

***Increasing Rural Jobs and Income in the North Cascades:
The Economic Impact of the American Alps Legacy Project***

A Report Prepared for

**North Cascades Conservation Council
Skagit Environmental Endowment Commission**

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Executive Summary

I. Current Economic Conditions in the North Cascades and the Economic Role of the North Cascades National Park

The North Cascades National Park (NCNP) protects a rugged mountainous area in northwestern Washington. This area has long been called the “American Alps” because of its spectacular peaks and many glaciers and snowfields. This is a relatively new national park, having been established in 1968. The national park is managed in conjunction with two related areas, the Ross Lake National Recreation Area (RLNRA) and the Lake Chelan National Recreation Area. Together they are often referred to as the North Cascades National Park Complex (NCNP Complex).

The first part of this report looks at the local economic context in which these national park units are embedded and estimates the impact they are having on that local economy. The report focuses on two of the three national park units, NCNP itself and RLNRA.

The available data suggests that employment and income opportunities within the small towns and rural areas on the west side of the park (Concrete, Rockport, Marblemount, and Newhalem) are limited and many residents commute out of the area for employment. On the east side of the park, in the Methow Valley towns of Twisp, Winthrop, and Mazama, there is a more diverse and complete local economy compared to communities on the west side of the park in the Skagit Valley.

Part of the difference between the Methow and Skagit sides of the park is the relative isolation of the Methow Valley, forcing it to provide a broader range of local goods and services. The upper Skagit Valley, in contrast, is within commuting distance of the metropolitan I-5 corridor stretching from Mount Vernon to Bellingham, providing a broad range of suppliers of goods and services within relatively brief travel times.

With some exceptions, the small towns and rural areas surrounding NCNP and RLNRA have experienced significant economic vitality with population, income, and employment rising as fast as or faster than the state of Washington as a whole. The number and range of business firms *within* the Skagit Valley communities, however, has remained relatively limited.

The level of visitation to NCNP itself has been quite low, around 20,000. Most of the visitation to the NCNP Complex is associated with RLNRA, where annual visitation has been about 280,000. This is largely explained by the fact that no paved roads provide access to NCNP itself. State Route 20 does not take visitors to the park, only to RLNRA.

The economic impact associated with both the expenditures of park visitors and National Park Service expenditures is significant to the small towns and rural areas

surrounding the park, but not a dominant source of employment and income. It is the source of five to ten percent of local jobs and income. See Table ES-1.

Table ES-1

Total Current Economic Impact of North Cascades NP and Ross Lake NRA on the Local Economy				
Geographic Area and Type of Spending	Local Economic Impacts Including Multiplier Effects			
	Sales	Jobs	Personal Income	Value Added
Rural Area Adjacent to Park				
Visitor Spending (Mt. Rainier NP pattern)	\$ 9,321,000	177	\$ 3,428,000	\$ 5,147,000
National Park Service Spending	\$ 5,861,561	180	\$ 7,679,000	\$ 8,772,634
Total	\$ 15,182,561	356	\$ 11,107,000	\$ 13,919,634
Rural Area and Metro I-5 Corridor				
Visitor Spending (Mt. Rainier NP pattern)	\$ 10,574,000	177	\$ 3,906,000	\$ 5,907,000
National Park Service Spending	\$ 9,558,000	242	\$ 10,666,000	\$ 12,467,000
Total	\$ 20,132,000	419	\$ 14,572,000	\$ 18,374,000

Source: MGM2 and MGM2 Operate models. See main body of the report.

The local economic impacts on the larger regional economy that includes the metropolitan I-5 corridor, while larger in absolute terms, are very small in relative terms, representing a few tenths of one percent of total economic activity.

II. Employment and Income Impacts of an Expanded North Cascades National Park and Expanded Park Visitor Amenities

The visitation levels for North Cascades National Park (NCNP) and Ross Lake National Recreation Area (RLNRA) are unusually low given the spectacular beauty and size of these national park units, and their proximity to several large metropolitan areas in the United States and Canada. For example, Olympic National Park, which draws on the same metropolitan areas that NCNP does, had over ten times as many visitors as the combined visitors to NCNP and RLNRA. If the national park component is considered by itself, i.e. without the two national recreation areas associated with it, in 2008 it had the lowest estimated local economic impact of any national park outside of Alaska.

The American Alps Legacy Project has proposed to expand NCNP to include most of RLNRA; to add some lands currently managed by the United States National Forest Service (USNFS); and to improve the amenities and services available to park visitors. The intent is to facilitate increased visitation to the park along the State Route 20 corridor that currently bisects the park, while continuing to protect the wilderness backcountry. The intent is also to “bring the national park” closer to Methow Valley communities.

Part II of this report analyzes the economic impacts of that proposed expansion of NCNP on the adjacent communities both east and west of the park. Economic impacts were calculated for both the small towns and rural areas immediately adjacent to the

expanded park and for a larger area that includes the metropolitan area along the I-5 corridor to the west where the NCNP headquarters is currently located.

The economic impacts of the proposed expansion of NCNP are associated with both a projected larger number of visitors and an expanded National Park Service budget to support those visitors and to operate and maintain improved visitor amenities. Each of these types of impacts was analyzed separately.

The projected economic impact of the increase in visitation was carried out in three steps.

- i. We looked at the projected increases in the population of the greater Puget Sound and greater Vancouver, British Columbia, regions over the next 20 years. This increase in regional population was projected to increase visitation to the North Cascades National Park Complex (NCNP Complex) even if this Park Service entity only continues to serve its current share of the regional outdoor recreation market. This population increase alone could increase the current 300,000 visits to NCNP and RLNRA by an additional 83,000 visits in 2030.
- ii. After the expansion of the park, the conversion of RLNRA to national park status, and the completion of upgrades in the visitor-supporting amenities, we assumed that NCNP would slowly increase its share of the regional market for park-related outdoor recreational activities over the next 20 years from the current two percent to four or five percent. This is a modest projection when compared to the share of the total “park-related” outdoor recreation market in the region served by Washington’s other two national parks: Olympic National Park is currently serving 22 percent and Mount Rainier National Park more than seven percent of that market. Capturing this increased share of the regional outdoor recreation market could increase NCNP visitation in 2030 by 350,000 to 550,000 above 2010 levels.
- iii. We also assume that the new visitor amenities, the interpretive sites, the new short hiking trails, and the extension of the park into the Methow Valley will encourage longer visits to the park and more visits to the east side of the park. In response to those extended visits, we assume that businesses in adjacent communities will increase the range and attractiveness of the available private visitor services to support a likely transformation in the type of visitors to the park toward more overnight use. A portion of the current high volume of day visits would likely be extended to overnight visits that make use of private facilities outside of the park, the pattern, for instance, currently found at Olympic National Park. This change in the character of park visits could increase the local economic impact of these visitors by as much as 70 percent.

We analyzed how National Park Service budgets and personnel assignments vary with the size of national parks and their levels of visitation. From that analysis, we projected the additional park staffing and budget that would be necessary to support our projected

visitation levels. This analysis indicated that the budget serving NCNP and RLNRA could increase by 45 percent over the next 20 years. The increase in park spending in the small towns and rural areas where most of the park employees would live would also be greater, by almost 60 percent.

The National Park Service’s economic impact model, the MGM2 model, which is tied to the IMPLAN input-output model originally developed for the USFS, was used to estimate the combined local economic impacts of the increase in visitation, the change in the pattern of visitation, and the increase in National Park Service spending. The total economic impacts of the larger and upgraded national park on the adjacent small towns and rural areas, assuming a five percent share of the regional outdoor recreation market by the year 2030 are shown in the Table ES-2.

Table ES-2

Projected Local Economic Impact of Expanded and Upgraded North Cascades National Park Expanded Park Captures 5% of the Regional Outdoor Recreation Market by the Year 2030 Rural Areas Adjacent to the Park				
Geographic Area and Type of Spending	Annual Local Economic Impacts Including Multiplier Effects			
	Sales	Jobs	Personal Income	Value Added
Before Park Expansion				
Visitor Spending	\$ 9,321,000	177	\$ 3,428,000	\$ 5,147,000
National Park Service Spending	\$ 5,861,561	180	\$ 7,679,000	\$ 8,772,634
Total	\$ 15,182,561	356	\$ 11,107,000	\$ 13,919,634
After Park Expansion				
Visitor Spending	\$ 57,018,000	1,095	\$ 21,220,000	\$ 32,279,000
National Park Service Spending	\$ 9,180,682	281	\$ 12,026,813	\$ 13,740,156
Total	\$ 66,198,682	1,376	\$ 33,246,813	\$ 46,019,156
Change Due to Park Expansion				
Visitor Spending	\$ 47,697,000	918	\$ 17,792,000	\$ 27,132,000
National Park Service Spending	\$ 3,319,121	102	\$ 4,347,813	\$ 4,967,522
Total	\$ 51,016,121	1,020	\$ 22,139,813	\$ 32,099,522

These projected economic impacts are very significant for the small towns and rural areas adjacent to NCNP. The 1,000 additional jobs associated with the expanded park would represent a 20 percent increase in jobs in these rural communities. The \$22 million increase in personal income would represent a 12 percent increase in the wages and salaries received by residents of these rural communities.

