suggest that local and state incentives to film productions in the form of rebates or grants signal to developers that construction of production facilities and studios would generate a return on their investment (thus spurring their investment in new real estate).

The flow of capital investments in film infrastructure represents significant economic benefits to the local area in the form of high-quality jobs and income for residents, helping to support industries outside of the film industry such as the building trades and design. Upon completion, that infrastructure investment supports a growing and sustainable regional film production industry. This can only happen in regions that have an established production base where companies and investors have the confidence to sustain this level of investment.

Montana's Production Facilities

While Montana has limited studio space, there has been recent expansion of production studios and sets. The Yellowstone Film Ranch demonstrates the early impact of the MEDIA Act Tax Credit Program on the potential for film infrastructure in Montana. Constructed by Livingston-based Soundcolor Studios, the complex is a full-scale production studio that currently has 26 structures, including lodging as well as

Capital investment would not be feasible without the MEDIA Act.

"Never in a million years would we have built Yellowstone Film Ranch without the MEDIA Act. We didn't start building until the Act was approved."

-Richard Gray, Montana-based producer

space for production offices, storage, catering, extras, and set builds.[35] Yellowstone Film Ranch would not have been feasible without the MEDIA Act.

The film set is being built from the ground up for the production *Murder at Emigrant Gulch* and designed to be a permanent fixture for Hollywood to film western-themed scenes. The set cost approximately $3 million to build and employed over 50 construction workers. Understanding that construction in Montana is primarily seasonal, the construction timeline was set in a way to allow the workers to continue building in months that they would typically be shut down, prolonging their employment into the offseason. **This $3 million capital investment is estimated to have supported 35 FTE jobs, generated $1.4 million in employee compensation, and had a $5.1 million in economic impact for the State of Montana**. **This economic impact is above and beyond those articulated in the previous section; but these benefits further support local employment and businesses in a variety of industries throughout the State.**



Yellowstone Film Ranch, Under Construction

Source: Montana Film Office (2020)



Yellowstone Film Ranch, Completed

Source: Montana Film Office (2020)

When originally looking for locations to shoot *Murder at Emigrant Gulch*, Gray began scouting the typical locations in Calgary, known at the time to be the most cost-effective site to shoot outdoor winter scenes resembling Montana. However, a recent change to its tax credit has imposed limits on funding, capping the credit to $10 million per project. Some in the film industry are concerned that this may decrease Calgary's competitiveness and incentivize larger productions with bigger budgets to look elsewhere.[36] Because of the MEDIA Act, Gray is now receiving calls from Canadian producers looking to film in Montana. Essentially, the MEDIA Act may change the direction of international trade flows in favor of Montana and the United States.

[35] Yellowstone Film Ranch Facebook Page. 2020.
[36] https://globalnews.ca/news/6539336/alberta-film-industry-tax-credit-ucp-government/

In addition to Yellowstone Film Ranch, Montana Studios recently purchased a long-vacant and historic complex in uptown Butte. This transfer, which occurred in 2019, required renovation of the original buildings' facades. Currently, Montana Studios is planning to use the space for production sound stages, interior filming, offices, educational and training rooms, set locations, and apartments and condos for those working on film projects.[37]



Montana Studios' Media Manufacturing Campus. Source: Montana Studios (2020)

Steve Grover, the owner of Montana Studios, notes that because of the MEDIA Act, he anticipates "between 6–10 projects in 2020–2021 that wouldn't have looked at Montana before the incentive."[38] That activity is anticipated to will draw around $20 million in local spending. Grover further explains that, in addition to attracting film investment, the MEDIA Act will notably allow producers "to tell a Montana story in Montana."

Historically, many movies are set in Montana, though few are filmed in the State itself. Investment in physical studios such as the Yellowstone Film Ranch and Montana Studios can create virtuous cycles that induce new production activity, particularly directing activity that can occur in the local economy. Nevertheless, with the anticipated increase in film production in the State because of the MEDIA Act, the State will need to continually expand its infrastructure in order to see the industry mature.

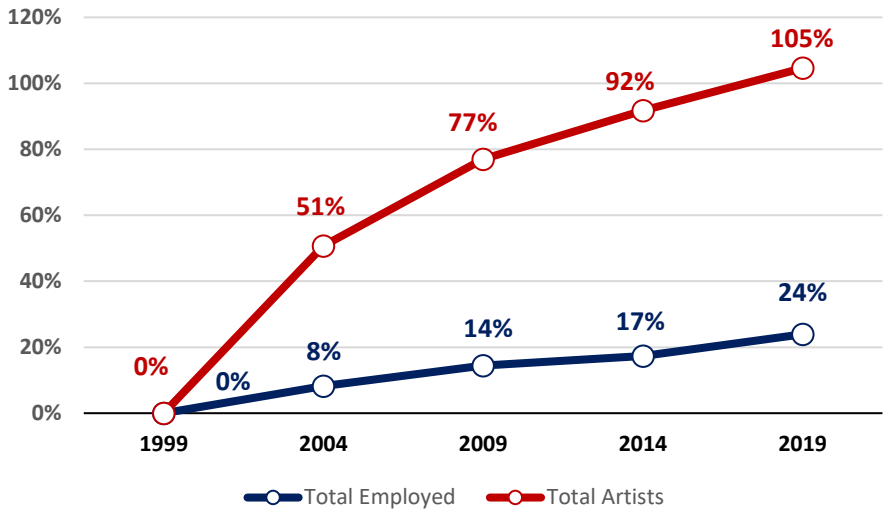
[37] Mike Smith. 2019. *Tentative deal: Council OK's media production company getting 40 East Broadway complex*.
[38] Quotes from interview conducted with Mr. Steve Grover in May 2020.

