Proposed Birthplace of Rivers National Monument

The Economic Impacts of Designation

Cover photograph: Fall Color Along the Williams River by Thomas Fletcher.

Downstream Strategies
building capacity for sustainability

Cranberry Wilderness and Recreation Area

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THE ECONOMIC IMPACTS OF DESIGNATION

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EXECUTIVE SUMMARY

National monument designation is a special status bestowed upon federal lands possessing unique natural, cultural, or historic features, established either by an act of Congress or by presidential proclamation. National monuments vary from historic buildings to multimillion-acre landscapes in the West, and these units are managed by the United States Forest Service, National Park Service, Bureau of Land Management, or United States Fish and Wildlife Service. The Birthplace of Rivers would be the only national monument in West Virginia and the only large-scale monument in the East. There are over 100 national monuments across the United States, and the designation could ensure protection of this special area while highlighting the landscape's uniqueness on a national level. The monument would be managed by the United States Forest Service and would provide continued access for all currently permitted recreational activities, including hunting, fishing, and gathering. Through increased tourism and ecological restoration, national monument designations often create significant economic benefits for local and regional economies.

The proposed Birthplace of Rivers National Monument includes ecologically unique features and contains some of the most visited recreational destinations in West Virginia. Its diverse offering of recreational activities—which include hiking, mountain biking, scenic drives, hunting, and fishing—would enhance the area's marketing appeal.

Many studies have quantified the economic benefits resulting from national monument designations across the United States. Understanding these economic impacts can inform decision makers and the public about the designation process. This study focuses on the proposed Birthplace of Rivers National Monument and calculates the local economic benefits to the study area. The analysis first presents the current economic benefits of the proposed area as it is today; it then projects the potential benefits that would be realized following increased visitation from the national monument designation.

While final proposed boundaries are still to be determined, the area considered for national monument status includes the Cranberry Wilderness and would preserve up to 75,000 acres of additional national forest land. As such, the monument could total approximately 123,000 acres. This study calculated the present (2012) economic output of the proposed national monument area to be $10.2 million. The area supports 101 full-time jobs, total income exceeds $3.6 million, and state and local taxes amount to over a half-million dollars. We estimate that increased visitation resulting from national monument designation would generate an additional $4.3 million in economic output, for a total annual impact of $14.5 million for the study region. In addition, more than $200,000 in new state and local taxes would be generated from the designation, along with 42 new jobs and over $1.5 million in additional income.

