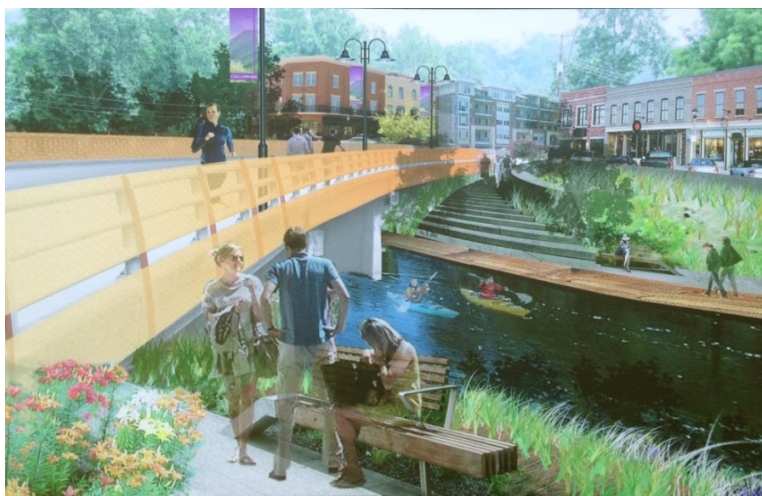


Economic Impacts of the Cullowhee River Corridor Development

Near-Term Benefits to Jackson County, North Carolina



May 2014

For:



By a Grant from:



Cullowhee Revitalization Endeavor, Inc. (CuRvE)
PO Box 2212, Cullowhee NC 28723

Contents

Highlights	3
Summary Findings	4
Project Description	6
Approach & Methodology	6
Key Terms	6
Other Potential Benefits and Impacts	7
Capturing Spending Leaving Jackson County	8
Event Spending	15
Attraction of Nonevent River-Recreation Participants	16
Construction: In-Stream Improvements	18
Appendix	19
Firm Description	23

Cullowhee Revitalization Endeavor, Inc. (CuRvE) is a community organization whose mission is to facilitate the beautification and revitalization of downtown Cullowhee from State Highway 107 to the former main entrance of the Western Carolina University campus. Founded in 2007, a number of external changes have facilitated community action. The 2010 census identified Cullowhee as the largest and fastest growing township in Jackson County. In 2011, NCDOT announced that it would replace the main bridge over the Tuckaseegee River in the heart of Cullowhee. In 2012, a county referendum determined that alcohol will now be sold and served in Jackson County.

In 2012, Cullowhee Revitalization Endeavor was awarded a grant from the Blue Ridge National Heritage Area to fund phase I of the Cullowhee River Corridor (CRC) project. CuRvE considers the Tuckaseegee River as Cullowhee's core natural asset and views this corridor as central to the revitalization of a multi-community area in the heart of Jackson County. As part of the CRC project, CuRvE has commissioned Syneva, Inc. to conduct an economic impact study of the 3 ½ mile length of the Tuckaseegee River as it flows through old Cullowhee. The target area begins above the Cullowhee dam at the Lena Davis Landing and, below the dam, to the proposed Cullowhee River Park, downstream to the Cullowhee Community Garden and adjacent South Painter Park, continuing along the Jackson County Greenway to the Locust Creek river access. The following study is the result of this effort.

Highlights

- In the near-term, the Cullowhee River Corridor Development will annually add \$1.2 million of new spending in Jackson County.
- This spending will support 16 local jobs each year; add \$375 thousand in income, raise total output by \$1 million, and generate \$145 thousand in annual tax revenues.
- The additional spending originates from three major activities; 1) capturing spending that is currently flowing out of the county, 2) attracting nonresident visitors to events, and 3) attracting nonresidents to participate in river-recreation activities.
- From a survey of Western Carolina University students, faculty and staff, it is estimated that more than \$4.1 million was spent outside the county on recreational activities that the Cullowhee River Corridor Development will offer. Local spending will increase by \$800,000 simply by capturing about 2 recreational trips for each participant that would have traveled outside the county.
- The impacts from likely event participation occurring in the near-term, along with visits by participants in river-recreation activities would lead to the attraction of more than \$421,000 in additional spending in the county each year.
- The one-time impact of proposed in-stream construction will support 15 local jobs over the course of a single year, and increases tax revenues by \$122,963.

Summary Findings

Development of the Cullowhee River Corridor is in its initial formative stages. Determining realistic impacts means focusing on likely outcomes in the near-term (within five years of completion). These near-term impacts will require some investments from various sources in order for the development to occur, but are clearly achievable under the current economic environment in Jackson County

In the near-term, the Cullowhee River Corridor Development will annually add \$1.2 million of new spending in Jackson County. This spending will support 16 local jobs each year; add \$375 thousand in income, raise total output by \$1 million, and generate \$145 thousand in annual tax revenues (Tables 1-2).

Table 1
Summary
Annual Near-Term
Economic Impacts of the Cullowhee River Corridor Development

	Employment	Income	Value Added	Output
Direct	13.3	\$295,664	\$436,379	\$757,674
Indirect	1.3	\$36,382	\$87,467	\$136,741
Induced	1.4	\$43,169	\$102,471	\$154,926
Total	16.0	\$375,216	\$626,316	\$1,049,341

Table 2
Economic Impacts of the Cullowhee River Corridor Development
Annual Tax Revenues Generated

	Tax Revenue
State/Local	\$71,178
Federal	\$74,070
Total	\$145,248

The top impacted industries by the Cullowhee River Corridor Development are primarily *service-related* businesses; lead by *restaurants, sporting goods* and *grocery stores* (Table 3).

The additional spending from the Cullowhee River Corridor Development originates from three major activities; 1) capturing spending that is currently flowing out of the county, 2) attracting nonresident visitors to events, and 3) attracting nonresidents to participate in nonevent river-recreation activities.