Attraction of Creative Talent

Another benefit of a robust film industry within the local economy is the ability to attract and retain talent and strengthen the creative economy. Of course, the most prominent example of this is the creative economy in Los Angeles, California. The unofficial capital of the entertainment world, Los Angeles has the highest concentration of entertainment workers in the country.[39] This workforce makes up the largest share of jobs and wages contributing to Los Angeles' economy, making talent attraction vital to the overall welfare of the City's economy. The City's successful entertainment industry perpetuates a pipeline of talent attraction, creating a self-sufficient cycle of economic activity.

Although it may not be the first industry discussed when talking about Montana's economic growth, the creative arts industry is a sector in Montana that plays an integral role in the State's economy. The arts contribute to Montana's economy in a variety of ways, including the tangible contributions of jobs and tax revenue, as well as more abstract impacts on economic growth and quality of life. In 2019, there were 4,400 artists working in Montana, which is comparable to the number of people employed in the Legal Occupations industry (see Figure 4.2).[40]

Figure 4.2: Percentage Change in Labor Force and Artists in Montana (Indexed to 1999)



Source: BLS Occupational Employment Statistics (2020)

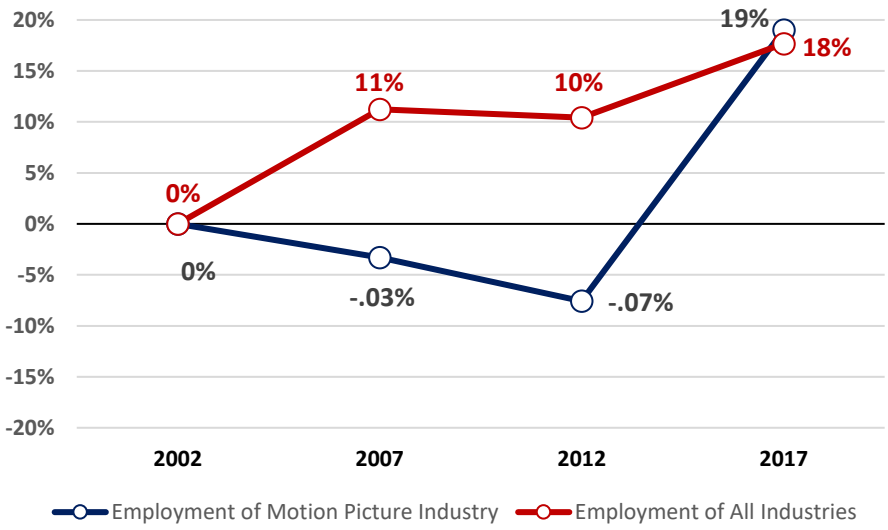
The trend of an increasing percentage of the civilian labor force being classified as artists indicates that the growth in the number of artists has outpaced the growth of the total employed labor force in Montana in the last two decades.

[39] Bureau of Labor Statistics. 2019. *Occupational Employment Statistics*.
[40] Based on occupation titles, the following are included in this definition of artist: actors, architects, crafts people, visual artists, photographers, performers of music, theatre and dance, writers of all forms of literature, designers, media reporters, producers and directors, entertainers, and sports performers and announcers.

The arts are an important industry in Montana that continues to grow. But this sector's contribution towards economic growth also goes beyond the traditional measures of dollars and jobs. The cultural capital generated through arts and culture enhances Montana's regional and national image that has attractive amenities for visitors, residents, and businesses alike. Recent research shows that the arts and culture community in a region drive economic activity by improving the quality of life adding to the overall appeal of a metropolitan area.[41] The growing arts and culture industry serves as an important addition to the economy that makes Montana an arts and tourism destination, attracting visitors who may not have come to the State otherwise. It should be noted that unlike the many other sectors, the film industry is highly mobile and able to relocate productions relatively quickly if a better offer is available that would make a production easier to finance or allow for a better return.[42,43]

Creating a Talent Pipeline. Montana is home to two film schools, situated within the Montana State University and the University of Montana, institutions located in Bozeman and Missoula. However, many students end up going to Los Angeles or New York City after graduating. The MEDIA Act offers a compensation tax incentive of 30 percent to hire college students, with the aim of increasing local staff participation in big productions in the State.

Figure 4.3: Percent Change in Overall and Motion Picture Industry Labor Force in Montana (Indexed to 2002)



Source: BLS Occupational Employment Statistics (2020)

As shown in Figure 4.3 above, the film industry in Montana lost film employment in the early 2000s. In 2002, there were over 722 Motion Picture artists, and ten years later that figure had dropped to 671.

[41] Saiz and Carlino. 2009. *Beautiful City: Leisure Amenities and Urban Growth: Federal Reserve Bank of Philadelphia*.
[42] Adiksson. 2013. *State Film-Production Incentives and Employment: A Brief Case Study*.
[43] Kevin Klowden. 2010. *Film Flight: Lost Production and Its Economic Impact on California*.

However, since 2012 there has been an average annual growth rate of five percent in employment. In 2017, the year where the latest data are available, there were over 860 employed in the Motion Picture industry.