TOTAL ECONOMIC IMPACTS FROM THE BIRTHPLACE OF RIVERS NATIONAL MONUMENT

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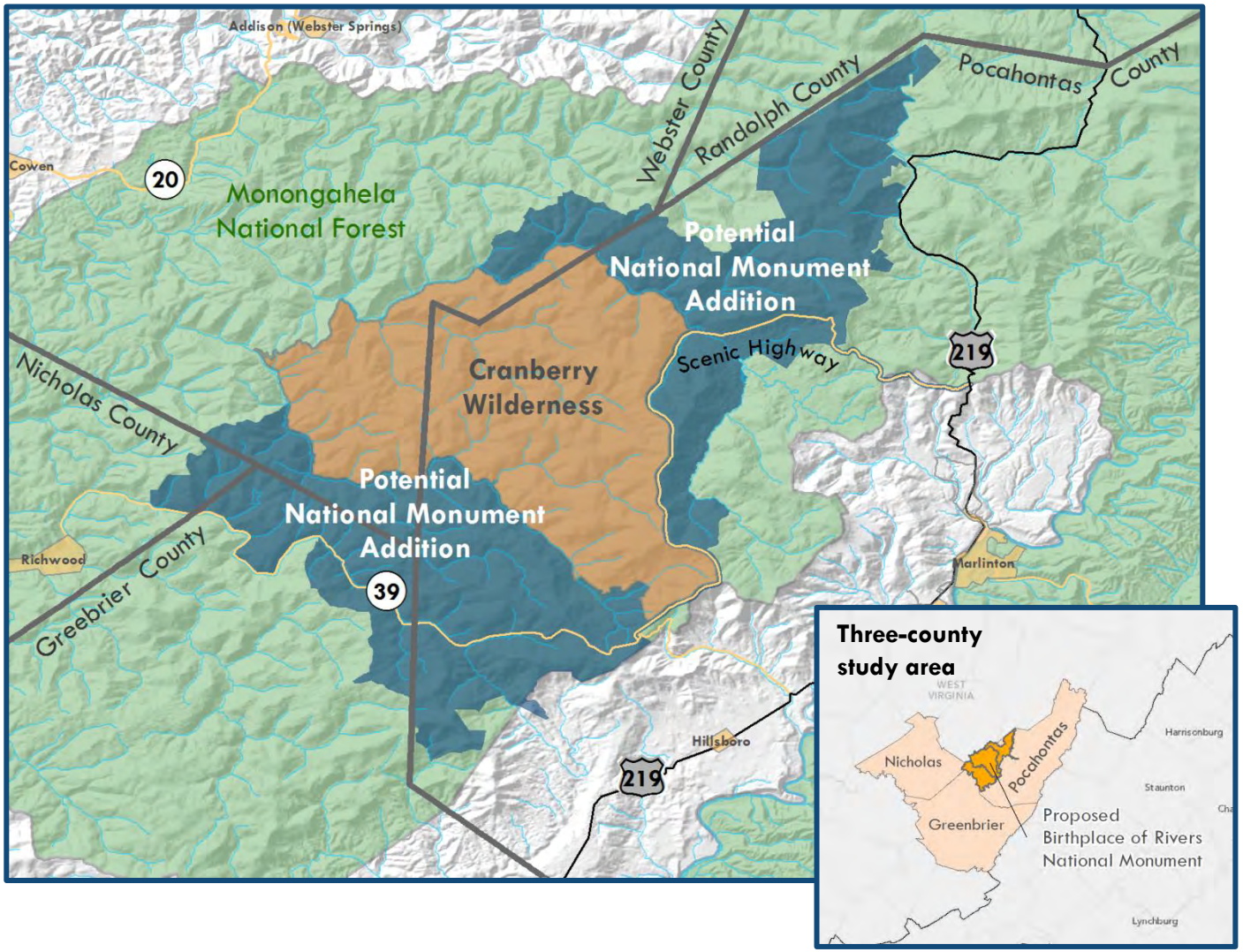
INTRODUCTION

The proposed Birthplace of Rivers National Monument (BRNM) is comprised of the existing Cranberry Wilderness Area and nearly 75,000 acres of additional national forest land surrounding the wilderness. Final proposed boundaries have yet to be decided, but a broad landscape has been identified for consideration by user groups and stakeholders. Overall, the proposed national monument could total up to 123,000 acres (Figure 1).

The BRNM effort is a stakeholder-driven initiative. Therefore, an understanding of the potential economic benefits resulting from this proposal is necessary for the public and for decision makers (Figure 5). Studies have shown national monument designation can result in a heightened level of exposure, which would result in increased rates of visitation and, thus, increased visitor spending in the region. Unique areas—such as the Cranberry Wilderness and surrounding national forest attractions—currently provide a significant level of economic benefits to the region; this study quantifies those benefits to