The results are based in part on converting a small number of trips that residents are making outside Jackson County to instead stay in the county to participate in activities that the Cullowhee River Corridor Development will offer. From a survey of Western Carolina University students, faculty and staff, it is estimated that more than \$4.1 million was spent outside the county on these recreational trips over the

last year. Local spending will increase by \$800,000 simply by capturing about 2 recreational trips for each participant that would have traveled outside the county.

Together, the impacts from likely event participation occurring in the near-term, along with attraction of participants in river-recreation activities would lead to increased annual spending of more than \$421,000 in the county.

Separately, the study also considered the impact of proposed in-stream construction; which will support 15 local jobs over the course of a year and increases tax revenues by \$122,963.

Table 3
Economic Impacts of the Cullowhee River Corridor Development
Top Impacted Businesses

Business	Jobs	Income	Output
Restaurants	6.9	\$145,010	\$383,988
Sporting Goods Stores	1.9	\$37,750	\$81,122
Grocery Stores	1.5	\$37,854	\$72,613
Accommodations & Lodging	1.0	\$23,027	\$99,997
Misc. Retailers	0.7	\$8,026	\$24,339
Repair & Maintenance (auto)	0.6	\$12,532	\$25,960
Clothing & Accessories Stores	0.4	\$9,181	\$24,827
Real Estate Services	0.4	\$2,040	\$79,152
Amusement & Entertainment	0.4	\$17,538	\$30,807
Department Stores	0.3	\$9,381	\$18,270
Administrative Services	0.3	\$8,519	\$18,519

Cullowhee River Corridor Development Description

The physical area of the project begins just above the Cullowhee dam at Lena Davis Landing and includes a proposed family-oriented River Park below the dam, the Cullowhee Community Garden and South Painter Park along the riverbank, the Jackson County Greenway (under construction), and Locust Creek, a river access point developed by Duke Energy. The 3.5-mile road and river corridor makes up the Cullowhee River Corridor (CRC). CRC development would enable: picnicking and relaxing, a children's playground, jogging, walking, biking, rafting, tubing, kayaking canoeing. It would also enable special events like canoe races, kayak rodeos, bike and running races, fishing festivals and parades.

Approach & Methodology

This analysis focuses on the near-term impacts (within five years of completion) resulting from the Cullowhee River Corridor Development. Because development is in its initial formative stages it is important to focus on realistic outcomes that don't require significant investments or time in order for the benefits to occur. At this point, gauging long term impacts, however potentially important, would largely be speculative, and of less value to current decision makers.

The study conservatively examined the impacts which are achievable under the current economic environment in Jackson County. Viewed broadly, this analysis might be seen as preliminary analysis in a longer development process; these impacts serving as the catalysts for future, more transformational changes to the area.

To measure economic impacts as they flow through Jackson County, the IMPLAN® system was employed. IMPLAN® is an input-output model that is comprised of software and regional data sets. The overriding objective of the model is to measure the full economic impact to a location as a result of a specific economic activity. The model is built upon a matrix detailing the input-output relationships among industries and consumers and tracks new spending through the local economy. The primary matrix structure is derived from the National Bureau of Economic Analysis's Benchmark Input-Output Model.

Key Terms

Term	Definition
Direct impact	The impact caused by the initial change or new purchases.
Indirect impact	The cycle of local spending as it works its way backward through the local supply chain due to the direct effect.
Induced impact	Spending of local households of the income earned from the initial and indirect spending.
Total impact	Sum of direct, indirect and induced impacts.
Employment	The annual average of monthly jobs in that industry.
Income	All forms of employment income, including wages, benefits and proprietor Income.
Value Added	The value of output less the value of intermediate consumption; it is a measure of contribution.
Output	The gross value of industry production (total sales or gross margins).

Other Potential Benefits and Impacts

Other studies of river parks and greenways document numerous associated benefits and impacts not specifically addressed in this analysis. For the Cullowhee River Corridor Development these benefits are reasonable outcomes in the longer term and worthy of study after the project's completion.

Brief summaries of other potential benefits and impacts:

- **Increase in Real Property Values**

Residential or commercial properties adjacent or within close proximity to parks and greenways can experience increases to their real property values as the parks and greenways are viewed as assets or benefits to the property owner. In a commercial setting this can lead to the clustering of firms seeking to provide services to potential customers. In this study, the expected spending by users of the Cullowhee River Corridor Development is concentrated in a handful of service-industries (restaurants, sporting goods, grocery stores). Sites adjacent to the development and its recreational users may lead to a price premium for those properties.

- **Increase in Retention and Attraction of Residents**

Natural amenities, such as rivers, parks and greenways are increasingly viewed as significant variables in location decisions made by residents and home seekers. This is particularly true for baby-boomer retirees or soon-to-be retirees. As Western North Carolina is already a beneficiary of this trend, the Cullowhee River Corridor Development may provide Jackson County a competitive advantage in location decisions.

- **Improved Health, Fitness and Wellness**

Parks and trails support fitness and wellness by providing convenient opportunities for exercise, such as walking, jogging, biking, swimming, and rafting. Increased physical fitness can lead to decreased public health care costs. The results of the online survey showed a significant expected increase in recreational participation rates upon completion of the Cullowhee River Corridor Development.

- **Improved Community Cohesion**

While difficult to quantify, but fairly easy to observe, a central meeting place or shared public space can serve as a focal point for a community; leading to increased social interaction, and improvements in community/neighborhood relations. The livability or social capital of an area can be strongly influenced by these physical amenities. The Cullowhee River Corridor Development will present a venue for community events and provide an increase in opportunities for community interaction.

Capturing Spending Leaving Jackson County

Spending by local residents is typically not included in an economic impact analysis. This is a reasonable approach, in that the analysis is attempting to measure the change as a result of *new* spending coming into the area, not just the redirection of existing spending.