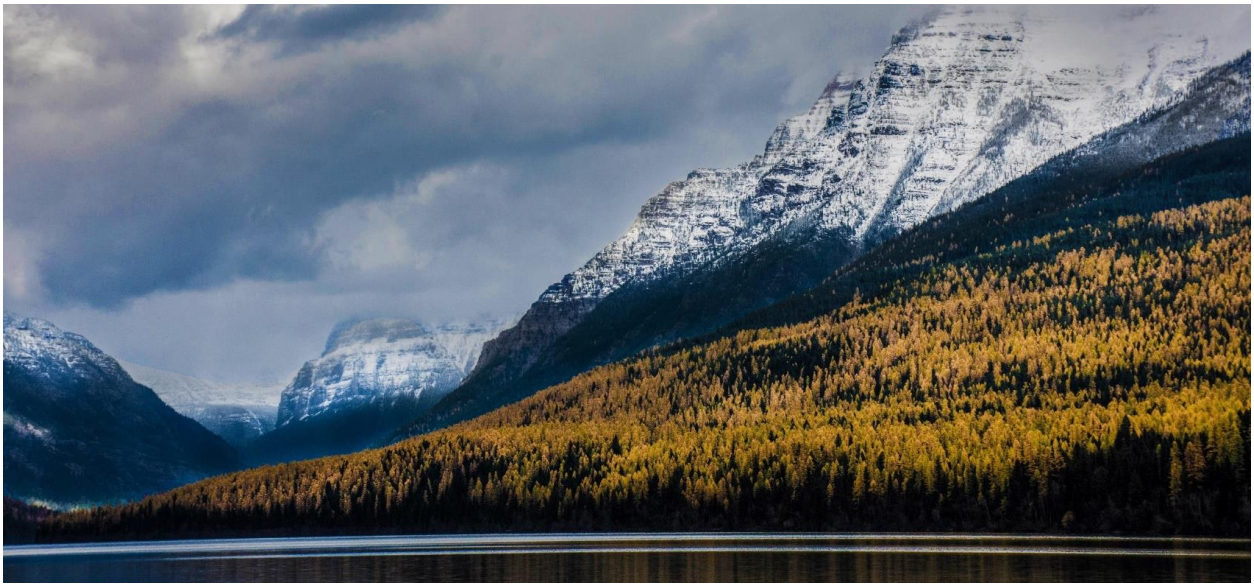
Montana is not known as the center of film and television production. But recent employment trends in the arts sector as well as the rebound in the Motion Picture industry suggest there is potential for future growth. **Film production has the potential to diversify and expand the economic base of Montana. While film production is still concentrated in states like California and New York, production is spreading to other areas. Film incentives remain a driving factor in determining where a film is ultimately produced. Over time, it is conceivable that through incentives, new nodes of film production will emerge and add a new significant dimension to the State's local economies.**

Increasing film activity allows Montana to take advantage of this opportunity and bolster this sector to ensure a consistent slate of future production activity. The productions attracted by the incentives will also have the added benefit of helping develop an experienced crew base in the State. Despite the growth in numbers, the lack of locally trained staff continues to pose as a challenge for in-state productions. **Growth and investment in this industry can create a virtuous cycle that induces new production activity, which can reinforce the development of a trained talent pool in the State. The ability for Montana to have local crew could further incentivize producers to choose Montana, as they will not have to pay additional per diems (such as lodging and rental cars) of outside crew. This crew base could make the State more valuable to future talent as well as to those interested in the arts more generally.**

4.3. Film Induced Tourism and Montana

Tourism is an economic and business activity that has become increasingly important to Montana's economy. The State has seen steady growth in the volume of visitors: in 1991, an estimated 7.1 million visitors traveled to Montana and by 2019, 12.6 million people reported visiting the State, representing about 3 percent in annual growth. The attributes that make Montana so appealing to its out-of-state visitors are the same qualities that Montanans love and value. These elements include the beauty and recreational opportunities offered by Montana's natural assets, history, and rich culture and heritage, including major landmarks such as Glacier National Park and Yellowstone National Park.[44,45] Currently, the tourism and hospitality industry is the second largest sector in Montana, with visitors contributing $3.7 billion in direct spending in 2019.[46] **As the remainder of this section demonstrates, film can be a significant driver of tourism; therefore, a larger catalog of popular productions that feature the State (which may be possible thanks to the MEDIA Act) ultimately can spur additional tourism activity in the future.**

[44] Kara Grau. 2017. *2017 Nonresident Visitation, Expenditures & Economic Impact Estimates*.
[45] Montana Governor's Office of Economic Development. 2019. *Montana Economic Development Report*.
[46] University of Montana. 2020. *Preliminary 2019 Nonresident Expenditures & Economic Impact Estimates*.



Glacier National Park – As Featured in Forrest Gump *and* The Shining. *Source: Upsplash (2020)*

There are a number of factors that influence an individual's decision to travel to a given location. But film-induced tourism has increasingly been viewed as an important influencer and travel motivator. Research has shown that films and television series can have a significant effect on creating attractions and boosting visitor numbers around the world. For example, one study found that productions provide memorable and long-lasting images and reach broader audiences than focused tourism marketing.[47] The National Brand Index has also reported that 40 percent of people would be 'very likely' to travel to places as a result of seeing the destinations while watching a film.[48]

Film Can Create Cultural Relevance.

In addition to attracting tourists, film provides an opportunity to highlight activities and industries that are important in Montana to a more global audience. In an interview with Dax Scheiffer, Director of Voices of Montana Tourism, he referenced the increased interest fly fishing in the State thanks to the cultural relevance that *A River Runs Through* produced for the activity. In this case, film served as an ambassador for an industry important to Montana

Similar to how films can be viewed as a valuable tool for product placement, they can also be a vehicle for promoting specific destinations. Tourism bureaus in other states and countries have reported increases in tourism after the release of a film or television series that was filmed in their jurisdiction. A study conducted by Oxford Economics investigating the economic impacts of film industry to the United Kingdom estimated that around one-tenth of UK tourism is inspired by films. Similarly, in New Mexico, total trips by tourists increased by over four percent due to visitors' familiarity with films produced in the State.[49]

[47] NZ Institute of Economic Research. 2002. *Scoping the Lasting Effects of the Lord of the Rings.*
[48] Pacific Business News. 2012. *Kaua'I Makes List of Top 10 Film Locations*.
[49] Southwest Planning & Marketing and CRC & Associates. 2008. *The Impact of Film Tourism on the State of New Mexico*.