FIGURE 1: THE CRANBERRY WILDERNESS AND POTENTIAL NATIONAL MONUMENT ADDITIONS



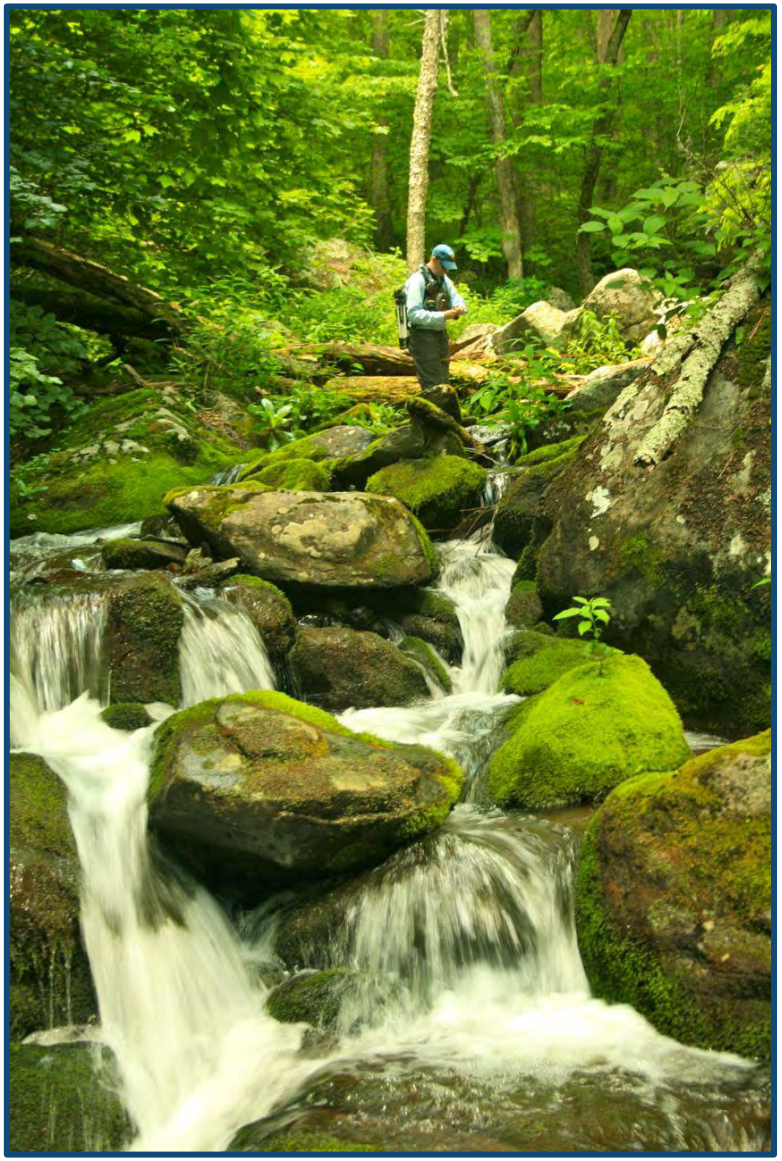
understand the value of these public lands.

Outside the Cranberry Wilderness, potential monument lands are managed under temporary administrative guidelines and are subject to future changes. However, in general, current management guidelines emphasize backcountry recreation or spruce and spruce-hardwood restoration, activities compatible with national monument status, and flexible management guidelines would accompany the designation to ensure that these important objectives would continue as intended uses of the monument.

This analysis estimates the current economic benefits of the proposed national monument area and then projects what an increase in visitation would mean in terms of local tourism, spending, and other economic benefits. The study area is defined as Pocahontas, Greenbrier, and Nicholas counties (Figure 1). While it is likely that the economic benefits of the BRNM would extend to a greater region, these counties were selected because each offers a gateway to the proposed BRNM, meaning that visitors are most likely to access the monument from these counties. Within these counties, gateway communities such as Marlinton, Richwood, and Lewisburg are poised to experience the greatest direct economic impact.

Current forest service management would continue with national monument designation, which includes backcountry recreation, hunting, fishing, and red spruce forest restoration.

Studies have revealed that designation changes increase visibility and attract people who would not otherwise consider visiting the area (1; 2). In this study, we reviewed datasets that exhibited this trend and specifically examined visitation statistics for public lands before and after national monument designations. For example, five Bureau of Land Management (BLM) areas that received national monument designations in 2000 and 2001 had an average increase in visitation of over 127%. In addition to visitation statistics, research has shown increased visitation trends across the country due to federal designations (3), supporting the conclusion that the BRNM could see comparable levels of increased visitation and tourism.



CURRENT CONDITIONS

Socioeconomic Measures

Based on the 2010 Census, 70,491 people live in Pocahontas, Greenbrier, and Nicholas counties. Over 60% of the region's workforce is employed in the service industry, which consists of industries such as retail, trade, finance, insurance, and real estate. The service sector is the fastest-growing sector in the region, growing by over 18% from 2001 to 2010 and increasing 126% overall since 1970. The service industry provided over 20,000 full- and part-time jobs in 2010, accounting for an estimated $750 million in personal income and representing a growth of 30% since 2000 (4). In short, the service industry is one of the fastest growing and most prominent employers and sources of income in the region.