Analysis of the Cullowhee River Corridor Development is a unique situation in which some spending by residents *is* included as part of the potential economic impact. This is because residents are currently leaving Jackson County to participate in recreational activities that the development will offer. The Cullowhee River Corridor Development can capture a portion of the resident spending that is currently leaking out of the County. In this sense, the captured spending can be viewed as new spending; dollars that normally would have been spent elsewhere can be spent locally.

To help measure resident spending that is currently leaving the County on recreational activities in which Cullowhee River Corridor Development will offer, an online survey of Western Carolina University students, faculty and staff was conducted by the University's Public Policy Institute in March 2014. From 9,834 surveys sent there was a response rate of 11.7 percent, garnering a total of 1,151 responses (see Appendix for a copy of the survey). Western Carolina University students, faculty and staff provide a good sample for analysis; they comprise a significant portion of the County's population and employment,¹ the campus is adjacent to the development, and the survey respondents' likely represent an important cohort of the development's future users.

While the ability to survey Western Carolina University students, faculty and staff provides an important quantifiable contribution to this study, it should be recognized that the eventual users of the development will likely be a broader mix from among Jackson County residents and nonresidents visitors.

The survey focused on two major recreational activity groupings; one pertaining to *water-based* activities, and one to *land-based* activities. Each activity group is associated to the planned offerings of the Cullowhee River Corridor Development; water-based activities to the river park, and land-based to greenways.

Water-Based Recreational Activities: Participation Outside Jackson County & Demand

Water-based recreational activities are swimming, fishing, boating, tubing and kayaking. Among those surveyed, over one-half said they had traveled *outside* Jackson County four or more times within the last 12 months for water-based recreational activities (Table 4). Less than a quarter of respondents said they

¹ According to the U.S. Census Bureau, the estimated 2013 total population of Jackson County is 40,919. The 2013 fall 2013 enrollment for Western Carolina University was 10,107, per the University of North Carolina.

In the second quarter of 2013, employment in "State Colleges and Universities" totaled 1,805 or 14.2 percent of Jackson County's total employment, according to the North Carolina Department of Commerce

had never traveled *outside* Jackson County within the last 12 months for a water-based recreational activity.

Table 4

*Survey question: Within the last twelve months, how often have you traveled **outside** Jackson County for the following activities: Swimming, fishing, boating, tubing, or kayaking?*

Response	Survey Responses (n=1,052)	Percent of Survey Responses
Never	225	21.4%
1-3 times	264	25.1%
4-11 times	259	24.6%
12+ times	304	28.9%

Using the response rates to conservatively extrapolate the activities to the full student body, faculty and staff would mean the total number of times traveled outside Jackson County for water-based recreational activities equaled 67,815 within the last 12 month, or roughly about 7.2 trips per active participant, annually. The survey did not address the size of traveling parties, and it is likely that many trips were composed of several persons in the same travel party.²

A review of 10 U.S. studies which surveyed per person non-local spending of participants in *fresh* water-based recreational activities shows a median spending of \$44.51 per day.³ Applying the figure to the total number of trips translates into total spending of \$3,018,428 within the last 12 month made by students, faculty and staff traveling outside Jackson County for water-based recreational activities.

To help gauge demand for the proposed river park, the survey included the question: *“Plans for Cullowhee include improved access to swimming, fishing, boating, tubing, and kayaking from new Tuckasegee River access points. With this new access, how many times would you likely stay **within** Jackson County to participate in these activities in a year?”*

Responses to the question showed a strong increase in expected participation compared to the rates of those traveling outside the County for similar activities (Table 5, Figure 1). Those responding *Never* dropped from 21.4 percent to 12.8 percent. The results indicate high demand for activities offered by a river park and demonstrate that participants are willing to alter their behavior with the park’s improvements.

² A review of literature surveying participants in river-based recreational activities indicates party sizes typically range from 2-4 persons. See APPENDIX for literature listing.

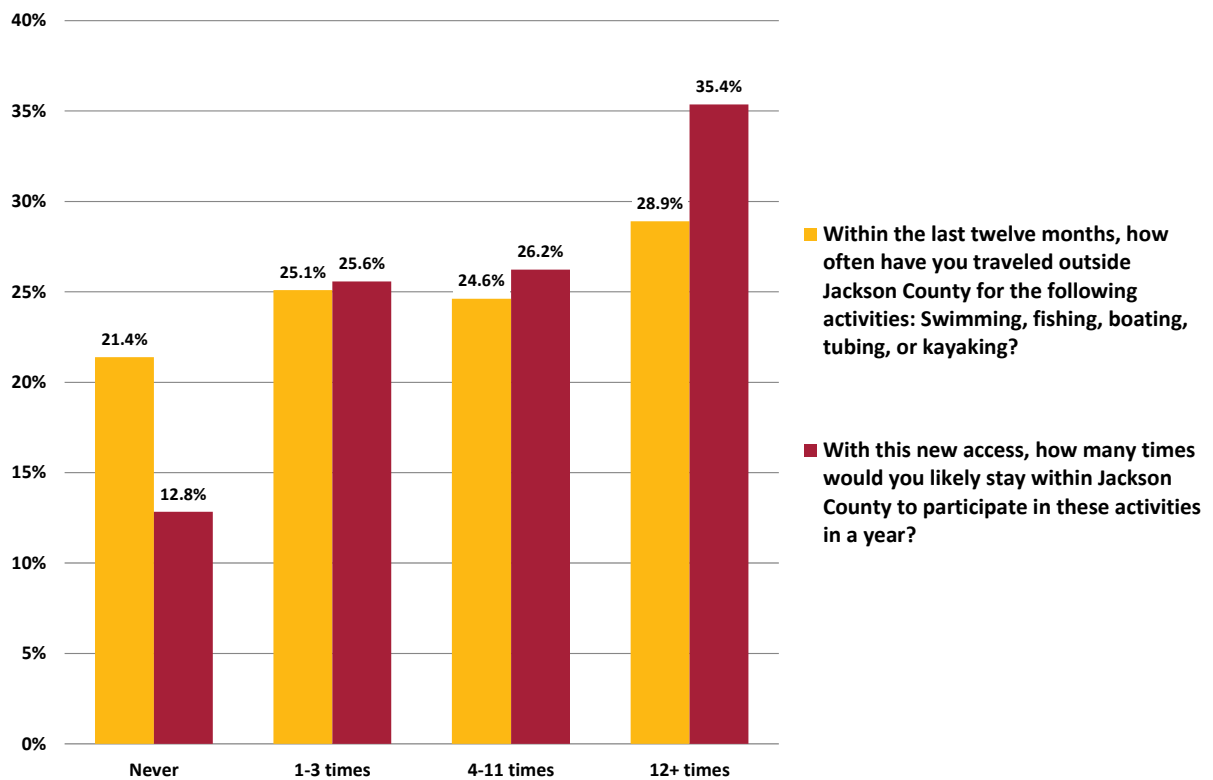
³ See APPENDIX for literature listing. See Table 16 for per day spending sources and methodology.