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Part I: Local Economic Context of the North Cascades National Park and Ross Lake National Recreation Area: Current Conditions, Trends, and Economic Impacts

1. Introduction

The North Cascades National Park (NCNP) was established in 1968 “to preserve for the benefits, use and inspiration of present and future generations certain majestic mountain scenery, snowfields, glaciers, alpine meadows, and other unique features in the North Cascades Mountains of Washington State.”¹ Associated with that national park are also two national recreation areas (Ross Lake and Lake Chelan) also administered by the National Park Service. Those three adjacent national park units are often referred to collectively as the North Cascades National Park Complex (NCNP Complex). See Figure 1.



Figure 1: Regional map showing the location of the North Cascades National Park, Ross Lake National Recreation Area and Lake Chelan National Recreation Area.

Although the primary purpose of national parks is to preserve unique natural landscapes for present and future generations, parks can have a significant impact on the economies of communities adjacent to those parks. Local residents and businesses, as well as national park officials and national park supporters nationwide are understandably interested in that local economic aspect of national parks.

¹ Section 101 of the enabling legislation, the 1968 North Cascades Act, signed by President Lyndon Johnson on October 2, 1968.

This report focuses on the local economic context of NCNP and RLNRA.² We begin by looking at the local communities that serve as gateways to the national park and national recreation area. We discuss current socioeconomic conditions and trends and then turn to an analysis of the current impact those two national park units are having on “gateway” communities.

2. Socioeconomic Conditions and Trends in the Local Economy Surrounding NCNP and RLNRA

2.1. Defining the NCNP Complex’s “Local Economy”

If we are going to discuss the local economies surrounding NCNP and the impact of the park on those communities, we need to define what we mean by “local.” That geographic definition matters for two reasons. First, an economic impact associated with park visitation that is felt in Seattle or Los Angeles or China where, for instance, backpacking equipment that facilitates a park visit is manufactured or purchased may be of little interest to residents and businesses in towns adjacent to the park. They are more likely to be interested in spending that directly stimulates *their local* economy. As the geographic extent of the economy being studied is expanded, the expenditures that will be included will expand and the measured impact will be larger, but the relevance of some of those expenditures to towns adjacent to the park will decline. Second, from an economic point of view, the expenditures of permanent local residents in a local restaurant or food store may play a different role than the expenditures of visitors because the latter bring new money into the local economy where it can circulate, putting others to work and generating additional income. If we are going to distinguish local spending from visitor spending, we have to define who is local and who is a visitor.

In the National Park Service’s approach to local economic impact analysis, the “local economy” is defined in terms of communities that are within about 50 miles of the park. Visitors who reside within that 50-mile radius are considered “local” visitors whose spending is treated differently than visitors from outside that 50-mile radius (non-local visitors). In addition, the National Park Service in its surveys seeks information about visitor spending within the vicinity of the park, where that “local vicinity” is again defined in terms of a 50-mile radius.

In addition, as will be discussed below, the National Park Service analyzes local economic impacts using a particular economic model, called the Money Generating Model (MGM), which calculates the impacts on the basis of the ability of the local economy to serve park-related demands for goods and services. The more

² Note that this study does not deal with the Lake Chelan NRA except in passing. This is because our focus is on Washington State Route 20 which passes through RLNRA, which in turn divides NCNP into northern and southern units. The Lake Chelan National Recreation Area lies to the south of the national park and is primarily served by ferry boat from the town of Chelan, far to the southeast of the national park and that highway corridor. Also not addressed are the Pasayten, Glacier Peak, Mount Baker, Noisy-Diobsud and Lake Chelan-Sawtooth Wilderness Areas which surround the park complex and provide limited user amenities managed by the U.S. Forest Service.

sophisticated the local economy is, the more successful it will be at capturing and re-circulating park-related expenditures. As a result, there will be greater “multiplier” impacts. For that reason, the “local economy” has to be defined so that appropriate income and job multipliers can be chosen. If the local economy includes a large urban trade center, the multipliers will be larger than if the local economy primarily consists of small towns and rural areas.

An important feature of the region in which NCNP is located is that although the towns immediately adjacent to the park are small and the area around them is rural, the I-5 corridor about 60 miles west of the park is a densely settled urban metropolitan area that stretches from Mount Vernon to Bellingham. In fact, the park headquarters is located approximately 50 miles west of the park in the town of Sedro Woolley, which is part of the Mount Vernon-Burlington metropolitan area. The combination of rural and metropolitan areas adjacent to the park suggests two useful definitions of the impacted economy. One would be limited to the small towns and rural areas immediately adjacent to the park and within the 50-mile radius usually used by the National Park Service in its economic impact analyses. The other relevant definition of the impacted area would include both the small towns and rural area around the park, as well as the metropolitan belt just outside of that 50-mile radius where the park headquarters is actually located and where many of the secondary impacts of visitor and park spending will be felt. We will do the economic analysis of park impacts for each of these areas: The smaller rural and town areas including Concrete, Rockport, Marblemount, Newhalem, and Diablo in the Skagit Valley on the west side of the park and Twisp, Winthrop, and Mazama in the Methow Valley on the west side of the park. We will also do it for those rural areas combined with the metropolitan belt stretching from Mount Vernon to Bellingham, including Sedro Woolley.

U.S. Forest Service researchers have combined the geographic areas used by the U.S. Census bureau (census blocks and block groups) into a series of contiguous “communities” for western Washington. For these “communities,” they also have aggregated 1990 and 2000 Census data on socioeconomic conditions.³ This provides socioeconomic trend data for that period. On the Skagit Valley side of NCNP, three such contiguous “communities” were identified: Concrete, Rockport, and Marblemount which actually encompass the area stretching all the way to Newhalem and Diablo.

On the Methow Valley side of NCNP, two contiguous “communities” were identified: Twisp and Winthrop. The Winthrop community was defined to include the Mazama area as well as the rest of the upper Methow Valley. The Twisp community was defined to extend about a dozen miles west along the Twisp River, east along State Route 20, as well as south along the Methow River. See Figure 2.

³ Community Socioeconomic Information System, Ellen Donoghue and Lynnae Sutton, General Technical Report PNW-GTR-672, May 2006.

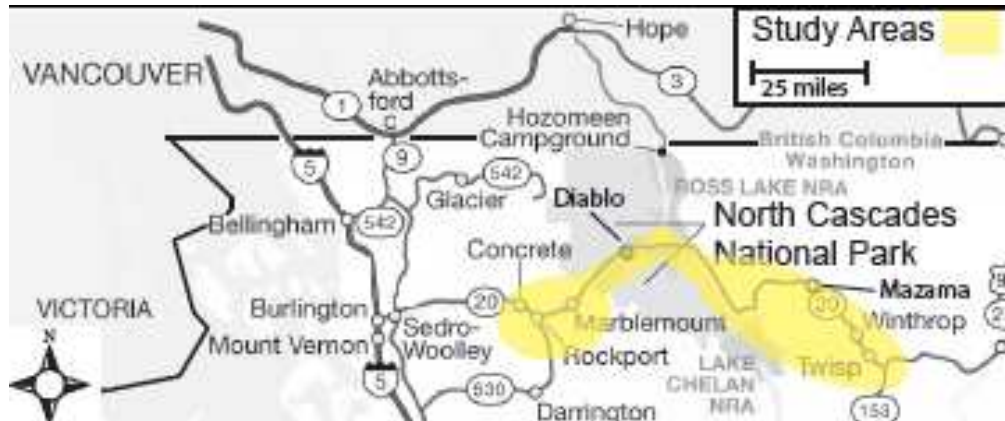


Figure 2: North Cascades NP and Ross Lake NRA Local Economic Impact Study Area

An alternative to using this “community” data tied to U.S. Census block groups is to use the U.S. Postal Service’s zip code geographic definitions that are centered on a town that serves the surrounding area. The drawback of using that geographic definition of communities is that the set of economic information available on a zip code area basis is much more limited.

For the economic impact analysis that moves beyond the rural areas to the metropolitan I-5 corridor, we will use the federal definition of the Mount Vernon and Bellingham metropolitan areas.

2.2. Socioeconomic Conditions in NCNP Gateway Communities

One of the challenges we face in trying to describe the economies of the small towns and rural areas surrounding the NCNP Complex is that socioeconomic data are regularly collected for such relatively small communities only every ten years when the U.S. Census is taken. There is then a three to five year delay after the data is collected before the geographic detail is released. That means that in 2010, just as a new Census is underway, we have to rely on ten-year-old data collected in the 2000 Census. The 2010 Census data on small communities will only become available in the 2013 to 2015 period.

The lack of detailed census data since 2000 for these small towns and rural areas forces us to look elsewhere for more current socioeconomic information. Estimates of population for the years since 2001-2009 are available from the Washington State Office of Financial Management for both unincorporated towns and the Census-based block groups that cover all of the rural geography in and around the small towns. The federal government collects annual information on the number of businesses and employees and payrolls in different types of industries for zip code level communities, but only includes those private businesses that are required to pay into unemployment insurance. This leaves out government employees, the self-employed, as well as farm and railroad workers. This means that National Park Service employees as well as employees of other public land management agencies are not included in that business,

employment, and payroll information. These limitations on the data available on the socioeconomics of the small towns and rural areas adjacent to NCNP are summarized in the Table 1 below. Despite these limitations, these are the data we have to work with.