Tourism dollars support county libraries, hospitals, local parks, arts, and emergency services. For example, $75,000 went to Pocahontas Memorial Hospital in 2012.

Visitation

The United States Forest Service (USFS) collects visitation data[1] based on yearly surveys of visitors to national forest areas. These surveys, combined with visitation center counters,[2] provide estimates of the number of visitors to the area.

By analyzing[3] the visitation data, we estimate current BRNM visitation at 118,687 visits for 2012. To compute spending estimates, visitation is broken down into day use and overnight use categories, as shown in Table 1. Day users were only in the area for the day. Overnight campground users camped at one of the developed campgrounds in the BRNM study area.[4] Overnight non-campground users stayed beyond the boundary of the BRNM but within 50 miles—at a developed or undeveloped campsite within the national forest or at other lodging.

TABLE 1: ANNUAL VISITATION, 2012

User type	Visitation	Percent of visitation
Day	54,284	46%
Overnight campground	32,870	28%
Overnight non-campground	31,533	27%
Total	**118,687**	

These visitation estimates, when multiplied by the average per-visitor spending, are used to calculate the total spending by visitors to the study region in 2012. In the following chapter, we break down the per-visitor expenditures used to calculate total spending associated with visitation to the proposed BRNM area.

[1] Visitation data were provided by Eric Sandeno of USFS.
[2] The Cranberry Wildness Visitor Center has a motion counter that records each visitor entry; for the other sites included in this analysis, visitor counts were generated using surveys and extrapolations from random visual counts.
[3] A technical methods document is available that describes how the visitation estimates were calculated.
[4] Campgrounds included Cranberry, Summit Lake, Cranberry River Restricted Use Area, and Williams River Restricted Use Area.

Spending

Visitor expenditures were extrapolated from a 2009 survey database provided by USFS for the Gauley, Greenbrier, Marlinton, and White Sulphur Ranger Districts of the Monongahela National Forest, which are in the three-county study area. The survey asked participants to estimate their party's total expenditures during their visits and to record the number of nights they spent within 50 miles of their destination—but within the National Forest— and the number of persons traveling in their vehicles. Using this information, combined with other data in the survey, we calculated the average daily or per-trip expenditures per person for each type of user (see Table 2). Nine expenditure types are determined using the survey information and provide more detail on how visitors spend their money.

TABLE 2: AVERAGE VISITOR EXPENDITURES

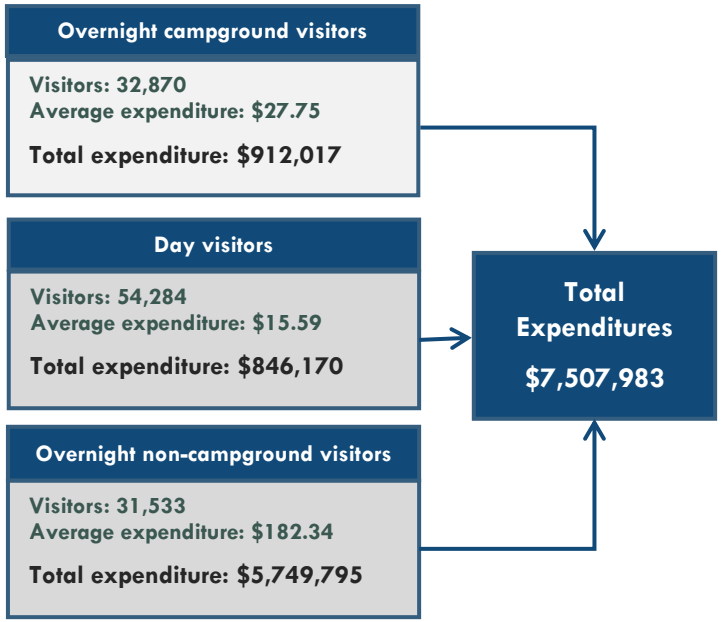
Expenditure type	Day (per day)	Overnight campground (per day)	Overnight non-campground (per trip)
Sporting goods	$0.00	$1.44	$3.83
Motel/hotel	$0.00	$0.00	$65.21
Gas/oil	$6.70	$7.35	$27.85
Recreation/entertainment	$2.70	$2.56	$12.36
Restaurant/bar	$2.75	$2.23	$37.69
Souvenirs/other	$0.67	$0.93	$12.62
Local transport	$0.00	$0.00	$0.00
Groceries	$2.11	$7.33	$14.30
Camping	$0.66	$5.90	$8.48
Total	**$15.59**	**$27.75**	**$182.34**