Table 5

Survey question: Plans for Cullowhee include improved access to swimming, fishing, boating, tubing, and kayaking from new Tuckasegee River access points. With this new access, how many times would you likely stay **within** Jackson County to participate in these activities in a year??

Response	Survey Responses (n=1,052)	Percent of Survey Responses
Never	135	12.8%
1-3 times	269	25.6%
4-11 times	276	26.2%
12+ times	372	35.4%

Figure 1
Survey Response Rates
Water-based Recreational Activities



Land-Based Recreational Activities: Participation Outside Jackson County & Demand

Land-Based recreational activities are jogging, walking or biking. Among those surveyed, 35 percent said they had traveled *outside* Jackson County four or more times within the last 12 months for land-based recreational activities (Table 6). Nearly 42 percent of respondents said they had never traveled *outside* Jackson County within the last 12 months for one of these recreational activities.

Using the response rates to conservatively extrapolate the activities to the full student body, faculty and staff would mean the total number of times traveled *outside* Jackson County for land-based recreational activities equaled 46,499 within the last 12 months, or roughly about 6.7 trips per active participant, annually. The survey did not address the size of traveling parties, and it is likely that many trips were composed of several persons in the same travel party.

To gauge spending of those traveling *outside* Jackson County for land-based recreational activities, an estimate of \$25.13 was used.⁴ Applying the figure to the total number of trips translates into total spending of \$1,168,517 within the last year made by students, faculty and staff traveling outside Jackson County for one of these land-based recreational activities.

Table 6

*Survey Question: Within the last twelve months, how often have you traveled **outside** Jackson County for the following activities: Jogging, walking or biking?*

Response	Survey Responses (n=1,047)	Percent of Survey Responses
Never	436	41.6%
1-3 times	239	22.8%
4-11 times	171	16.3%
12+ times	201	19.2%

To help gauge demand for land-based recreational activity participation, the survey included the question: *“Plans for Cullowhee include improved access to jogging, walking, and biking on the new greenway. With this new access, how many times would you likely stay **within** Jackson County to participate in these activities in a year?”*

Responses to the question showed an increase in expected participation compared to the rates of those traveling *outside* the County for similar activities (Table 7, Figure 2). Those responding *Never* dropped from 41.6 percent to 29.5 percent. Although not as strong as the responses to water-based activities, the results indicate increased demand for activities offered by the greenway, and demonstrates that participants are willing to alter their behavior with the improvements.

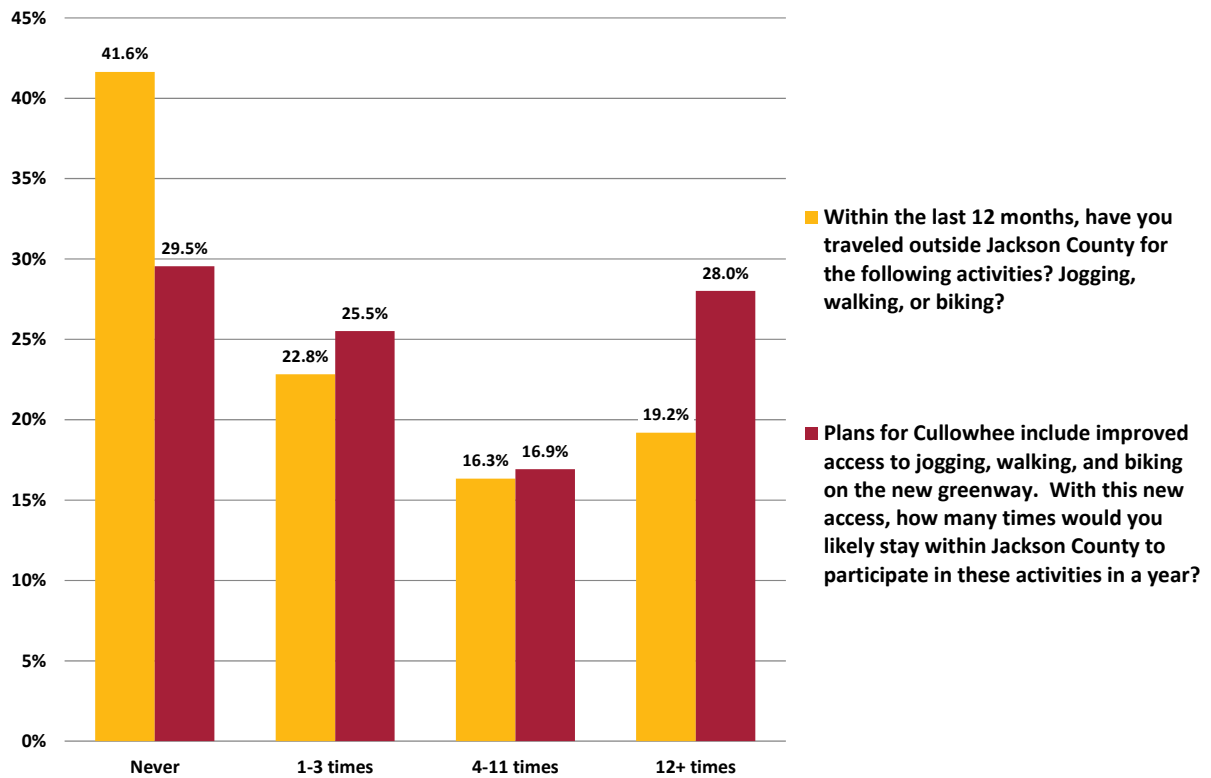
⁴ Survey of non-local visitors to 14 North Carolina State Parks. Over half (56.4%) of visitors participated in hiking on their visit. *Economic Contribution of Visitors To Selected North Carolina State Parks*. 2008 adjusted to 2012 dollars.