Global Case Studies of Film-Induced Tourism

There is a growing body of research related to film tourism, and thus far it is evident that film and television can have a very positive impact on tourism visits (see Figure 4.4 below). In general, screened productions can help elevate the visibility of a region, which increases tourism.[50] When lively backdrops are used as the setting for popular productions, their prominence will result in an influx of tourists excited to visit landmarks highlighted in their favorite movies.

Domestically, there are many leading examples of localities that have experienced film induced tourism. Following the release of *Close Encounters of the Third Kind*, visits to the Devil's Tower, Wyoming increased by 75 percent.[51] In Iowa, *The Bridges of Madison County* and *Field of Dreams* brought notoriety to the area and its covered bridges and set pieces, attracting between 100,000 to 150,000 visitors every year.[52] Rayburn County, Georgia and the film *Deliverance* is a good example of the lasting impacts of film induced tourism. Released in 1972, it continues to attract tourists to Rayburn County 40 years on, bringing in $42 million in annual tourism related revenue.[53] Although these listed examples are specific to other locations, increased film activity in Montana could lead to similar outcomes with respect to film tourism.

Generally speaking, a surge in tourism benefits local economies in a number of a ways. One of the major benefits is that viewing locations can attract tourists year-round since visiting film locations can be done throughout the whole year.[54] Film and television productions also have the added benefit of having a wide socioeconomic appeal, potentially broadening the base of the visitor market.[55] One of the interesting aspects of film tourism is that it can be enduring, continuing to draw visitors year after year. One study found that although the peak of interest comes after a film is released, a 54 percent increase in visitation was evident at least five years later in the 12 films studied.[56]

[50] Simon Hudson and Brent Ritchie. 2014. *Promoting Destinations via Film Tourism: An Empirical Identification of Supporting Marketing Initiatives*.
[51] Ibid.
[52] PA Budget and Finance Committee. 2009. *Pennsylvania's Film Production Tax Credit and Industry Analysis.*
[53] Rich Phillips. 2012. *40 years later, 'Deliverance' still draws tourists, stereotypes.*
[54] Sue Beeton. 2004. *The More Things Change . . . A Legacy of Film-Induced Tourism*.
[55] Peter Schofield. 1996. *Cinematographic Images of a City: Alternative Heritage Tourism in Manchester*.
[56] Roger Riley. 1992. *Movies as Tourism Promotion: A 'Pull' Factor in a 'Push' Location*.

Figure 4.4: Film Tourism Impacts

Film or TV Series	Location	Impact on Visitor Numbers
Braveheart	Wallace Monument, Scotland	300% increase in visitors the year after release
Heartbeat	Goathland, North Yorkshire, England	Three times the number of normal visitors in 1991
Deliverance	Rayburn County, Georgia	20,000 film tourists a year, gross revenues $2 to 3M
Dances with Wolves	Fort Hayes, Kansas	25% increase compared with 7% for previous 4 years
Close Encounters of the 3rd Kind	Devils Tower, Wyoming	75% increase in 1975; 20% visit now because of the film
Thelma and Louise	Arches National Monument in Utah	19.1% increase in 1991
Field of Dreams	Iowa	35,000 visits in 1991, with steady increase every year
Dallas	Southfork Ranch, Dallas	500,000 visitors per year
The Lord of the Rings	New Zealand	10% increase every year from 1998 to 2003 (from UK)
Steel Magnolias	Louisiana	48% increase year after release
Last of the Mohicans	Chimney Rock Park, North Carolina	25% increase year after release
The Fugitive	Dillsboro, North Carolina	11% increase year after release
Little Women	Orchard House, Concord, Massachusetts	65% increase year after release
Bull Durham	Durham, North Carolina	25% increase in attendance year after release
Harry Potter	Various locations in U.K.	All locations saw an increase of 50% or more
Mission: Impossible 2	National parks in Sydney	200% increase in 2000
Gorillas in the Mist	Rwanda	20% increase in 1998
Crocodile Dundee	Australia	20.5% increase in U.S. visitors from 1981 to 1988
The Beach	Thailand	22% increase in youth market in 2000
All Creatures Great and Small	Yorkshire Dales	Generated £5M for Yorkshire Dales
To the Manor Born	Cricket St Thomas, Leisure Park, England	37% increase from 1978 to 1980
Middlemarch	Stamford, Lincolnshire, England	27% increase in 1994
Four Weddings and a Funeral	The Crown Hotel, Amersham, England	Fully booked for at least 3 years
Mrs. Brown	Osborne House, Isle of Wight, U.K	25% increase
Notting Hill	Kenwood House, England	10% increase in 1 month
Saving Private Ryan	Normandy, France	40% increase in American tourists
Sense and Sensibility	Saltram House, England	39% increase
Pride and Prejudice	Lyme Park in Cheshire, UK	150% increase in visitors
Cheers	Location in Boston	$7M in unpaid promotional advertising each year
Miami Vice	Miami	150% increase in German visitors from 1985 to 1988
Forrest Gump	Savannah, Georgia	7% increase in tourism
Troy	Canakkale, Turkey	73% increase in tourism
Captain Corellis Mandolin	Cephalonia, Greece	50% increase over 3 years

Source: Hudson and Ritchie (2014)

Film-Induced Tourism in Montana

Film tourism appears to play a significant role in influencing tourists' travel decisions in Montana. In 2014, the University of Montana conducted a tourist survey and found that over 82 percent of respondents have seen a production that has made them think about visiting Montana.[57] Many respondents cite that productions highlighting the attractiveness of an area (such as wildlife, scenery, and landscapes) have the most influence. When it comes to influencing travel decisions, documentaries were found to be the most influential productions, followed by films and television shows. The findings from that 2014 study are reflective of general national and international trends related to film-induced tourism.