Expenditures for day and overnight campground users are calculated per day, while—due to data limitations—overnight non-campground user expenditures are based on a per-trip summary. All dollars values are calculated per person for each expenditure type.

The 2009 survey results were adjusted for inflation so that the average expenditures are reported in 2012 dollars. As would be expected, the overnight visitors that stayed at motels and ate out (non-campground) spent significantly more than the others.

Using the visitation estimates from the previous section, we estimated total expenditures by multiplying the number of visitors by the average expenditure by user type. We estimated approximately $7.5 million in spending in the BRNM area in 2012. Figure 2 breaks down the spending by each user type.

FIGURE 2: TOTAL EXPENDITURES



ECONOMIC IMPACTS

Current Economic Benefits

We calculated the local economic impact of visitors to the proposed BRNM area using the above baseline spending estimates. These benefits were calculated only for the three-county study area—Pocahontas, Greenbrier, and Nicholas counties—and include direct, indirect, and induced impacts. Direct impacts are the effects of money spent by visitors to the local area. Indirect impacts refer to money spent by those benefiting from the direct impacts, such as a storeowner buying groceries at the local supermarket. Induced impacts are changes in household spending resulting from increased payments to workers. By entering the total expenditure data into an input-output modeling program, we calculate the economic benefits to the three-county study area generated by current visitation to the BRNM area.

The current annual economic output of the proposed Birthplace of Rivers National Monument area is over $10.2 million.

FIGURE 3: ECONOMIC IMPACTS BY SPENDING CATEGORY

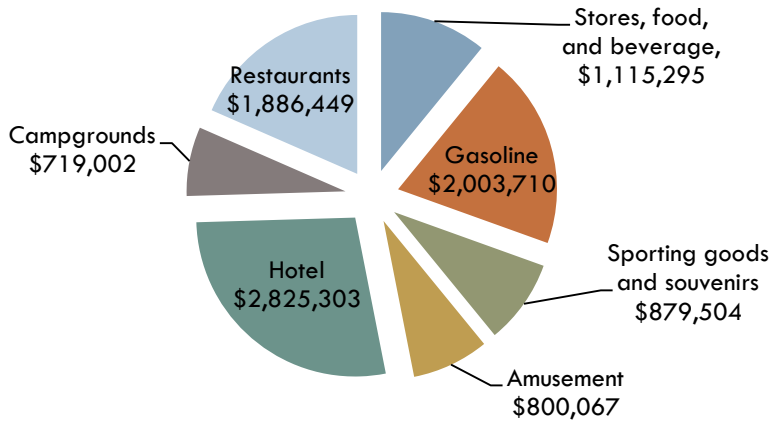


Figure 3 and Table 3 break down current impacts by category. As shown, total economic output exceeded $10.2 million in 2012, while employment amounted to 101 jobs.[5] Total income—including labor income, proprietor's income, and other property type income—totaled over $3.6 million, while state and local taxes generated due to visitation to the BRNM area totaled over a half-million dollars.

TABLE 3: CURRENT ECONOMIC BENEFITS

Impact	Employment	Economic output	Total income	State/local taxes
Direct	81	$7,508,000	$2,629,200	$439,500
Indirect	9	$1,129,200	$453,200	$47,500
Induced	11	$1,592,100	$586,000	$76,800
Total	**101**	**$10,229,300**	**$3,668,400**	**$563,800**

This model was developed using the IMPLAN (IMpact analysis for PLANning) modeling system, which is a widely used economic modeling software package that estimates the movement of products and revenue through the economy. In general, input-output models provide information on the current state of a regional economy in terms of jobs, labor income, the dollar value of total production, and the dollar value for value-added revenue.