Table 7

Survey question: Plans for Cullowhee include improved access to jogging, walking, and biking on the new greenway. With this new access, how many times would you likely stay **within** Jackson County to participate in these activities in a year?

Response	Survey Responses (n=1,046)	Percent of Survey Responses
Never	309	29.5%
1-3 times	267	25.5%
4-11 times	177	16.9%
12+ times	293	28.0%

Figure 2
Survey Response Rates
Land-based Recreational Activities



Spending Captured by Cullowhee River Corridor Development

It is difficult to know for certain what portion of travel going outside Jackson County for water and land-based recreational activities will convert to staying in Jackson County with the improvements made by the Cullowhee River Corridor Development. Some changes will likely reflect on overall increase in

recreational activity participation.⁵ However, the survey results do confirm there are currently a significant number of *outside* trips being made for these recreational activities, and similarly a significant demand to stay in the County if access is improved. The convenience of the development and reduction in travel time and costs strongly indicate that people will convert some number of their trips traveling *outside* Jackson County to staying within Jackson County.

For the purposes of this analysis and to present a conservative baseline assessment for the Cullowhee River Corridor Development's impact, it is estimated that students, faculty and staff will convert *one-third* of their trips from *outside* Jackson County to *staying* within Jackson County to participate in similar recreational activities offered with the improvements. The conversion equals 22,379 trips *staying* in the county for water-based activities and translates into a realistic conversion rate of just 2.4 trips per person over a year. For land-based recreational activities, the one-third conversion translates into 15,345 trips *staying* in the county, or conversion of 2.2 trips per active participant.

Because spending behavior will be different when staying in Jackson County versus traveling outside, adjustments were made to the per day spending for each recreational activity.

A review of seven U.S. studies which surveyed per person spending by non-local and local participants in *fresh* water-based recreational activities shows spending by locals is on average 41 percent lower than spending by non-locals.⁶ This makes sense, with locals avoiding the costs of lodging and most transportation expenses. Adjusting the median nonlocal per person spending of \$44.51 per day to local spending, brings the per day figure to \$26.26. Thus the conversion of one-third of trips from traveling outside Jackson County to staying within Jackson County while participating in similar water-based recreational activities will result in an *increase* in local spending of \$587,688 annually (Figure 3). Additionally, by not spending for expenses such as lodging and transportation, students, faculty and staff retain (save) another \$408,393, which may eventually find its way into increased local spending.

A similar spending adjustment was made for those staying in Jackson County to participate in land-based recreational activities rather than traveling outside the county. All lodging and travel expenses were removed from the \$25.13 figure, bringing the estimated per day spending for those staying in Jackson County for land-based recreational activities to \$14.14.⁷ The conversion of one-third of trips from traveling outside Jackson County to staying within Jackson County while participating in similar land-based recreational activities will result in an *increase* in local spending of \$216,973 annually. Additionally, by not spending for expenses such as lodging and transportation, students, faculty and staff retain (save) another \$385,611, which may eventually find its way into increased local spending.

Together then, the conversion of one-third of trips by Western Carolina University students, faculty and staff from traveling *outside* Jackson County to *staying* in the county for water and land-based

⁵ While the overall improvements to the health of residents is a reasonable outcome of the Cullowhee River Corridor Development it is not included as one of the impacts measured; due to the difficulty in quantifying, and the desire to measure more distinct near-term impacts.

⁶ See APPENDIX for literature listing. See Table xx for per day spending sources and methodology.

⁷ Spending categories and daily amounts were specified in the study. *Economic Contribution of Visitors to Selected North Carolina State Parks*. North Carolina Department of Environmental and Natural Resources, 2008.

recreational activities will result in an *increase* in annual local spending of \$804,661. Additionally, by not incurring cost associated with outside travel, \$794,004 will be retained (saved), which may eventually find its way into increased local spending.

The economic impact of the captured spending will support 10.7 local jobs annually and raise income by \$237,728 (Table 8). Value added (contribution to the County’s economy) will increase by \$393,284 as a result of the additional spending. Total economic output is increased by \$641,994.

The increased spending will generate \$91,532 in additional annual tax revenues; \$44,371 to state/local agencies and \$91,532 to the Federal government (Table 9).