The short action film ***Inside Eden's Gate*** was released in 2018 as a teaser of Ubisoft's game ***Far Cry 5***. Set in fictional Hope County, Montana, the film centers on a cult responsible for taking over the county. Although the story and setting are fictional, various local organizations worked together to tie the depicted recreational aspects to real recreation available in the State. The film and game showcase Montana's natural beauty, along with activities like fly fishing, hunting, and ATV riding.

This level of exposure to the greater gaming and film community serves as a benefit to Montana, which gets free publicity from the franchise. In addition, local communities have seen tangible economic benefits from this exposure and earned media. According to the Montana Department of Commerce, ***Inside Eden's Gate*** was shot in Anaconda and brought $300,000 to the City. Expenses included lodging, transportation, props, and local labor.

Like other states, Montana has also benefitted from the tourist attention that comes with film production, particularly from productions that highlight local scenery. In Montana, the most well-known example is *A River Runs Through It*, released in 1991. The film, which earned an Academy Award for best cinematography, brought romanticism to fly-fishing while showcasing the State's natural beauty. It catalyzed interest in the State of Montana and boosted the local economy with the subsequent increase from tourists and novice anglers.[58] The economic impact continued as the success of the film helped put Montana as a prime location spot for Hollywood movies in the 1990s.[59]

Other notable films showcasing Montana include *What Dreams May Come*, *Arrival*, *Hunt for Red October*, and *Jurassic Park*. Collectively, these films represent over $635 million in domestic box office sales.[60] The television series *Yellowstone* is also a recent addition to this catalogue of productions highlighting Montana's amenities and local scenery. While not all listed productions have been shot in Montana, their sheer reach grants the State additional opportunities to garner future tourism and production activity. **In the years following the MEDIA Act, the potential for increased film and television activity in the State could result in productions that further elevate Montana's profile nationally and internationally, resulting in greater tourist interest as well.**

[57] University of Montana Institute for Tourism and Recreation Research. 2014. *Survey: Travel Influence of Moving Pictures*.
[58] Vince Devlin. 2012. *20 years After the Film "A River Runs Through It," a River of Tourism Runs Through Montana*.
[59] Kayley Mendenhall. 2001. *'A River Runs Through It' Continues to Draw Tourists to Montana*.
[60] IMDB. 2020. *Box Office Mojo*.



Gallatin River – As Featured in A River Runs Through It. *Source: Montana Fish, Wildlife, & Parks (2017)*

4.4. Why This Matters

The benefits to local communities from the film and entertainment industry are considerable. When a production shoots on location, it brings jobs, revenue and related infrastructure development, providing an immediate boost to the local economy. Beyond these immediate impacts, productions that take place in Montana play a critical role in helping to shape the cultural image of the State. Following a successful on-screen production, tourism is often boosted which can further stimulate the local community and economy. Also drawn to the State are potential new residents or business that may seek to relocate, having been left with a positive impression on them through the imagery and places seen on the television and in the movies.

In addition to direct economic benefits, long term benefits include development and establishment of spin-off film production activities such as editing, sound

The television series *Yellowstone*, which began airing in 2018, uses the State as a backdrop and frequently showcases its natural beauty. Between 2017 and 2018, *Yellowstone* made over 2.2 billion online impressions from 650 news and magazine articles. Much of the media coverage discusses how the show succeeds in capturing Montana's landscapes and wildlife.

Positive social media and news coverage can have a significant impact on the local tourism industry by increasing the pool of potential visitors to the State. The wide reach of online impressions on positive media, much like film induced tourism, increases tourism through increased exposure.

production, creative and artistic activities, development of permanent facilities such as sound stages and studios, and industries related to independent filmmaking, documentaries, music videos, and interactive media production. Regions with thriving film activity also fuel a creative and culturally vibrant local economy, attracting additional interest in the area through capital investment and increased tourism. As an economic driver, the arts community provides thousands of jobs throughout the State, creating a diverse and resilient local economy.

5. Conclusion

This report provides an initial look at the economic impact of the MEDIA Act Tax Credit Program as well as the entire film industry in Montana. Because the program is still in its infancy, it is difficult to provide a return on investment at this stage. In particular, the broader catalytic impacts generated by film and the MEDIA Act may not be realized for a few more years. However, this report has demonstrated the ways in which film drives economic growth in the State's economy—providing out-of-state infusions of spending to small communities across Montana, supporting local residents with jobs on set, and potentially creating a virtuous cycle of attracting future economic activity such as generating additional tourism, spurring investments in film infrastructure, and supporting a strong ecosystem for Montana's arts and culture community.

Figure 5.1: Summary of Film Production Economic Activity in Montana

	Other MT Productions - Have Filmed	Certified Productions - Have Filmed	All Productions that Have Filmed	Certified Productions - Not Yet Filmed
Production Count	112	5	117	5
Total Economic Impact	$35.8	$11.9	$47.6	$25.9
Direct Jobs (FTE)	75	25	100	55
Total Compensation	$9.7	$2.6	$12.3	$5.9
Indirect/Induced Jobs (FTE)	135	45	180	95
Total Compensation	$4.0	$1.2	$5.3	$2.8
Total Tax Credits	-	$1.8	$1.8	$4.4

Econsult Solutions (2020)

Industry research into incentive programs as well as interviews with various stakeholders have revealed that, while early, the intended effect of the MEDIA Act Tax Credit Program is being achieved, with additional capital investment and planned production taking place within the State. It is anticipated that as producers become more knowledgeable about the Act and its benefits, more investment and activity will be generated. As detailed throughout this report, Montana is currently positioned to grow its film industry in a way that will be beneficial to all Montanans.