Table 1

Limitations of Small Town and Rural Area Socioeconomic Data		
Data Source	Data Available	Limitation of the Data
USFS Census Block Group Data	Broad range of socioeconomic Census information	Only available for two years, 1990 and 2000. No data for 2010.
Zip Code Business Patterns	Number of businesses in a zip code, jobs in those businesses, and payrolls	Government employees and self-employed not included. Those who commute out to work not included.
Population <i>Estimates</i>	Number of residents each year	Not a count of residents, but an estimate based on a variety of other variables. Available for most geographic levels in Washington.

There has been significant growth in the population of the rural communities adjacent to NCNP. Population growth across Washington slowed significantly between 1990-2000 and 2000-2009. In most of the rural communities adjacent to the park that was also true. The exceptions were Concrete in the Skagit Valley and Winthrop-Mazama in the Methow Valley. During 2000-2009, growth in rural park communities was faster than in the state as a whole for half of the communities, Concrete and Rockport in the Skagit Valley and Winthrop-Mazama in the Methow Valley. In the earlier decade, 1990-2000, Rockport and Winthrop also had faster population growth than the state as a whole. Marblemount-Newhalem and Twisp had slower growth in population than the state as a whole in both periods. See Table 2 below.

Table 2

Population Growth in Small Town and Rural Communities Adjacent to North Cascades NP					
Community	Population			Percentage Change in Population	
	1990	2000	2009	1990-2000	2000-2009
Concrete	1,355	1,549	1,869	14%	21%
Rockport	1,287	2,080	2,501	62%	20%
Marblemount-Newhalem	867	960	1,003	11%	4%
Sedro Woolley	12,072	15,475	16,896	28%	9%
Winthrop-Mazama	1,188	1,706	2,453	44%	44%
Twisp	2,445	2,894	3,082	18%	6%
State of Washington	4,866,692	5,894,121	6,668,200	21%	13%

Source 1990 and 2000 U.S. Census; Community Socioeconomic Information System, USDA Forest Service; Washington Office of Financial Management, Forecasting Division.

We do not have reliable data on the number of people employed in businesses and organizations *within* the small towns and rural areas we are studying because government employees and the self-employed are not counted in the data. We do have a count of the employed individuals living within our extended geographic communities in 2000. See Table 3. Many of these workers are likely commuting out of the community to work elsewhere. The average one way commute times suggest workers are commuting 30 to 40 miles one way to work. That, in turn, suggests that the employment opportunities in these small towns and rural areas may leave something to be desired.

Table 3

Employed Persons Living within the Extended Geographic Communities and the Average One-Way Commute Time to Work, 2000		
Community Name	Employed Persons Living in Extended Geographic Communities 2000	Average One-Way Commuting Time Minutes 2000
Concrete	1,549	38
Marblemount	960	30
Rockport	2,080	39
Winthrop-Mazama	1,706	15
Twisp	2,894	25
Sedro Woolley-Lyman-Hamilton	18,170	33
Sedro Woolley	15,475	28

Sources: U.S. Forest Service, Community Socioeconomic Information System

The 2007 Zip Code Business Patterns data on the number of private businesses in the small towns and rural areas around NCNP confirms this lack of employment opportunities in the smaller Skagit Valley communities such as Marblemount, Rockport, and Newhalem. In Marblemount, only six businesses were counted, while in Rockport-Newhalem only 12 were counted. Recall, however, that the sole proprietor businesses and government organizations are excluded from this data. Also, it should be noted that the Rockport-Newhalem zip code area stretches along the State Route 20 highway corridor, bypassing Marblemount which is a small zip code area by itself. See Table 4 below.

Clearly, most of the Skagit Valley business establishment was located much further to the west, towards the I-5 corridor in the Sedro Woolley area and beyond. The Methow Valley gateway communities had a much more fully developed commercial business structure, as indicated by both the number of business firms and the broad range of distribution across various industries.

Table 4

Number of Business Establishments in North Cascades National Park Zip Code Areas, 2007							
Industry	Zip Code Area Name						
	Sedro Woolley-Lyman-Hamilton	Concrete	Rockport-Newhalem	Marblemount	Twisp	Winthrop	Mazama
Forestry, fishing, hunting, and agriculture	16	6	0	0	6	2	0
Mining	0	2	0	0	0	1	0
Utilities	0	1	0	0	0	2	0
Construction	128	9	3	1	35	42	3
Manufacturing	31	4	0	0	3	2	1
Wholesale trade	9	0	0	0	2	2	0
Retail trade	47	7	2	2	17	28	3
Transportation & warehousing	15	1	0	1	0	1	0
Information	2	0	0	0	1	6	0
Finance & insurance	15	1	0	0	4	2	0
Real estate & rental & leasing	21	4	0	0	5	10	4
Professional, scientific & technical services	26	2	0	0	8	16	1
Admin, support, waste mgt, remediation services	20	1	1	0	6	6	1
Educational services	4	1	0	0	0	2	1
Health care and social assistance	48	4	0	0	10	8	1
Arts, entertainment & recreation	4	1	0	0	4	9	1
Accommodation & food services	44	12	5	1	11	30	6
Other services (except public administration)	33	4	1	1	15	3	0
Unclassified establishments	2	1	0	0	0	0	0
Total Business Establishments	465	61	12	6	127	172	22

Source: Zip Code Business Patterns, U.S. Census Bureau

This limited commercial infrastructure on the rural Skagit Valley side is important from the point of view of the size of NCNP's impact on the rural communities. The ability of a community to capture and hold visitor spending and obtain the greatest local economic benefit from that spending depends on the existence of a diverse mix of businesses. There is, of course a "chicken or egg" aspect to this. The volume of visitor spending has to reach a certain level before specialized businesses relying on that spending can be viable. That is, there has to be a market for the business to serve. But it is also true that a lack of local commercial businesses seeking to serve visitors can lead to the visitors and their spending traveling on by to an area with a more fully developed economy.

A discussion of the type of jobs that residents of the rural areas and towns adjacent to NCNP have is limited by the availability of data. Data covering all residents is only available in Census years. That means that that data is already ten years old. It is possible the mix of jobs that resident have has changed significantly since then. We have some data on job mix associated with employers located *within* these rural communities, but most residents hold jobs outside of these small towns and rural areas. This limitation of the data should be kept in mind when considering the following information.

Wherever their jobs were located, near the gateway communities or at a relatively long commute away, the residents of the extended geographic communities surrounding NCNP were primarily employed in the service sectors, which supplied half to three-quarters of the jobs held by residents in 2000. The residents of Winthrop-Mazama had the highest reliance on the service sectors for employment (74 percent of jobs), while those of Rockport and Concrete had the lowest reliance on these sectors (61 and 63

percent, respectively). “Services” represents a very broad array of economic activities, every thing but agriculture, mining, construction, and manufacturing. Thus all of retail trade and government fall into the “services” category, as do visitor (tourist) services, health and other professional services, finance, repair, management, administration, etc.

One can group the major service activities associated with visitors (or “tourists”) by combining employment in recreation, accommodations, eating and drinking establishments, entertainment, and arts. In Table 5 below, we have labeled these “tourist services.” In general, the jobs of the residents in the Methow Valley were more focused on this set of service activities than the jobs of residents in the Skagit Valley. On the Skagit Valley side 16 to 17 percent of all residents’ jobs were in this set of tourist services in 2000. In the greater Sedro Woolley area, only nine percent of residents’ jobs were found in these sectors. In all of the gateway communities, there was significant growth in employment in these tourist service sectors, but this was especially true in the Methow Valley where these sectors doubled in size between 1990 and 2000.

Table 5

Growth of Employment in Tourist Services 1990-2000			
Arts, Entertainment, Recreation Accommodation & Food Services			
Community	1990	2000	% Change
Concrete	52	85	63%
Marblemount-Newhalem	28	40	43%
Rockport	26	45	73%
Sedro Woolley-Lyman-Hamilton	433	751	73%
Winthrop-Mazama	60	126	110%
Twisp	100	192	92%

Source: Community Socioeconomic Information System, USDA Forest Service

In the Concrete and Marblemount areas, the increase from 1990 to 2000 was closer to 50 percent, but still significant in percentage terms. See the table below. Keep in mind that these jobs are not necessarily located *within* these communities where the workers lived. Residents commuted out to many of these jobs. So they do not necessarily represent jobs servicing park visitors within these communities. Even so, employment in the larger visitor economy represented only one in six to one in ten of all the jobs held by residents. Large percentage changes do not necessarily indicate large impacts on the local economy if the sector is a small part of the overall economy. See Tables 5 and Table 6 below.

For Skagit Valley residents, the natural resource sectors appear to play a more important role than for Methow Valley residents. Marblemount-Newhalem residents, for instance, had 26 percent of their employment in agriculture, forestry, mining, and manufacturing, while residents of Winthrop-Mazama had only 11 percent of their jobs in these sectors in 2000. See Table 6.