Figure 3
Potential Annual Spending Captured by Cullowhee River Corridor Development

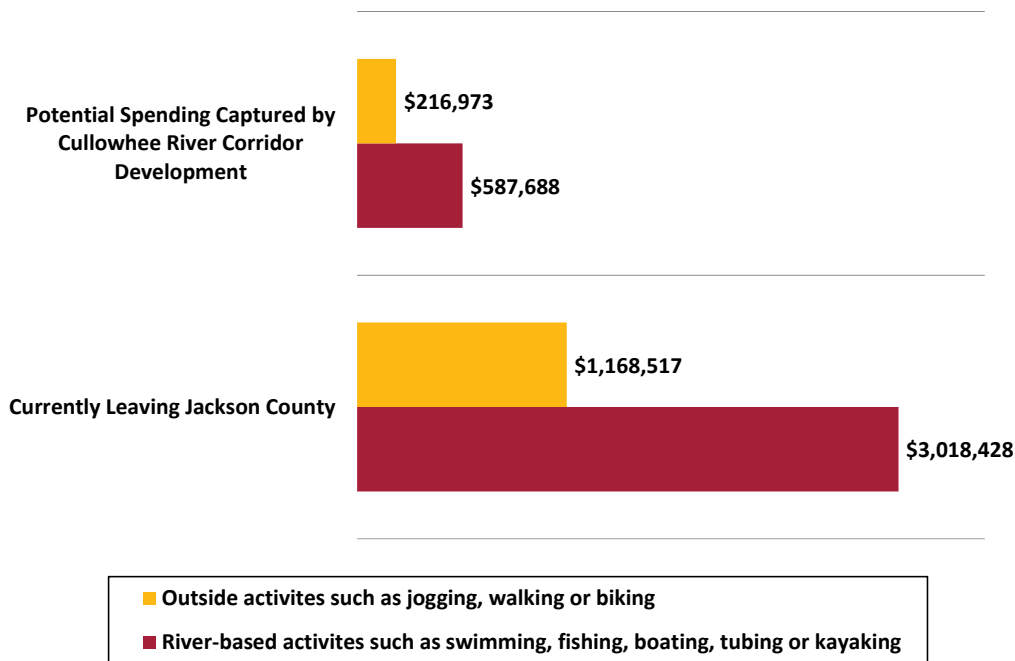


Table 8
Captured Spending
Economic Impact Summary

	Employment	Income	Value Added	Output
Direct	9.1	\$190,816	\$277,261	\$465,485
Indirect	0.7	\$19,594	\$51,166	\$78,451
Induced	0.9	\$27,318	\$64,857	\$98,058
Total	10.7	\$237,728	\$393,284	\$641,994

Table 9
Captured Spending
Annual Tax Revenues Generated

	Tax Revenues
State/Local	\$44,371
Federal	\$47,161
Total	\$91,532

Event Spending

Development of the Cullowhee River Corridor will open up opportunities for river-oriented outdoor events. River parks can host a wide range of outdoor events; festivals, fishing derbies, raft/canoe races, parades, rodeos, and slaloms, to name a few. Many river park events are held jointly along with running races or music festivals. For some U.S. communities, the river park has developed into the site of a signature, annual event drawing tens of thousands of visitors to the area over the course of several days.

A review of attendance at river park events shows that the theme, proximity to other attractions, event’s history, and size of potential tourist market, are just a few of the variables that help determine event participation. Western North Carolina is a popular and growing tourist market, and the area’s appeal for outside recreation is already established. River park events would likely appeal to many of the visitors already traveling to the area.

As noted earlier, this study aims to provide a conservative baseline for consideration of the development’s realistic near-term economic potential. There is nothing to indicate that in the long term the Cullowhee River Corridor won’t develop into a venue capable of hosting sizeable events and attracting many thousands of outsider visitors.

For a near-term estimate, the economic impact of 5,000 event visits within a single year is considered. Because the river park will likely host multiple events within a single year, each event visit is counted separately, in order to measure the per visit spending. Expected per visit spending is derived from the *2012 North Carolina Visitor Profile*, published by North Carolina Division of Tourism, Film and Sports Development in 2013.⁸ The types of events a river park can host are considerably broad, so the spending of a *typical* visitor statewide is a reasonable benchmark. The Outdoor Industry Association’s survey of water-recreation participants is used to gauge the likely mix of resident versus nonresident, and day-trip versus overnight visits; accordingly nonresidents will likely comprise 45.4 percent of the event’s attendees. Annual spending by nonresident event attendees will total \$339,516.

The additional economic activity generated by the spending by nonresidents attending river park events will support 4.5 jobs in Jackson County, while increasing income by \$115,351 (Table 10). Value added

⁸ *2012 North Carolina Visitor Profile*, North Carolina Division of Tourism, Film & Sports Development, 2013

(contribution to the County’s economy) will increase by \$195,239 as a result of the additional spending. Total economic output increases by \$343,840 on account of the spending.

The events will generate \$44,857 in additional annual tax revenues; \$22,381 to state/local agencies and \$22,476 to the Federal government (Table 11).

Table 10
Event Spending
Economic Impact Summary

	Employment	Income	Value Added	Output
Direct	3.5	\$87,822	\$132,921	\$246,745
Indirect	0.5	\$14,225	\$30,750	\$49,369
Induced	0.4	\$13,304	\$31,567	\$47,726
Total	4.5	\$115,351	\$195,239	\$343,840

Table 11
Event Spending
Annual Tax Revenues Generated

	Tax Revenues
State/Local	\$22,381
Federal	\$22,476
Total	\$44,857

Attraction of Nonevent River-Recreation Participants

More than six percent of Americans participated in paddling — totaling more than 19 million individuals. On average, each paddler took seven trips a year, contributing to 202 million annual paddling outings. In 2012, paddling participants made 202 million annual outings —in kayaks, rafts, canoes and standup paddle boards.⁹

Increased access, improved amenities and expected publicity resulting from development of the Cullowhee River Corridor will lead to the attraction of nonevent river-recreation participants.

Gauging the precise number of increased participants is difficult; however a review of 16 U.S. waterways showed that on average there are 410 paddlers per mile on established paddling destination waterways.¹⁰ Applying this factor to the 3.54 miles of the Tuckasegee River between the Lena Davis

⁹ Outdoor Foundation, *2013 Report on Paddlesports*

¹⁰ *The Northern Forest Canoe Trail: Economic Impacts and Implications For Sustainable Community Development*. Vermont Tourism Data Center, University of Vermont, 2007

Landing and Locust Creek Access translates into a conservative annual usage estimate of 1,450 additional paddlers (or paddler days) as a likely result of the river improvements.