6. Appendix

6.1. List of All Productions in Montana January 2019-June 2020[61]

Production	Type	Location	Status
DPHHS	Commercial	Great Falls	Other MT Productions
State Fund	Commercial	Missoula	Other MT Productions
Cerveza Patagonia	Commercial	Missoula	Other MT Productions
Miu Miu	Commercial	Greenough/Bonner	Other MT Productions
Nike	Commercial	Arlee	Other MT Productions
Jynarque	Commercial	Missoula	Other MT Productions
Custer County	Commercial	Whitefish/Big Sky	Other MT Productions
Genesis	Commercial	Big Sky	Other MT Productions
Kia	Commercial	Melrose/Bannack	Certified, Have Filmed
US Census	Commercial	Browning	Other MT Productions
Edward Jones	Commercial	Great Falls	Other MT Productions
Healthcare Struggles	Commercial	Helena	Other MT Productions
Toyota	Commercial	Big Sky	Other MT Productions
Ford Snow Footage	Commercial	Big Sky	Other MT Productions
Airbnb	Commercial	Whitefish	Other MT Productions
Purina Mills	Commercial	Glacier NP	Other MT Productions
Blue Buffalo	Commercial	Livingston	Other MT Productions
Submittable / Zero To Five / Series of 3	Commercial	Missoula	Other MT Productions
Story First Creative	Commercial	Billings	Other MT Productions
Simpson Strong-Tie	Commercial	Billings	Other MT Productions
Gunner Kennels	Commercial	Bozeman	Other MT Productions
Go Fast Campers	Commercial	Bozeman	Other MT Productions
SITKA Gear	Commercial	Bozeman	Other MT Productions
Turner Classic Movies/Spain	Commercial	Livingston	Other MT Productions

[61] Note that this is not a comprehensive list and some very small productions may not have been identified in ESI's research.

Production	Type	Location	Status
C7	Documentaries	Missoula	Other MT Productions
The Light of Solitude	Documentaries	Butte	Other MT Productions
The Black Cowboy	Documentaries	N/A	Other MT Productions
Crabb Ranch	Documentaries	Choteau	Other MT Productions
Dave Grusin: Not Enough Time	Documentaries	McLeod	Other MT Productions
Grizzly Country	Documentaries	Bozeman	Other MT Productions
Rewind	Documentaries	Bozeman	Other MT Productions
Non Western	Documentaries	Ashland	Other MT Productions
American Prairie Reserve/Last Wild Places	Documentaries	Malta	Other MT Productions
Wild & Wool	Documentaries	Bozeman	Other MT Productions
Epic Yellowstone	Documentaries	Yellowstone	Other MT Productions
The House That Rob Built	Documentaries	Missoula	Other MT Productions
32 Below	Documentaries	Helmville	Other MT Productions
Blackfeet Boxing: Not Invisible	Documentaries	Browning	Other MT Productions
In This Together: We Are One	Documentaries	Fort Peck	Other MT Productions
Looking Forward From Yesterday	Documentaries	Harlem	Other MT Productions
Paradise	Documentaries	Livingston	Other MT Productions
Public Trust / Hal Herring Interviews	Documentaries	N/A	Other MT Productions
Through the Breaks	Documentaries	Missouri Breaks	Other MT Productions
When They Were Here	Documentaries	Browning/Polson	Other MT Productions
Landscapes of the Western Mind	Documentaries	White Sulpher Springs/Bozeman	Other MT Productions
I Am Like You	Independent Features	Bozeman	Other MT Productions
We Burn Like This	Independent Features	Billings/Butte	Other MT Productions
Two Eyes	Independent Features	Anaconda/Shelby/Nevada City/Hall/Phillipsburg/Ennis	Certified, Have Filmed
Cowboys	Independent Features	Kalispell	Other MT Productions
Trail of Justice Add't Photography	Independent Features	Hamilton/Anaconda	Other MT Productions
Hocked	Independent Features	Bozeman	Other MT Productions
3000 Miles 'til Christmas	Independent Features	Missoula/Hamilton/Butte/ Whitefish/Anaconda	Certified, Have Not Filmed

Production	Type	Location	Status
Zomsters	Independent Features	Kalispell	Certified, Have Not Filmed
Murder at Emigrant Gulch	Independent Features	Emigrant/Livingston/Red Lodge/Gardiner	Certified, Have Not Filmed
The Last Son of Issac LeMay	Independent Features	Yellowstone Film Ranch/Bannack State Park/Virginia City/Nevada City	Certified, Have Not Filmed
God's County	Independent Features	Bozeman/Livingston	Certified, Have Filmed
Weir Minerals	Industrial/Corporate	Nye	Other MT Productions
Kat Porco/Cystic Fibrosis	Industrial/Corporate	Red Lodge	Other MT Productions
ABF Wellness Week	Live Events	Emigrant	Other MT Productions
Yellowstone Live	Live Events	YNP	Other MT Productions
N/A Ag Live	Live Events	Bozeman	Other MT Productions
Yellowstone	Network Television	Darby/Helena	Certified, Have Filmed
Tyrannosaurus Rex	Network Television	Glasgow	Other MT Productions
Bullock Interview	Network Television	Billings	Other MT Productions
Yellowstone Forever	Online/Web Content	YNP/Bozeman/Gardiner	Other MT Productions
Pick, Flip & Drive	Online/Web Content	Great Falls	Other MT Productions
Sci Show	Online/Web Content	Missoula	Certified, Have Not Filmed
Randy Newberg / Fresh Tracks	Online/Web Content	N/A	Other MT Productions
Expedition Overland	Online/Web Content	Bozeman	Other MT Productions
Come And Get It	Online/Web Content	Bozeman	Other MT Productions
N/A Mex	Online/Web Content	Bozeman	Other MT Productions
Horse Rich Dirt Poor/Wildlife Society	Online/Web Content	Glendive	Other MT Productions
Steve Bullock for President	Political	Helena/Butte/Missoula/Ronan	Other MT Productions
Steve Bullock for President	Political	Missoula/Helena	Other MT Productions
Kathleen Williams for N/A	Political	Livingston	Other MT Productions
Whitney Williams for Governor	Political	Missoula/Philipsburg/Drummond	Other MT Productions
John Muse For US Senate	Political	Bozeman	Other MT Productions
Homestead	Short Films	Livingston	Other MT Productions
300 Savage	Short Films	N/A	Other MT Productions