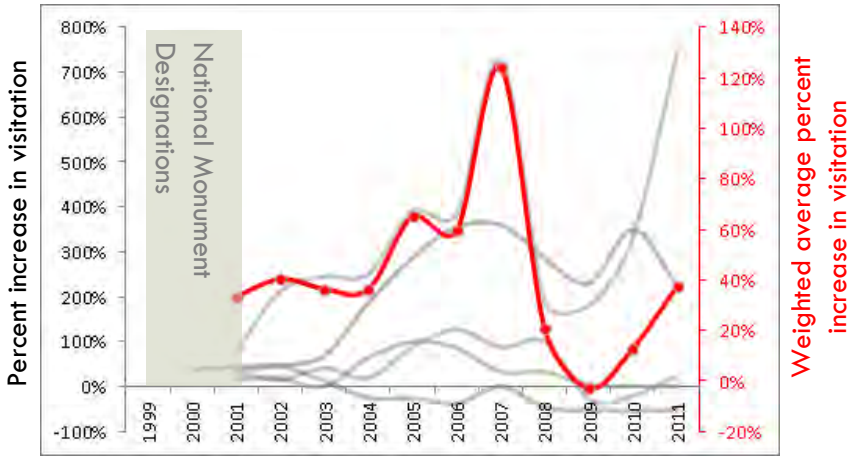
[5] The 101 jobs represent full-time equivalent jobs. As such, the total employment impact is likely higher assuming that many of the jobs may be part-time or seasonal jobs.

Economic Benefits from National Monument Designation

Post-designation visitation and spending increase

The increased visibility from a federal BRNM designation would undoubtedly increase the recognition and prominence of this unique natural area. This could have a substantial positive impact on both visitation and associated spending. To project this increase in visitation, we examined visitation data from public lands that were recently designated as national monuments.

FIGURE 4: VISITATION INCREASE OF PUBLIC LANDS POST-DESIGNATION



Pre- and post-designation trends are shown in Figure 4 for five[6] BLM lands designated as national monuments between 1999 and 2001. The post-designation percent increase in visitation (grey lines) is presented for the ten-year period following designation. The red line displays the weighted average of the percent increase per year for all five sites. Visitation changes were based on visitation with designation minus projected visitation without designation. Using these data, we calculated a weighted average visitation increase of 42% (above non-designation). This weighted average is used to project the future increase in visitation to the BRNM based on the proposed national monument designation. To justify this projected increase, several additional studies were reviewed that examined the impact of national monument destinations on visitation. One study concluded that areas would expect to see over a 100% increase in visitation over a three-year period (1). Another study showed a direct and quantifiable correlation between federal land designation and visitation growth (3). An analysis comparing counties in West Virginia before and after federal land designation, such as a wilderness area or national forest, highlighted the localized response to federal land.[7] The results showed higher per-capita gains in employment and income—+8.4% versus -3.1%—in counties with federal land designations.

Designation as a national monument could attract over 49,000 new visitors to the area, spending more than $3 million.

The 42% projected increase is applied to the present visitation estimates, resulting in an additional 49,919 annual visitors to the area, on average, based on BPRN designation.

TABLE 4: PROJECTED VISITATION AND EXPENDITURES

User type	Visitor increase	Expenditure increase
Day use	22,831	$355,891
Overnight campground	13,825	$383,585
Overnight non-campground	13,262	$2,418,306
Total	**49,919**	**$3,157,782**

[6] Canyons, Carrizo Plains, Kasha, Sonoran, and Upper Missouri River.

[7] This analysis was performed by Downstream Strategies and is available upon request in a technical brief.

Expenditures by these additional visitors would total almost $3.2 million, as shown in Table 4.

Additional post-designation economic impacts

Using the projected 42% visitation and expenditure increase shown in Table 4, we again used IMPLAN to calculate the additional economic benefits that national monument designation would have on the three-county area. As shown in Table 5, these benefits include a $4.3 million increase in economic output and the creation of 42 new jobs with earnings of over $1.5 million per year.[8] The monument designation would generate over $237,000 in new state and local taxes, providing additional revenue for state and local governments.