Table 6

Distribution of Employment, 2000, North Cascades National Park Communities							
Community	Total Employment (Workers)	Natural Resources		Total Services		Tourist Services	
		(Workers)	(% of Total)	(Workers)	(% of Total)	(Workers)	(% of Total)
Concrete	578	129	22%	365	63%	85	15%
Marblemount-Newhalem	418	107	26%	192	46%	40	10%
Rockport	719	140	19%	435	61%	45	6%
Sedro Woolley-Lyman-Hamilton	8086	1560	19%	5270	65%	751	9%
Winthrop-Mazama	761	83	11%	564	74%	126	17%
Twisp	1210	227	19%	807	67%	192	16%

Source: Community Socioeconomic Information System, USDA Forest Service

A 2005 survey of a large number of Methow Valley businesses confirmed the growing importance of visitors to the overall economic vitality of Twisp, Winthrop, and Mazama. The survey covered 137 businesses in this area. The Census Bureau's 2007 Zip Code Business Patterns data reported above indicated that there were 321 businesses in these three Methow Valley zip codes. Thus the 2005 survey appears to represent about 43 percent of all businesses. These businesses were asked about the extent to which their business' peak seasons were dependent on tourists. Over 41 percent indicated that their businesses were "dependent" on tourists and another 34 percent said that they were "somewhat dependent" on tourists. Only about a fifth said that their businesses were not dependent on tourists.⁴

These Methow Valley businesses were also asked to indicate how important various types of revenue generating activities were to their particular business. "Recreational Visitors" were rated "very important" by 53 percent of the businesses, "important" by another 18 percent, and "somewhat important" by 15 percent. In total, 86 percent felt that recreational visitors were at least somewhat important or more to their sales revenues and profits.⁵

When asked to quantify what part of their annual revenues was associated with visitors to the area, almost 30 percent said 91 to 100 percent of their revenues were tied to visitor expenditures. Another 11 percent said 76 to 90 percent of revenues were tied to visitors. Fully half of the businesses said that half or more of their revenues came from visitor spending. Over 70 percent of the businesses said that visitor spending was the source of at least 20 percent of their revenues. Clearly the visitor economy is central to most Methow Valley gateway community businesses.⁶

These businesses were also asked to comment on how recreational visits had changed over the time their business had been operating. Over 50 percent indicated that landscape-based recreation has "increased significantly." Another 37 percent said that it

⁴Economic Impacts of MVSTA Trails and Land Resources in the Methow Valley, Resource Dimensions, Final Report prepared for Methow Valley Sport Trails Association, July 2005, page 83, Table 60.

⁵ Ibid. p. 88, Table 63.

⁶ Ibid. p. 89, Table 65.

had increased somewhat. Only about seven percent believed that there had been no increase or a decline. Obviously, growing recreation demand was a driving force within the Methow Valley gateway community economies. These survey questions, however, did not ask specifically about the role of visitors to NCNP and RLNRA.

Unfortunately, we do not have similar surveys for Skagit Valley communities. There have been surveys of visitors that have focused on the visitor experience in the national park or one of the national recreation areas. For instance, in 2007 there was a survey of visitors to the RLNRA.⁷ That survey, like all of the others available, did not ask visitors about their expenditure patterns while they were in the park or the local communities surrounding the park. As a result, they do not provide any information on the impact those visitors have on the local economy or allow any inference as to how reliant local businesses are on park visitors.

2.3. Trends in Socioeconomic Conditions in NCNP Communities

One can measure the economic vitality of local communities in a variety of ways. We will use the U.S. Census socioeconomic measures of population, real income, employment, home values, unemployment, and poverty. As discussed above, we have local community data on these only for Census years, which means that 2000 is the most recent data and 1990-2000 is the most recent period over which we can measure trends.

Real income growth in the gateway communities, in general, was as high as or higher than real income growth across the state of Washington as a whole. Rockport was the exception to this, experiencing an actual decline in real household income between 1990 and 2000. Winthrop-Mazama saw real incomes grow over three times faster than in the state as a whole. Marblemount saw real median household income rise from about \$24,000 to over \$42,000 per year. This was partly due to employment rising over twice as fast as population as both more household members joined the workforce and unemployment declined significantly. That decline in the unemployment rate bucked the statewide trend upward in the unemployment rate. Keep in mind that the Marblemount area is a very sparsely settled, with less than a thousand residents and only 400 employed residents in 2000. Small numerical changes in small areas can lead to larger percentage changes.

Real home values in most of the gateway communities also grew faster than home values across the state of Washington. Rockport was the exception. Real home values in Concrete and Twisp nearly doubled between 1990 and 2000. This normally would be

⁷ Surveys of Visitors to Ross Lake National Recreation Area: State Route 20 Corridor User Survey and Ross Lake User Survey, Jane E. Swanson and Darryll R. Johnson, Technical Report NPS/PWR/PNWCESU-2007-03, NPS D-286. In 2005 "A Survey of Visitors to Five Mountain Lake Areas in North Cascades National Park," was prepared by Jane E. Swanson and Darryll R. Johnson, College of Forest Resources, University of Washington. In 1992 a visitor survey of the Lake Chelan NRA Stehekin area was carried out (Visitor Services Project Stehekin, Margaret Littlejohn, Report 42). In 1988 there was a "Skagit Valley User Survey" carried out on the Canadian side of the border by Acres International Limited for the Ministry of Environment and Parks of British Columbia.

taken as a sign of either new, more costly homes being built or demand for homes rising faster than they were being built or both. This can be seen as a positive sign (residents' asset values are rising) or as a negative sign (the cost of housing and with it the cost of living are rising).

Population growth in the Methow Valley was similar to or greater than statewide population growth. In the Skagit Valley, Concrete and Marblemount saw population growth well below the statewide rate. In terms of employment growth, only Concrete and Twisp saw growth significantly below the state growth rate. Rockport, Winthrop-Mazama, and the greater Sedro Woolley areas saw employment grow much faster than statewide. High rates of growth in employment do not necessarily mean that unemployment rates will decline. If employment expands but the population of working-age residents grows even faster, the unemployment rate can increase. This appears to have happened in the Rockport area. Winthrop-Mazama and Marblemount bucked the statewide trend of higher unemployment rates.

Poverty rates declined modestly between 1990 and 2000. In Marblemount, Winthrop-Mazama, and the greater Sedro Woolley areas poverty rates dipped dramatically. In Twisp and Rockport, on the other hand, poverty rates increased significantly. See Table 7 below, which reports on the *percentage change* in each of these socioeconomic measures.

Table 7

Economic Change 1990-2000 North Cascades National Park Communities						
Community	Percentage Change in					
	Population	Real Median Household Income	Employment	Real Median House Value	Unemployment Rate	Poverty Rate
Concrete	14%	10%	3%	91%	30%	11%
Marblemount-Nehalem	11%	75%	25%	43%	-26%	-56%
Rockport	62%	-5%	40%	35%	121%	40%
Winthrop-Mazama	44%	35%	59%	53%	-30%	-45%
Twisp	18%	12%	14%	91%	19%	24%
Sedro Woolley-Lyman-Hamilton	30%	35%	47%	75%	32%	-30%
State of Washington	21%	11%	22%	38%	9%	-9%

Source: U.S. Census Bureau; U.S. Forest Service Community Socioeconomic Information System.

The only economic measure for which we have data past the 2000 Census is “covered” employment, where the job is actually *within* a zip code area and the associated payrolls. Recall that these are people employed by businesses that are located within the zip code, not residents of the zip code area who are employed there or elsewhere. Between 2000 and 2007, the communities of Twisp and Winthrop saw employment and real annual payrolls at local businesses increase much faster than statewide. Mazama more or less tracked the state growth rates. On the other hand, the growth in the Skagit Valley adjacent to NCNP, in general, was significantly below the statewide rate. Because of the low number of businesses reporting from the small towns in the Skagit Valley, we have combined Concrete, Rockport, Marblemount and Nehalem in the table. These communities saw covered employment actually decline from 2000 to 2007 by one percent while real payrolls increased ten percent. The employment growth was a

small fraction of statewide employment growth, but the growth in real payrolls was significantly faster. Only further west towards the I-5 corridor did one find growth in local employment and payrolls at or above state growth rates. See Table 8 below.

Table 8

North Cascades NP Zip Code Communities Economic Change 2000-2007, Covered Employment Only						
Zip Code Area	Paid Employees		Real Annual Payroll (\$1,000)		Percent Change	
	2000	2007	2000	2007	Paid Employees	Real Annual Payroll
Concrete-Rockport-Marblemount-Newhalem	443	439	\$13,529	\$14,880	-1%	10%
Sedro Woolley-Lyman-Hamilton	3,710	4,121	\$125,058	\$159,956	11%	28%
Twisp	349	465	\$8,114	\$12,359	33%	52%
Winthrop	713	838	\$16,982	\$22,273	18%	31%
Mazama	95	109	\$1,818	\$1,903	15%	5%
Washington	2,267,485	2,501,684	\$105,653,264	\$112,307,548	10%	6%

Source: County and Zip Code Business Patterns, U.S. Census Bureau

In general, the Winthrop and Twisp areas and the greater Sedro Woolley area on the far westside showed greater levels of local economic vitality and socioeconomic well-being than the state as a whole. Mazama largely tracked the state trends. Especially in terms of more recent trends, the small, non-metropolitan Skagit Valley gateway communities did not fare as well as the state as a whole.

3. The Impact of the NCNP on the Local Economy

3.1. NCNP and RLNRA Visitation Levels and Past Trends

Typically, the primary local economic impacts associated with a national park are tied to the expenditures that visitors make within the local area surrounding the park. In its economic impact analysis, the National Park Service has defined “local area” as the area within about 50 miles of a gateway to the park.⁸ The economic impact analysis, therefore, begins with the level of visitation and the pattern of expenditures in the area surrounding the national park.