According to the Outdoor Industry Association, the mix of nonevent river-recreation participants is composed of residents (54.6%), daytrip nonresident visitors (18.7%), and overnight nonresident visitors (26.6%).¹¹ The Outdoor Industry Association also publishes spending by river-recreation participants (kayaking, rafting, and canoeing); \$58.94 per nonresident daytrip visitor, and \$171.17 per overnight nonresident visitor. Overall then, the county should expect to receive \$82,046 in annual spending from the additional nonresidents river-recreation participants, outside of those attracted to the river for specific events.

The additional spending by nonresident river-recreation participants will increase income in Jackson County by \$22,136 and support 0.8 jobs over the year (Table 12). Total economic output will increase by \$63,507.

Annually, the spending will generate \$8,862 in additional tax revenues; \$4,428 to state/local governmental agencies and \$4,434 to Federal (Table 13).

Table 12
Nonevent River-Recreation Participants
Economic Impact Summary

	Employment	Income	Value Added	Output
Direct	0.7	\$17,026	\$26,196	\$45,444
Indirect	0.1	\$2,563	\$5,551	\$8,922
Induced	0.1	\$2,547	\$6,047	\$9,142
Total	0.8	\$22,136	\$37,794	\$63,507

Table 13
Nonevent River-Recreation Participants
Annual Tax Revenues Generated

	Tax Revenues
State/Local	\$4,428
Federal	\$4,434
Total	\$8,862

¹¹ *The Economic Contributions of Outdoor Recreation: Technical Report on Methods and Findings*. Outdoor Industry Association, 2013

Construction: In-Stream Improvements

Estimates for proposed in-stream improvements total \$1,605,285,¹² which also include limited shelter and parking enhancements. On-site construction activity is expected to be complete within one year and resulting impacts will occur in that single year period.

Adjusting for outside engineering expenses, the improvements will support a total of 15.3 jobs in Jackson County and increase local income by slightly more than one-half million (Table 14). The construction itself will support 10.8 jobs directly, while the increased economic activity in the local economy will support an additional 4.5 jobs. Value added (contribution to the County's economy) will increase by \$741,211 as a result of the in-stream improvements. Total economic output will increase by \$1,953,047 in the county.

The construction will generate \$122,963 in additional tax revenue; \$42,690 to state/local agencies and \$80,273 to Federal (Table 15).

Table 14
In-Stream Improvements
Economic Impact Summary

	Employment	Income	Value Added	Output
Direct	10.8	\$364,339	\$441,418	\$1,478,385
Indirect	2.5	\$83,397	\$160,159	\$263,550
Induced	2.0	\$58,939	\$139,634	\$211,112
Total	15.3	\$506,676	\$741,211	\$1,953,047

Table 15
In-Stream Improvements
Annual Tax Revenues Generated

	Tax Revenues
State/Local	\$42,690
Federal	\$80,273
Total	\$122,963

¹² S2O Design and Engineering, Lyons, CO, March 2014

Appendix

Table 16
Spending Estimates & Sources

Application	Per Day Spending (adjusted to 2012 dollars)	Source
Residents of Jackson County traveling outside the county to participate in recreational river/water-based activities.	\$44.51	Survey of 10 publications documenting spending for recreational river/water-based activities (see Appendix).
Residents of Jackson County participating in river/water-based activities in the county.	\$26.26	Survey of 10 publications documenting spending for recreational river-based activities (see Appendix), Adjusted for resident-only spending (less lodging and travel expenditures).
Residents of Jackson County traveling outside the county to participate in recreational jogging, walking or biking.	\$25.13	Survey of non-local visitors to 14 North Carolina State Parks. Over half (56.4%) of visitors participated in hiking on their visit.
Residents of Jackson County participating in recreational jogging, walking or biking in the county.	\$14.14	Survey of non-local visitors to 14 North Carolina State Parks. Over half (56.4%) of visitors participated in hiking on their visit. Adjusted for resident-only spending (less lodging and travel expenditures)
Estimated spending by nonresident attendees to river-park events	\$97.89 nonresident daytrip visitor, \$186.21 overnight nonresident visitor	2012 North Carolina Visitor Profile, North Carolina Division of Tourism, Film and Sports Development, 2013
Nonevent river-recreation participants	\$58.94 nonresident daytrip visitor, \$171.17 overnight nonresident visitor	Survey of participants in water-based recreation (kayaking, rafting, and canoeing). Outdoor Industry Association, 2012

Literature Reviewed

*Used in construction of spending composites.

2012 North Carolina Visitor Profile. North Carolina Division of Tourism, Film & Sports Development, 2013*

Berard, Dave. *The Economic Impacts of Active Silent Sports Enthusiasts: A Case Study from Northern Wisconsin*. University of Wisconsin Department of Urban and Regional Planning 2014*

Beedle, Jennifer. *2008 Paddle Tourism Study*, North Carolina State University, Parks, Recreation and Tourism, 2008*

Bowker, J.M. *The Waterway at New River State Park: An Assessment of User Demographics, Preferences, and Economics*. Virginia Department of Conservation and Recreation, 2004 *

Greenwood, Jerusha B. *Economic Contribution of Visitors to Selected North Carolina State Parks*. North Carolina Department of Environmental and Natural Resources, 2008*

Hagenstad, Marca, Jim Henderson, Robert S. Raucher, Stratus Consulting. *Preliminary Evaluation of the Beneficial Value of Waters Diverted in the Clear Creek Whitewater Park in the City of Golden*. Boulder CO, 2000

ICF Macro, Inc. *2012 Pennsylvania Recreational Water Trails Economic Impact Study A Four-Trail Case Study*, 2012 *