Production	Type	Location	Status
The Long Way	Short Films	Missoula	Other MT Productions
Two or Three Things I Know About Edward Hopper	Short Films	Butte	Certified, Have Filmed
Talisman	Short Films	Livingston	Other MT Productions
Method	Short Films	Bozeman	Other MT Productions
Iniskim	Short Films	Browning	Other MT Productions
Stanley Products	Still Photography	Bozeman	Other MT Productions
David Yarrow Photo Shoot	Still Photography	Virginia City	Other MT Productions
Esquire Magazine Shoot	Still Photography	Hamilton	Other MT Productions
David Yarrow	Still Photography	Big Timber	Other MT Productions
Murdoch's Catalog Shoot	Still Photography	Bozeman	Other MT Productions
Seacat Studio Shoot	Still Photography	Bozeman	Other MT Productions
Yellowstone Still Shoot	Still Photography	Darby	Other MT Productions
Mountain Mommas/Sunrise Option	Television	Bozeman	Other MT Productions
Mountain Mommas/WI to MT	Television	Helena	Other MT Productions
Mountain Mommas/Grandparents from Germany	Television	Missoula	Other MT Productions
Mountain Mommas/Room to Roam	Television	Bozeman	Other MT Productions
Dream Home 2019 Winners	Television	Whitefish	Other MT Productions
Mountain Men/Season 8/Bus Stop Bandi	Television	Yaak	Other MT Productions
Mountain Men/Season 8/Tooth and Claw	Television	Yaak	Other MT Productions
Mountain Men/Season 8/All or Nothing	Television	Yaak	Other MT Productions
Mountain Men/Season 8/No Guts, No Glory	Television	Yaak	Other MT Productions
Mountain Men/Season 8/Breaking Point	Television	Yaak	Other MT Productions
Mountain Men/Season 8/Desperate Measures	Television	Yaak	Other MT Productions
Mountain Men/Season 8/The Long Haul	Television	Yaak	Other MT Productions
Mountain Men/Season 8/Final Farewell	Television	Yaak	Other MT Productions
Mountain Men/Season 8/Family First	Television	Yaak	Other MT Productions
Mountain Men/Season 8/Darkness Falls	Television	Yaak	Other MT Productions
Mountain Men/Season 8/Polar Vortex	Television	Yaak	Other MT Productions

Production	Type	Location	Status
Mountain Men/Season 8/Seize the Day	Television	Yaak	Other MT Productions
Mountain Men/Season 8/New Blood	Television	Yaak	Other MT Productions
Unnamed Nat History Doc	Television	YNP/Gardiner	Other MT Productions
Live PD/3 Episodes	Television	Missoula	Other MT Productions
Sesame Street / Big Bird's Road Trip	Television	Red Lodge	Other MT Productions
Max Baucus: US China Ambassador	Television	Belgrade	Other MT Productions
God Rush: Turin's Lost Mines 2	Television	Helena	Other MT Productions
Dinosaurs	Television	Glasgow	Other MT Productions
T-Rex Fossil Dig Story	Television	Jordan	Other MT Productions
Naked and Afraid	Television	N/A	Other MT Productions
Ghost Hunters	Television	Butte	Other MT Productions
Dr Chef TV Pilot	Television	Hamilton	Other MT Productions
State of the State Address Bullock	Television	Helena	Other MT Productions
Today's Wild West	Television	Miles City/Great Falls	Other MT Productions
Under the Big Sky	Television	N/A	Other MT Productions

Source: Montana Film Office (2020)

6.2. Interviews and Outreach with Montana Stakeholders

The ESI team conducted interviews with various Montana-based stakeholders in May-June 2020. We thank the following individuals for providing us with valuable insight and helping to contextualize the report's quantitative analysis.

Stakeholder	Business/Occupation
Jeri Rafter	Producer
Richard Gray	Producer; Owner of Yellowstone Film Ranch
Steve Grover	Producer; Owner of Montana Studios
Will Brewster	Photographer
Tyler Grutsch	Montana Video Production Rentals
JP Gabriel	Film Lites MT
Dax Scheiffer	Voices of Montana Tourism
Dina Hernandez	*Yellowstone*
Josef Lieck	*Two or Three Things I Know About Edward Hopper*
Elizabeth Miller	*God's Country*
Sam Chan	Kia Commercial
Travis Fine	*Two Eyes*

Source: Econsult Solutions (2020)

6.3. Methodology

Calculating the Footprint of the Film Industry in Montana

In order to arrive at estimated spending and employee compensation for film productions from 2019 to 2020 in Montana, we used various data sources since complete data were not available for every production. These include the following data sources:

1. Daily production spending for on-location productions from the Association of Film Commissioners International (AFCI). These daily spending amounts were normalized in 2020 dollars and applied to the appropriate production types (see Figure 6.1).
2. For certified productions that have not filmed, we used their estimated production budgets and employee compensation spending from their applications.
3. For certified productions that have filmed, we reached out directly to the producers to obtain their most of up to date spending and employee compensation.