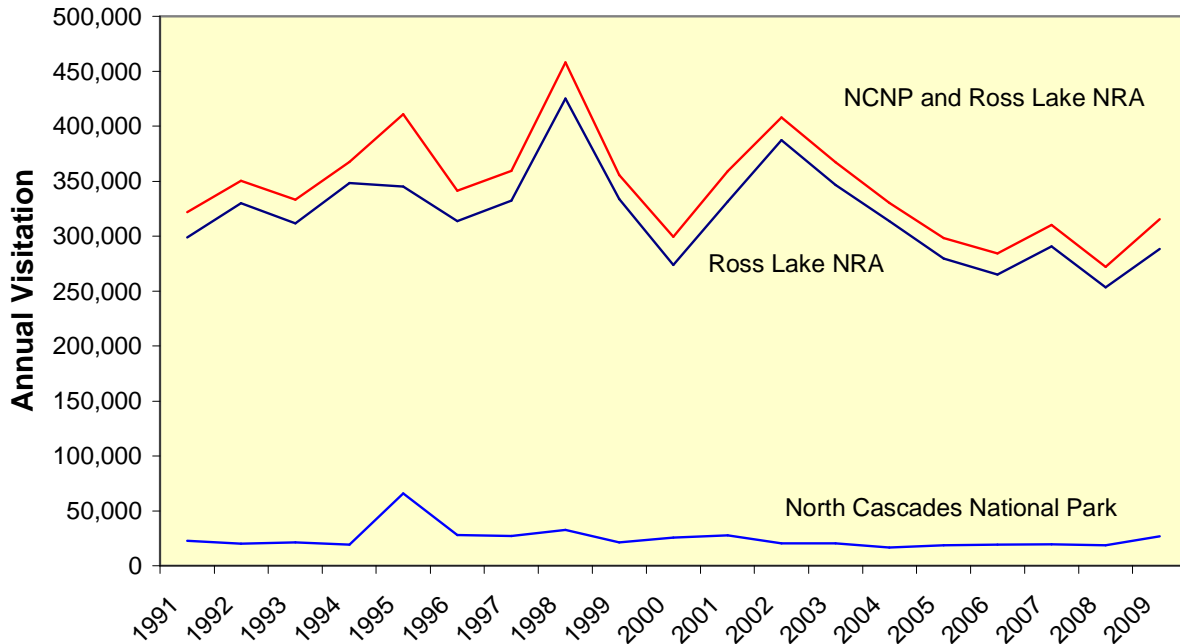
Annual visitation to NCNP itself, separate from the visitation to the national recreation areas that are associated with it, have been quite modest, averaging about 25,000 over the last two decades and about 20,000 over the last five years. This relatively low visitor count for the NCNP itself is explained by the structure of the NCNP Complex. Visitors to the national park component are exclusively people who actually enter the national park lands within the jointly managed national park and national recreation areas. The State Route 20 corridor which separates the north and south units of NCNP does not actually enter the national park. That highway corridor is part of RLNRA, not the national park.

⁸ “National Park Visitor Spending and Payroll Impacts 2008,” Daniel J. Stynes, October 2009, pp. 1-2.

Because there is very limited access to the actual national park lands by road, visitation, not surprisingly, has been relatively limited.

Annual visitation to RLNRA, on the other hand, which can be visited while travelling on State Route 20, is relatively high: 320,000 over the last two decades and 282,000 over the last five years. See Figure 3.

Figure 3: Visitation at NCNP and Ross Lake NRA, 1991-2009



Note that the level of visitation at RLNRA, about 282,000, is about 14 times greater than the visitation to the national park itself, which has averaged about 20,000 over the last five years. This is not surprising because while no part of NCNP is reachable by a paved road, State Route 20 provides ready access to RLNRA as about 35 miles of that highway passes through it. Along State Route 20 there are numerous overlooks, interpretive sites, trailheads and campgrounds as well as a visitor center, all within that national recreation area. The national recreation area provides ready access to visitor facilities, while the national park is reachable only by foot trail and gravel road. The visitation at the combination of NCNP and RLNRA has been about 300,000 over the last five years.

3.2. Visitor Expenditure Levels

The impact of visitors on the local economy is associated with visitor purchases of goods and services within the local economy. Different types of visitor expenditures have different types of impacts. Dollars spent on retail goods in local shops, convenience stores, and gas stations will have a smaller impact than dollars spent at hotels or in restaurants because the former primarily import goods, add a margin, and

resell them. Hotels and eating and drinking establishments, on the other hand, are more labor intensive, with fewer of the dollars spent immediately leaking out of the local community to fund the importation of goods for resale.

To measure the local economic impact of national park visitors, therefore, we need to know both the level and pattern of visitor spending. That information is typically collected through visitor surveys that ask detailed questions about how much money was spent on various types of goods and services and about exactly where, relative to the park the money was spent. This allows *local* spending to be separated from spending on the trip getting to the park and also allows the different impacts of different types of spending to also be taken into account. Finally, this type of survey allows visitors to be separated into local and non-local visitors as well as day-trip visitors and visitors who spend one or more nights near or in the park. The local versus non-local visitor distinction is important because local visitors are usually assumed to not have a significant local impact since they do not bring money in from outside the local economy and are likely to have spent income on meals, automobile fuel, and other retail purchases within the local economy whether or not they visited the park. The day trip versus overnight trip distinction is important because parties staying overnight near the park spend significantly more money within the local economy than those on day trips.

Although such surveys of visitors have been carried out for Olympic National Park and Mount Rainier National Park, a visitor expenditure survey has not been carried out for NCNP or RLNRA. In the absence of such park-specific expenditure surveys, the National Park Service uses average expenditure patterns drawn from dozens of other national park surveys to approximate the likely expenditure patterns for parks like NCNP, for which such survey data is not available.

It is difficult to evaluate the appropriateness of applying these national averages to the visitors to NCNP and RLNRA since we have no survey data dealing with expenditure patterns for visitors to these two national park units. We do have the annual estimates of the visitors who spend the night *in* the park that local park supervisors provide. We also have some survey data for RLNRA dealing with the pattern of visitation, e.g. day trips and where the visitors came from and where they were headed. But these tell us nothing about the percentage of visitors who spend the night at facilities outside the park. Without survey data specific to NCNP and RLNRA, we do not know if the use of national averages to estimate visitors' expenditures over- or understates the actual impacts.

Visitor surveys for Washington's other two large national parks, Olympic and Mount Rainier, however, *are* available.⁹ The patterns of visitor expenditures in those two national parks are quite different. In Mount Rainier National Park, there is a much larger number of day visitors who come to the park but do not spend the night in the vicinity of

⁹ 2000 Olympic NP Visitor Survey (C.D. Ormer et al. Visitor Services Project, Report 121, National Park Service and University of Idaho Cooperative Park Studies Unit, Moscow, ID) and 2000 Mount Rainier NP Visitor Survey (Visitor Services Project Report #124, National Park Service and University of Idaho Cooperative Park Studies Unit, Moscow, Idaho.)

the park. That may be due to its relatively close proximity to the Seattle and Portland metropolitan areas. At Olympic National Park, a much larger percentage of visitors spend at least one night in the vicinity of the park. The current pattern of visitation to NCNP and RLNRA appears to be similar to that at Mount Rainier, with large numbers of day visitors. For that reason, we will also use the survey information from Mount Rainier National Park to estimate the current impacts of NCNP.

3.3. Local Economic Impacts of Visitor Spending

The National Park Service developed the “Money Generation Model” (MGM) to systematize the estimation of the economic impacts various national park units have on their surrounding local economies. The most recent version of the model, MGM2, makes use of a mathematical model of the inter-relationships between various sectors of the economy, tracing the flow of inputs necessary to allow the production of goods and services from each of several dozen different types of economic activities. This is called an input-output model.

When local spending on particular goods or services (local demand) increases, it triggers a demand for the inputs that are necessary to support that production. As purchases are made and production throughout the economy proceeds, workers are hired, wages are paid, and additional rounds of spending and production take place as businesses are supplied with the inputs they need and workers and suppliers spend the money they have been paid. The IMPLAN input-output model, originally developed for the U.S. Forest Service, is used by MGM2 to summarize the relationships between visitor spending and the broad range of economic changes that visitor spending triggers throughout the local economy.

The initial visitor spending has a *direct* impact on the businesses where the spending takes place. Then it has an *indirect* impact on other businesses that supply the initial business. Finally, there are *induced* impacts as those who earn wages, rents, profits, and taxes spend those income flows within the local economy. These “ripple” effects *multiply* the initial impacts as additional rounds of spending take place in the local economy. How large the *multiplier* impacts are depends on how quickly the initial spending leaks out of the local economy. If, for instance, there are only convenience stores and a restaurant or two in a small town (e.g. Marblemount), almost all spending is going to leak quickly out to larger trade centers that supply the few businesses in the small town. The local multipliers will be small. If, on the other hand, the local economy includes a large metropolitan trade center (e.g. Seattle) with a diverse economy that supplies many of its own needs, the initial spending will circulate longer before it leaks out to the national and international economies. The multiplier effects will be larger.