Johnson, Lindsay. *Case Studies of Water Trail Impacts on Rural Communities*, University of Oregon, 2002

Lindsey, Greg. *Property Values, Recreation Values, and Urban Greenways*. Journal of Park and Recreation Administration, Fall 2004

Nadel, Rebecca Ellen. *Economic Impacts Of Parks, Rivers, Trails And Greenways*. School of Natural Resources and Environment at the University of Michigan, 2005

Otto, Daniel. *Economic Impacts of River Trail Recreation in Iowa*. Iowa State University, 2012 *

Pennsylvania Economy League, Inc. *Understanding the Economic Value of Schuylkill River Park*. Philadelphia, PA, 1997

Pollock, Noah. *The Northern Forest Canoe Trail: Economic Impacts And Implications For Sustainable Community Development*. Vermont Tourism Data Center, University of Vermont, 2007*

Responsive Management and Southwick Associates. *The Economic Impact of Mountain Troutfishing in North Carolina*. North Carolina Wildlife Resources Commission, 2009 *

RPI Consulting. *Economic Impacts Of Whitewater Recreation City Of Durango, Colorado*, 2006 *

Sage Policy Group. *The Economic Contributions of the Chester River*, Chester River Association, 2012

Southwick Associates. *The Economic Contributions of Outdoor Recreation: Technical Report on Methods and Findings*. Outdoor Industry Association, 2013*

Cullowhee River Corridor

(Cullowhee Dam to NC 107)

Changes are coming to Cullowhee.

A new river access point at Locust Creek, just upstream of the intersection with NC 107, is complete. In the spring, work will begin on a pedestrian bridge that will cross the river from Locust Creek to link to the Jackson County Greenway. The Greenway winds along the river and will eventually link to South Painter Park and the Cullowhee Community Garden. In 2014, the Tuckaseegee River Bridge in downtown Cullowhee will be replaced with a new bridge with sidewalks and a bike lane that will be linked by sidewalks to the university. A proposed river park upstream and downstream of the bridge will provide a site for fishing, swimming, boating, whitewater boating, tubing, and picnicking.

Cullowhee Revitalization Endeavor (CuRVE), a community organization, is soliciting your opinion about these changes to the Cullowhee community. Your involvement in this project involves answering 10 general questions about your activities in the Cullowhee area. Your participation is voluntary. You may withdraw at any time or decline to answer any questions you choose. Your responses will be confidential and will be identified only by a respondent number assigned to your answers. There are no foreseeable risks to you for participating in this study. If you have any questions or concerns about your treatment as a participant in this study, you can reach the Chair of the Western Carolina University Institutional Review Board through WCU's Office of Research Administration at 828-227-7212.

1. Within the last 12 months, how often have you traveled along Old Cullowhee Road?

- 1 - 3
- 4 - 11
- 12+ times
- Never

2. Within the last 12 months, how often have you used the current businesses on Old Cullowhee Road?

- 1 - 3
- 4 - 11
- 12+ times
- Never

3. Within the last 12 months, have you traveled **outside Jackson County** for the following activities?

Jogging, walking, or biking?

- 1 - 3
- 4 - 11
- 12+ times
- Never

Swimming, fishing, boating, tubing, or kayaking?

- 1 - 3
- 4 - 11

12+ times

Never

4. If new businesses developed along Old Cullowhee Road, how often would use such businesses each year?

1 - 3

4 - 11

12+ times

Never

5. Plans for Cullowhee include improved access to **jogging, walking, and biking** on the new greenway. With this new access, how many times would you likely stay **within Jackson County** to participate in these activities in a year?

1 - 3

4 - 11

12+ times

Never

6. Plans for Cullowhee include improved access to **swimming, fishing, boating, tubing, and kayaking** from new Tuckasegee River access points. With this new access, how many times would you likely stay **within Jackson County** to participate in these activities in a year?

1 - 3

4 - 11

12+ times

Never

7. Where do you live? in Jackson County outside Jackson County

7b. What is your mailing zip code? _____

8. What is your status at WCU?

WCU student

WCU staff or faculty

Not affiliated with WCU

9. In what year were you born? _____

10. Do you have any children under age 18?

Yes

No

If you are interested in working with Cullowhee Revitalization Endeavor (CuRvE), please send an email to CullowheeRevitalization@gmail.com

Please return this survey to: CuRvE, PO Box 2212, Cullowhee NC 28723

Firm Profile

SYNEVA Economics LLC is a private consultancy whose expertise is assisting public and private decision makers with local and regional economic analysis. SYNEVA Economic LLC's value is providing clear and insightful information to help clients make knowledgeable, efficient and effective decisions.

Recent projects include economic impact analyses for major infrastructure projects, airports, industry relocations, and residential and commercial developments. The firm has conducted industry target and cluster evaluations for communities in 20 states. SYNEVA Economics has provided workforce assessments across Georgia, and Florida, site selection evaluations for food manufacturers and distribution centers, plus conducted dozens of community assessments across the U.S.

For complete listing of projects and current activities visit www.syneva.com.

Contact Information:

Tom Tveidt
Research Economist
tom@syneva.com
828.734.5021

SYNEVA Economics, LLC
PO Box 885
Asheville NC 28802
www.syneva.com

SYNEVA Economics, LLC has prepared this report for the sole use of the Client. This report may not be relied upon by any other party without express written agreement. SYNEVA Economics, LLC has exercised due and customary care in conducting this analysis, but has not independently verified information provided by others. No other warranty, express or implied is made in relation to the conduct of the Client or the contents of the analysis. SYNEVA Economics, LLC assumes no liability for any loss resulting from errors, omissions, or misrepresentations made by others. Any findings stated in this report are based on circumstances and facts as they existed at the time the work was performed. Any changes in circumstances and facts upon which this report is based may adversely affect the finding contained in this report.