Over $1.5 million in additional income and an additional 42 jobs would be created as a result of designation.

The projected impact is based on only increased visitation and spending by visitors. Therefore, the projected impacts are considered conservative, and are in fact lower than those reported in most studies of this type.

TABLE 5: ADDITIONAL PROJECTED ECONOMIC BENEFITS FROM DESIGNATION

Impact	Employment	Economic output	Total income	State/local taxes
Direct	34	$3,157,800	$1,105,800	$184,900
Indirect	4	$475,000	$190,600	$20,000
Induced	5	$669,600	$246,500	$32,300
Total	**43**	**$4,302,400**	**$1,542,900**	**$237,200**

[8] The 42 new jobs represent full-time equivalent jobs. As such, the total employment impact would likely be higher assuming that many new jobs may be part-time or seasonal jobs.

SUMMARY

The economic impact of tourism in West Virginia includes $4.27 billion in tourism-related spending per year, which translates into 44,400 jobs with earnings of $988 million, and which provides $582 million in state and local taxes (5). In Pocahontas County (the county most directly impacted by the proposed designation), with its one million annual visitors, travel and tourism generate more jobs than any other industry in the county: one out of every four jobs. (6). The BRNM designation would give the Cranberry area national notoriety and exposure, increasing the numbers of visitors and visitation-related spending by an estimated 42%.

National Monument designation would increase the numbers of visitors and visitation-related spending by an estimated 42%.

As the only national monument on eastern USFS lands, BRNM would truly be a one-of-a-kind destination, giving the immediate region a competitive advantage over other tourism-based attractions. The area's close proximity to a large portion of the nation's population bodes well for increased visitation as the result of monument designation. While this expansion would pay off in terms of jobs, economic output, and taxes, other benefits would also be realized. These include the increased protection of six regionally significant watersheds (Cranberry, Elk, Gauley, Cherry, Greenbrier, and Williams); protected public access to lands for hunting, fishing, and other recreation activities; and the creation of a regional focal point and a legacy for generations.

The BRNM effort is a citizen and stakeholder-driven initiative. Therefore, an understanding of the potential economic benefits resulting from this proposal is necessary for the public and for decision makers (see Figure 5). The current and projected benefits described in this report provide both a snapshot and a "what-if" scenario, and inform the ongoing collaborative designation process.

FIGURE 5: ECONOMIC IMPACTS OF DESIGNATION

ABOUT THIS REPORT

Our research team, comprised of an environmental economist and analysts, prepared this report using widely accepted methods and models to derive the economic benefits of a specific natural resource management decision. It can be a challenge to find accessible and relevant data for this type of analysis, but given the data limitations, we were able to derive a conservative estimate of the economic impacts from the proposed designation of the Birthplace of Rivers National Monument. Our current estimates are based on visitation and spending data provided by the United States Forest Service. Our projected visitation increase is based on similar examples from across the country. Finally, this proposal is unique and represents a distinct opportunity for the Cranberry Wilderness area and the state of West Virginia.

ACKNOWLEDGEMENTS

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ABOUT DOWNSTREAM STRATEGIES

Downstream Strategies has more than 14 years of experience building capacity for sustainability through projects in our three main program areas—Water, Energy, and Land—via our unique toolkit, which includes Geographic Information Systems, Stakeholder Involvement and Perspectives, and Monitoring and Remediation. We combine sound interdisciplinary skills with a core belief in the importance of protecting the environment and linking economic development with natural resource stewardship. We provide science, research, and tools to organizations, businesses, and agencies and have considerable background in environmental science and policy. This report highlights our expertise in environmental economics. We have completed many projects related to the economic impacts of natural resource decisions. These projects include quantifying the economic benefits of acid mine drainage remediation on the North Branch of the Potomac River and the West Branch of the Susquehanna River, an economic analysis of wind energy development versus continued mountaintop coal mining, and an examination of the economic benefits of expanding local food production across West Virginia. These publications can be found on our website, www.downstreamstrategies.com/projects.html.

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