MGM2 provides four different levels of multipliers for the different types of local economic settings that may exist around the national park unit: rural area, small metropolitan area, large metropolitan area, and statewide economies. These generic multipliers are based on averaging across over 100 distinct IMPLAN models for each

type of economic region.¹⁰ For a park in a rural area, a visitor's dollar has little more than a dollar impact on total spending. After the multiplier effects are taken into account, the total spending that results is only \$1.03 because the dollars do not really circulate in the under-developed rural economy. In a large metro area, on the other hand, a dollar in sales leads to an additional 30 cents in other sales for a total of \$1.30 in total sales. The impact on income actually earned by households in the local economy is also different. A dollar of visitor spending leads to 35 cents in personal income within a rural area while in a large metro area it would lead to 52 cents in personal income.¹¹

The area immediately around (within a 50 mile drive) NCNP and RLNRA is definitely rural in character. However, as discussed earlier, Washington counties are quite large and three of the four counties in which parts of the NCNP Complex is located are classified as metropolitan counties, meaning they have a population of at least 100,000 and a central city of at least 50,000 or are closely linked by commuting to such a county. Whatcom, Skagit, and Chelan Counties are metropolitan counties. Only Okanogan County is not a metropolitan county. However, the gateway communities on the edge of the west side of NCNP are quite some distance from the metro urban centers. Bellingham in Whatcom County, for instance, is about 80 miles from Marblemount. Mount Vernon, in Skagit County, is 60 miles from that gateway community. Those two metropolitan cities are even further from Newhalem, where the NCNP visitor center is currently located. The fact that these large counties are classified as metropolitan counties might lead an analyst to make use of the small metro multiplier in the MGM2 model, despite the rural character of the region surrounding these national park units. This we believe would be a mistake, since the 50-mile area around NCNP is purely rural, justifying use of the smaller rural impact multipliers.

Since we do not have a scientific survey of the expenditure patterns and visit characteristics of visitors to NCNP and RLNRA, we cannot use data specific to the NCNP Complex to estimate the local economic impacts. There are two alternative ways of estimating those impacts: use typical visit and expenditure patterns from studies done for hundreds of national parks around the nation or use a national park in the state of Washington that is judged similar to NCNP.

When the typical 2008 nationwide pattern of national park visitor expenditures are applied to NCNP and RLNRA, the estimated impacts from the MGM2 model are shown in Table 9 below.

Based on the model, the estimated spending associated with the non-local visitors among the total 19,000 visitors to NCNP in 2008 was about \$1.1 million.¹² Because the

¹⁰ Ibid. p. 11.

¹¹ See the MGM2 Model Shortform, <http://web4.canr.msu.edu/mgm2/> .

¹² The "typical national park visitor expenditure patterns" information was for 2008. For that reason we have used 2008 visitor information. The 2008 visitation to the NCNP itself was 18,725 in 2008 but 26,927 in 2009. That average for 2004 through 2009 was 19,992. Similarly, the visitation to the RLNRA was 253,333 in 2008 but 288,458 in 2009 but 281,765 over the 2004-2009 period. We have done the impact

visitation to NCNP is so small, the local economic impacts are quite modest: 23 jobs¹³ and \$454,000 in labor income. “Value added” consists of all of economic value actually created as a result of the non-local visitor’s spending. It includes the labor income already reported, as well as rent, interest, profit, and indirect business taxes. That totals \$702,000 for NCNP.

Table 9

MGM2 Impacts of Non-Local Visitor Spending in North Cascades NP and Ross Lake NRA, 2008 Based on Typical National Park Visitor Patterns and Spending						
Park Unit	2008 Recreation Visits	2008 Overnight Stays	2008 Non-Local Visitor Spending (\$1,000s)	Impacts of Non-Local Visitor Spending		
				Jobs	Labor Income (\$1,000s)	Value Added (\$1,000s)
North Cascades NP	18,725	15,333	\$ 1,137	23	\$ 454	\$ 702
Ross Lake NRA	253,333	52,550	\$ 7,328	146	\$ 2,544	\$ 3,934
Total	272,058	67,883	\$ 8,465	169	\$ 2,998	\$ 4,636

Source: National Park Visitor Spending and Payroll Impacts 2008, Daniel J. Stynes, October 2009, Table A-1, National Park Service.

The number of visitors to RLNRA was much larger and the estimated spending by non-local visitors totaled \$7.3 million. This resulted in an estimated 146 jobs with a payroll of \$2.5 million. The total value added in the economy was \$3.9 million.¹⁴

The non-local visitors’ expenditures for the combination of these two national park units resulted in about 170 jobs and \$3 million in labor income.

To check on the accuracy of using national data to estimate local economic impacts, we also used the expenditure and visitation patterns associated with Mount Rainier National Park. This allowed data specific to national park visitors in Washington to be used. There are only two large national parks in Washington, Olympic National Park being the other one. Of the two, Mount Rainier appeared to have a visitor pattern more similar to NCNP. Both of these national parks have large numbers of day visitors who travel to the parks from the greater Seattle area but do not spend the night near the park. Olympia National Park visitors are much more likely to spend a night or more in the vicinity of the park.¹⁵

analysis in terms of the 2008 visitation so that the typical spending pattern and Mount Rainier NP spending pattern analyses were comparable.

¹³ “Jobs” are defined simply as a person filling a paid employment position. Thus a person may hold more than one job and that job may be less than full-time. It might also be seasonal, but since the jobs are measured on an annual basis, a seasonal job would appear as a fraction of a job. A part-time job and a full-time job throughout the year, however, would both be counted as one job. So “jobs” are a mix of full-time and part-time employment opportunities.

¹⁴ National Park Visitor Spending and Payroll Impacts 2008, Daniel J. Stynes, October 2009, Table A-1, National Park Service, pp. A-8 and A-9.

¹⁵ 2000 Olympic NP Visitor Survey (C.D. Ormer et al. Visitor Services Project, Report 121, National Park Service and University of Idaho Cooperative Park Studies Unit, Moscow, ID) and 2000 Mount Rainier NP Visitor Survey (Visitor Services Project Report #124, National Park Service and University of Idaho Cooperative Park Studies Unit, Moscow, Idaho.)

When NCNP and RLNRA visitation levels are combined with the Mount Rainier National Park visitation and expenditure characteristics, the MGM2 model local economic impact estimates are similar to those obtained using national characteristics, but somewhat higher: Visitor expenditures are ten percent higher, employment impacts are five percent greater, labor income impacts 14 percent greater, and value added 11 percent greater. See Table 10 below.

Table 10

MGM2 Economic Impacts of Non-Local Visitor Spending in North Cascades NP and Ross Lake NRA, 2008				
Visitor Spending Pattern Used for Estimate	2008 Non-Local Visitor Spending (\$1,000s)	Impacts of Non-Local Visitor Spending		
		Jobs	Labor Income (\$1,000s)	Value Added (\$1,000s)
Average Data from Visitors to Other National Parks	\$8,465	169	\$2,998	\$4,636
Survey Data from Visitors to Mount Rainier NP	\$9,321	177	\$3,428	\$5,147
Ratio: Mt Rainier to National Expenditure Pattern	1.10	1.05	1.14	1.11

Note: North Cascades visitation levels used but expenditure patterns taken from national or Mount Ranier NP surveys.

3.4. Local Economic Impacts Associated with National Park Service Expenditures

In addition to the local economic impacts associated with NCNP visitor spending, there is also a local economic impact associated with the expenditures of the national park itself as a result of its efforts to protect the park’s natural assets and provide infrastructure to support visitors and direct services to those visitors. The economic impact on the rural communities surrounding the park, however, has to be separated from the impact associated with the NCNP headquarters, which is located in Sedro Woolley, within the metropolitan I-5 corridor between Bellingham and Mount Vernon. In addition, part of the NCNP Complex budget is associated with the Lake Chelan National Recreation Area, which is not included in our analysis. We have used NCNP data on the residences of its employees to allocate the employment and payroll impacts.¹⁶ We have also assumed that the non-personnel portion of the park’s operations budget is also distributed geographically in a manner similar to the distribution of employees. That is, park resources, including labor, operations, and construction, tend to move together to accomplish the park’s purposes.

About 16 percent of the park personnel live in the I-5 corridor while another 18 percent are associated with the Lake Chelan National Recreation Area. That leaves about 66 percent of the personnel living in the small gateway communities in the Skagit Valley along State Route 20.¹⁷ If the park employees associated with the Sedro Woolley park headquarters within the I-5 metropolitan corridor are included in the analysis, about 82

¹⁶ Because North Cascades NP often has to provide housing for its employees in relatively rural areas where housing may not be readily available, the park monitors the residential location of its employees and provides for some of that housing itself.

¹⁷ We include the small number of employees associated with the Hozomeen facilities at the north end of Ross Lake near the Canadian border with the employees living in rural communities along the North Cascades Scenic Highway in the Skagit Valley.

percent of the total NCNP Complex employment and budget are included in our impact analysis.

We have used the MGM2 “Operate” model to calculate the current local economic impacts of NCNP and RLNRA expenditures.¹⁸ The results are reported in Table 11 below for broad budget categories: payroll (including benefits), operations, and repair/construction.