When an estimated budget or direct data from the producer were not available, we applied the daily spending rate to the appropriate production types. This information was supplemented by spending patterns of comparable productions prior to 2019, which were data provided by the Montana Film Office and were independently researched, verified, and adjusted. This allowed us to calculate an average number of shoot days by production type in order to apply the daily production rate. However, it was assumed that this total figure does not reflect the subset of spending that occurred in Montana, so we used comparable spending patterns in order to take a proportion of the budget and adjust it further down to an estimated spending that occurred in Montana.

Figure 6.1: Daily Production Spending by Production Type (in $2020)

Type	Low	Medium	High
Feature Film (Studio)	-	$155,000	$322,400
Feature Film (Independent)	$37,200	$62,000	$124,000
TV Weekly Series	-	$204,600	$372,000
TV Movie	$43,400	$93,000	$155,000
TV Special	$43,400	$74,400	$124,000
Commercial	$31,000	$124,000	$186,000
Music Video	$37,200	$80,600	$136,400
Corporate/Industrial	$18,600	$31,000	$55,800
Documentary	$18,600	$31,000	$43,400
Still Photography	$18,600	$31,000	$43,400
Reality	$9,300	$31,000	$74,400
All others	$18,600	$31,000	$43,400

Source: Association of Film Commissioners International (2007)

6.4. Economic and Tax Revenue Impact Methodology

Economic impact estimates are generated by utilizing input-output models to translate an initial amount of direct economic activity into the total amount of economic activity that it supports, which includes multiple waves of spillover impacts generated by spending on goods and services and by spending of labor income by employees. This section summarizes the methodologies and tools used to construct, use, and interpret the input-output models needed to estimate this project's economic impact.

Input-Output Model Theory

In an inter-connected economy, every dollar spent generates two spillover impacts:

- First, some amount of the proportion of that expenditure that goes to the purchase of goods and services gets circulated back into an economy when those goods and services are purchased from local vendors. This represents what is called the "indirect effect," and reflects the fact that local purchases of goods and services support local vendors, who in turn require additional purchasing with their own set of vendors.

- Second, some amount of the proportion of that expenditure that goes to labor income gets circulated back into an economy when those employees spend some of their earnings on various goods and services. This represents what is called the "induced effect," and reflects the fact that some of those goods and services will be purchased from local vendors, further stimulating a local economy.

The role of input-output models is to determine the linkages across industries in order to model out the magnitude and composition of spillover impact to all industries of a dollar spent in any one industry. Thus, the total economic impact is the sum of its own direct economic footprint plus the indirect and induced effects generated by that direct footprint.

Input-Output Model Mechanics

To model the impacts resulting from the direct expenditures, Econsult Solutions, Inc. developed a customized economic impact model using the IMPLAN input/output modeling system. IMPLAN represents an industry standard approach to assess the economic and job creation impacts of economic development projects, the creation of new businesses, and public policy changes within its surrounding area. IMPLAN has developed a social accounting matrix (SAM) that accounts for the flow of commodities through economics. From this matrix, IMPLAN also determines the regional purchase coefficient (RPC), the proportion of local supply that satisfies local demand. These values not only establish the types of goods and services supported by an industry or institution, but also the level in which they are acquired locally. This assessment determines the multiplier basis for the local and regional models created in the IMPLAN modeling system. IMPLAN takes the multipliers and divides them into 536 industry categories in accordance to the North American Industrial Classification System (NAICS) codes.

The IMPLAN modeling system also allows for customization of its inputs which alters multiplier outputs. Where necessary, certain institutions may have different levels of demand for commodities. When this occurs, an "analysis-by-parts" (ABP) approach is taken. This allows the user to model the impacts of

direct economic activity related to an institution or industry with greater accuracy. Where inputs are unknown, IMPLAN is able to estimate other inputs based on the level of employment, earnings, or output by an industry or institution.

Employment and Employee Compensation Supported

IMPLAN generates job estimates based on the term "job-years", or how many jobs will be supported each year. For instance, if a construction project takes two years, and IMPLAN estimates there are 100 employees, or more correctly "job-years" supported, over two years, that represents 50 annual jobs. Additionally, these can be a mix of a full and part-time employment. Consequently, job creation could feature more part-time jobs than full-time jobs. To account for this, IMPLAN has a multiplier to covert annual jobs to full-time equivalent jobs.

Income to direct, indirect, and induced jobs is calculated as employee compensation. This includes wage and salary, all benefits (e.g., health, retirement) and payroll taxes (both sides of social security, unemployment taxes, etc.). Therefore, IMPLAN's measure of income estimates gross pay opposed to just strictly wages.

Tax Revenue Impact

The economic impacts in turn produce one-time or ongoing increases in various tax bases, which yield temporary or permanent increases in various tax revenues. To estimate these increases, ESI created a tax revenue impact model to translate total economic impacts into their commensurate tax revenue gains. These tax revenue gains only account for a subset of the total tax revenue generation that an institution or industry may have on the economy. ESI estimated the income and business tax revenue generated using data from Montana's FY2019 Comprehensive Annual Financial Report (CAFR). The effective income tax rate was used from the CAFR, along with historical business tax revenue generated in the State to arrive at estimated tax revenue impacts.

6.5. About Econsult Solutions, Inc.

This report was produced by Econsult Solutions, Inc. ("ESI"). ESI is a Philadelphia-based economic consulting firm that provides businesses and public policy makers with economic consulting services in urban economics, real estate economics, transportation, public infrastructure, development, public policy and finance, community and neighborhood development, planning, as well as expert witness services for litigation support. Its principals are nationally recognized experts in urban development, real estate, government and public policy, planning, transportation, non-profit management, business strategy and administration, as well as litigation and commercial damages. Staff members have outstanding professional and academic credentials, including active positions at the university level, wide experience at the highest levels of the public policy process and extensive consulting experience.

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