Table 11

Current Economic Impact of North Cascades NP and Ross Lake NRA on the Local Economy					
Type of Park Expenditure	Park Expenditure	Local Economic Impacts Including Multiplier Effects			
		Sales	Jobs	Personal Income	Value Added
<u>Rural Area Adjacent to Park</u>					
Payroll	\$ 5,491,000	2,209,570	129	6,120,143	6,741,081
Operations	\$ 1,369,781	\$ 550,846	8	\$ 177,094	\$ 405,031
Repair & Construction	\$ 2,479,962	\$ 3,101,145	43	\$ 1,381,484	\$ 1,626,522
Total	\$ 9,340,743	\$ 5,861,561	180	\$ 7,679,000	\$ 8,772,634
<u>Rural Area and Metro I-5 Corridor</u>					
Payroll	\$ 6,854,000	\$ 4,489,000	179	\$ 8,428,000	\$ 9,524,000
Operations	\$ 1,710,000	\$ 733,000	8	\$ 240,000	\$ 536,000
Repair & Construction	\$ 3,096,000	\$ 4,336,000	55	\$ 1,998,000	\$ 2,408,000
Total	\$ 11,660,000	\$ 9,558,000	242	\$ 10,666,000	\$ 12,467,000

Source: MGM2 Operate Model and 2009 North Cascades NP Complex budget

We have calculated the local economic impacts for two different geographical areas. The top panel of the table above reports the impact when only the small towns and rural areas around NCNP and RLNRA are considered. In that analysis only about 66 percent of the total NCNP Complex budget is included and rural multipliers are used to reflect the rapid leakage of the National Park Service spending out of those rural areas. In those rural areas around the park, 180 jobs are created and \$7.7 million is added to personal income, and \$8.8 million of economic value is created. Note that the job creation associated with National Park Service spending (180) is about the same as the job creation associated with national park visitor spending (170 to 180) reported in Table 10.

The lower panel in the table above expands the geographic area where park impacts are calculated to include the metropolitan I-5 corridor from Bellingham to Mount Vernon, including Sedro Woolley where the park headquarters is located. For that analysis 82 percent of the park budget is included and higher multipliers associated with small metropolitan areas are used to reflect the greater ability of those larger economies to capture and circulate the dollars the park spends. The economic impacts in the

¹⁸That model requires the entry of detailed budget information on payroll, employment (annual and seasonal), operations budget, and construction, building, and repair budgets. The multipliers built into the model were for 1996. We adjusted the multipliers most sensitive to price level, the jobs to sales multipliers, to reflect changes in the producer price index and the consumer price index, following the same adjustments made in the MGM2 model to adjust it from 2001 to 2006 price levels. <http://web4.canr.msu.edu/mgm2/mgm2operate.htm>

combined rural-metropolitan area are 40 to 60 percent larger than in the purely rural areas.

The combined impact of both visitor and National Park Service spending is shown in Table 12 below. The job impact is 356 in the rural area and 419 if the I-5 metropolitan corridor is included. The impact on local incomes is about \$11 million in the rural area and about \$15 million if the geographic impact area is expanded to include the metropolitan areas.¹⁹

Table 12

Total Current Economic Impact of North Cascades NP and Ross Lake NRA on the Local Economy				
Geographic Area and Type of Spending	Local Economic Impacts Including Multiplier Effects			
	Sales	Jobs	Personal Income	Value Added
Rural Area Adjacent to Park				
Visitor Spending (Mt. Rainier NP pattern)	\$ 9,321,000	177	\$ 3,428,000	\$ 5,147,000
National Park Service Spending	\$ 5,861,561	180	\$ 7,679,000	\$ 8,772,634
Total	\$ 15,182,561	356	\$ 11,107,000	\$ 13,919,634
Rural Area and Metro I-5 Corridor				
Visitor Spending (Mt. Rainier NP pattern)	\$ 10,574,000	177	\$ 3,906,000	\$ 5,907,000
National Park Service Spending	\$ 9,558,000	242	\$ 10,666,000	\$ 12,467,000
Total	\$ 20,132,000	419	\$ 14,572,000	\$ 18,374,000

Source: The two previous tables and MGM2 and MGM2 Operate models

These two separate local economic impacts of the NCNP and RLNRA, those resulting from visitors expenditures and those resulting from National Park Service expenditures, are likely to be distributed among the small communities surrounding the park in quite different ways. The private commercial visitor service infrastructure on the Skagit River side of the park is not very well developed, partly, no doubt, because of the diverse metropolitan trade centers located an hour or so drive to the west. In the Methow Valley however, a much more developed commercial visitor service infrastructure has developed, partly because of the relative isolation of the towns there from large trade centers. As a result, visitor spending is more likely to be captured and circulated on the Methow Valley side of the park. On the other hand, the majority of park employees live in the upper Skagit Valley while another group live in the I-5 corridor of which Sedro Woolley is a part. Thus park spending is likely to primarily impact the Skagit Valley communities on the west side of the park.

¹⁹The careful reader will note that the employment impact of visitors is more or less the same whether we focus on the rural areas alone or combine them with the metropolitan areas. The lower wage levels in rural areas encourage a higher use of labor in serving visitors. In the metro areas higher cost labor is used more conservatively. As a result, even though the income multiplier is higher in the metropolitan area as more of the dollars spent are captured and circulated, the employment multipliers are actually smaller. The combination of these two characteristics on total employment impacts is that they are similar in the rural as well as the metropolitan areas.

3.5. National Park Impact Relative to the Size of the Local Economy

If our reference point in judging the relative importance of these impacts is the small towns and rural areas close to NCNP and RLNRA, those economic impacts are significant, but not in any sense dominant.

The number of employed residents in the three Skagit Valley communities totaled about 1,700 in 2000. In the two Methow Valley communities, 2000 employment was about 2,000. "Covered" employment (agricultural, government, and self-employed workers not included) in businesses located within the Skagit Valley zip code areas was largely constant between 2000 and 2007 with employment in 2007 two percent below the 2000 level. Employment in businesses located within the Methow Valley zip code areas increased by about a quarter between 2000 and 2007.²⁰ This would suggest a 2007 employment level within local businesses of 1,675 in the Skagit Valley and 2,460 in the Methow Valley for a total of 4,135 persons employed in local businesses within this definition of the NCNP local economy.

Judged in terms of a local economy defined in terms of the geographic region stretching along State Route 20 between Concrete and Twisp, the estimated 356 rural jobs associated with NCNP and RLNRA represent about nine percent of local employment. The \$13.2 million in additional personal income represents six percent of total personal income for those three Skagit Valley and two Methow Valley communities combined.²¹

If the Sedro Woolley area and the communities between it and Concrete (Lyman and Hamilton) are included in the local economy, that local economy appears much larger. Between Concrete and the west extent of Sedro Woolley, there were about 8,100 employed residents in 2000. The zip code business patterns indicate that employment within local businesses in those areas grew by about 11 percent between 2000 and 2007. That would suggest that including this additional area within the definition of the local economy would add about 9,000 workers as of 2008. This would more than triple the size of the local economy. The same would be true if the size of the economy were measured in terms of total personal income or population. While the size of the local economy triples, the economic impacts only increase by 20 to 30 percent. As a result, the relative impact of NCNP and RLNRA stated in percentage terms would be only 40 percent of the impact on the rural area, about three percent of local employment and two percent of personal income.

²⁰ The employment in the Census block group communities is based on all of the employed people in the area. The zip code employment is based on "covered" employment; those workers who are employed by a business that reports its workforce and payroll to the state and federal government. Self-employed individuals, agricultural production, government, and railroad employees are not included.

²¹ The 2008 total personal income was estimated by multiplying the median household income in 2000 by the number of households. This 2000 total personal income was then escalated by the same annual growth rate between 1990 and 2000 to provide a 2008 estimate. This estimation process is necessary because economic data at the community level is not available except in the Census data that is gathered every ten years and then take 3 to 5 years to be made available.

But even that is probably a significant exaggeration of the local impact because it ignores the fact that Sedro Woolley is integrated into the overall I-5 metropolitan economy that includes the area between Bellingham and Mount Vernon. That metropolitan economy involves over 180,000 jobs and almost \$11 billion in personal income. In that context, the NCNP economic impact of about 400 jobs and \$11 to \$15 million in personal income are very modest indeed, a few tenths of one percent of the total metropolitan economy.

These results should not be surprising. The visitation rate to NCNP itself, about 20,000 visitors per year, is close to the lowest one can find for a national park outside of Alaska. Other large national parks in the lower 48 states with low visitation, such as Big Bend National Park in Texas or Isle Royale National Park off the north shore of Lake Superior, are quite isolated. Big Bend is on the border with Mexico in a very rural part of Texas and Isle Royale is in the middle of the largest of the Great Lakes, closer to Canada than to the U.S. and primarily reached from the Keweenaw Peninsula in the isolated Upper Peninsula of Michigan. NCNP, on the other hand is within a three hour drive of both the Seattle and Vancouver, BC, major metropolitan regions as well as within a two hour drive of the smaller metropolitan areas of Bellingham and Mount Vernon. When the visitation to RLNRA, about 280,000 visitors per year, is counted along with NCNP visitation, the visitation rate is no longer dramatically low, but it remains quite modest compared to national parks elsewhere in Washington and the nation.

In addition, although national parks and other protected landscapes that support outdoor recreation are often a key driver for the rural area and small cities near them, such landscapes rarely are the primary economic engines of a metropolitan economy. Such recreation resources may make a metropolitan area more attractive to both potential residents and businesses, but a broad range and scale of economic activities are needed to support metropolitan human settlements. Large, complex metropolitan economies simply dwarf the visitor economy associated with a national park.

That, of course, does not mean that our national parks are economically irrelevant. They provide very valuable services to visitors, valuable enough that visitors travel long distances and spend large amounts of money in the process of visiting them. In addition our national parks protect watersheds, air quality, climate stability, wildlife, and many other natural treasures. Those values are not easily expressed in dollar terms and rarely are. In addition, the small towns and rural areas around national parks *are* significantly impacted by the presence of national parks. In those smaller economies, the economic impact of the national parks is much easier to see and much more important to those rural and small town economies because of the more limited economic opportunities in rural areas.

As the NCNP and RLNRA economic impact results reported above make clear, even with very low levels of visitation, these national park units have a significant impact on the rural economy surrounding them. If these national park units were more successful

at drawing on the outdoor recreation market in the greater Puget Sound and Vancouver regions, that local impact would be even more significant.

The local economic impacts associated with national park visitor spending are largely proportional to the number of visitors. As already pointed out, the level of visitation to NCNP and RLNRA is quite low compared to the large population living within three hours of those park units. Both the greater Seattle region and the greater Vancouver (British Columbia) region are within a relatively short drive of these national park units. Olympic National Park draws its visitors primarily from the same urban areas and has about three million visitors a year. Mount Rainier National Park, drawing on the same population, has about one million visitors a year. The NCNP Complex is as close to these population centers, but draws less than 300,000 visitors. See Figure 4.



Figure 4: The relative locations of the North Cascades NP Complex, Olympic NP, Mount Rainier NP, Seattle and Vancouver.

The NCNP Complex thus far appears to have been less successful in tapping into the large outdoor-recreation-oriented population in the greater Seattle and Vancouver areas than other parks. This may be due in part to NCNP being significantly “less visible” due to the fact that it is primarily a wilderness park with very limited motorized access. Further, the park lacks certain roadside amenities, such as true national park entry portals east and west, that can provide visitors with a more traditional national park experience. That is not a criticism of the way the park has been managed and many would call it a virtue. Many of the large national parks protect large areas of wilderness accessible only on foot or horseback. But most of those “wilderness parks,” as they protect the backcountry, simultaneously provide “front-country” access points that can

be reached by a combination of motor vehicle and short hikes. A variety of amenities including overlooks, self-guided trails, interpretive displays, etc. encourage visitors traveling by motor vehicle to get out of their cars and experience some of the natural wonders the national park was created to preserve. If visitors are not aware of the activities in which they could engage within the park or those activities appear to be accessible only to skilled backcountry adventurers, the park may primarily encourage motorized sightseeing day- trips. That type of visitation has the lowest level of local economic impact.

In addition, if visitors are drawn into a greater variety of activities in the park, the availability of attractive accommodations, restaurants, and other commercial amenities outside of the park will also be important in determining whether visitors decide to spend the night in one of the adjacent communities. The greatest local economic impacts are associated with multi-night stays in private accommodations outside of the park.

There are other determinants of the apparent size of the economic impact. If the size of the impact is stated in job or dollar terms, the larger, more developed, and diverse the local economy is, the larger will be the impact because visitor expenditures do not leak out of the local economy as quickly and the multipliers are larger. That is shown in the impacts reported above for the rural areas compared to the rural plus metropolitan areas. When the larger economy is included, the employment and income impacts were 40 to 60 percent large. But if that larger impact is measured in terms of the *percentage* increase in total local jobs (or spending or income), the larger size of the overall economy is likely to dilute the impact when it is expressed as a percentage of the total economy, leading to impacts that are only a few percent or less of that very large economy.

4. Conclusions from This Baseline Analysis

Understanding the economic role that the NCNP Complex plays in the local economy is hindered by two data problems, one which the 2010 Census will solve and another that only action by the National Park Service can solve. The first problem, repeatedly referred to in this report, is that socioeconomic data for rural areas and small towns becomes available only once every ten years. Unfortunately for this report, written just as the 2010 Census was getting underway. That meant that we often had to work with data that was ten years old. We supplemented that with some more recent data or estimates. By 2013-2014 more detailed socioeconomic data will be available for the small towns and rural areas of the North Cascades.

The other data problem is that a visitor expenditure survey and then a local economic impact analysis based on it have not been carried out for the NCNP Complex. This left us with the alternatives of using “average” data from across all U.S. National Parks or using the data from visitor surveys from one of Washington’s other national parks. We used both approaches to fill this data gap.

A visitor expenditure survey, designed to collect a statistically reliable sample of all of the park's visitors, should be carried out by the National Park Service, just as it has been for almost all other large national parks and national recreation areas. This would remove some of the guess work about the characteristics of visitors. In some ways, this is more easily said than done. The NCNP Complex is an unusual set of national park units. It has no official entrance or exit. State Route 20 that traverses the park complex also serves as a significant highway for people who are simply trying to traverse the North Cascades. All of the automotive traffic is not necessarily park visitation. This makes both counting visitors and obtaining a reliable sample of visitors difficult. Travelers are not required to stop at any particular location along that highway. These unusual characteristics make it all the more important to put some significant effort into sampling *all* of the travelers on State Highway 20 through the RLNRA so that an accurate picture of all visitors' motivations, activities, and expenditures can be obtained.

The disaggregation of this set of national park units into one national park and two associated national recreation units also makes measurement of visitation and economic impact difficult. As pointed out in this report, the vast majority of people visiting the park complex never enter the national park itself. This is especially true of RLNRA, whose visitation level dominates the national park and Lake Chelan National Recreation Area combined. Whatever the original purpose of separating the national park from RLNRA, it may be time to reconsider that separation and largely merge the two into a "new North Cascades National Park."

Even given the uncertainties about the measurement of visitation to the NCNP Complex, it seems clear from the available information that that visitation is unusually low given the world-class quality of the North Cascades' natural landscapes and their close proximity to the large metropolitan centers of greater Seattle, Vancouver, BC, and Portland. This low visitation may be tied to NCNP being a relatively new park. But it also seems to be importantly tied to the fact that NCNP is somewhat "invisible" and inaccessible. There is no access to the national park by paved road. Only RLNRA has that. There are no formal park entrances on either the east or west sides of the park. The visitor amenities and services supporting park visitation are limited. As a result, the private visitor services infrastructure in the Skagit Valley is limited and the more substantial visitor services infrastructure in the Methow Valley is not much focused on national park visitors.

The result is a relatively low visitation rate with a large volume of day trips, which translates directly into a relatively low local economic impact. The impact on the small towns and rural areas immediately adjacent to the park, while significant (five to ten percent of economic activity), is much smaller than one would expect for communities adjacent to a national park. This is not a recommendation that the heart of the North Cascades wilderness be opened to motorized visitation in order to boost local rural economies. It is just pointing out that the park's front-country potential along State Route 20 has not been made as attractive, interesting, and educational as it could be and this has impacted the number and character of visits and reduced significantly their local economic impact.

Part II: The Local Economic Impact of an Expansion of the Park and Its Visitor Amenities

5. The Unrealized Potential of the North Cascades National Park

The visitation levels for North Cascades National Park (NCNP) and Ross Lake National Recreation Area (RLNRA) are unusually low given the spectacular beauty and size of these national park units, and their proximity to several large metropolitan areas in the United States and Canada. Of course, NCNP is a relatively new park, having been established in 1968. In contrast, Mount Rainier National Park was established in 1899, the fifth national park to be created. Olympic National Park was established in 1938. In that sense, Washington's and the Puget Sound's other two large national parks have a much longer history and tradition of attracting visitors.

Even in that context, current visitation to the NCNP is extremely low. If the national park component is considered by itself, i.e. without the two national recreation areas associated with it, in 2008 it had the lowest estimated local economic impact of any national park outside of Alaska. Even after considering multiplier impacts, only 23 jobs were associated with NCNP visitor spending.

NCNP, by itself, is almost the least visited "large" national park outside of Alaska in terms of visitors per acre of parkland. Only Isle Royale National Park, an island in Lake Superior just offshore of the Canadian side of the Lake and far removed from any large metropolitan areas in the U.S., has a lower visitation rate, about 9 percent lower. Yet even that isolated national park had a visitor employment impact almost 60 percent higher than the NCNP.

The closest national parks to NCNP in terms of visitors per acre are Death Valley National Park in the desert country of eastern California and Big Bend National Park in the isolated Mexican borderlands of west Texas, each of which have 10 to 15 times as many visitors per acre and visitor-related jobs. The average number of visitors per acre across all national parks is over 500 times that of NCNP. Olympic and Mount Rainier National Parks have 100 to 200 times the visitors per acre as NCNP.

For rural communities adjacent to the NCNP, "least visited" translates into "least economic impact" on the local economy.

In one way, this dramatically low visitation to the national park itself is easily explained. The most readily accessible parts of the North Cascades, the areas along State Route 20, were not included in the national park when it was designated. Instead the most accessible areas were placed in the RLNRA. As a result, that national recreation area gets the bulk of the visitation, about 280,000 visitors per year. The national park, itself, is not accessible by paved road, only by one long gravel road or on foot or horseback by trail. Because much of the park is located at higher elevations, many of the trails are

snow-covered more than six months of the year, which also limits access. As a result the park itself receives only about 20,000 visitors per year.²²

Olympic National Park, which draws on the same metropolitan areas that NCNP does, had over ten times as many visitors as the combined visitors to NCNP and RLNRA. Mount Rainier National Park, also serving the metro areas of Seattle and Portland had almost four times as many visitors as NCNP and RLNRA combined.²³

This relatively low visitation level cannot be explained by an uninteresting natural landscape. The North Cascades have long been recognized for their dramatic jagged mountain peaks and many glaciers and snowfields. North Cascades' rivers, lakes, and valleys are also spectacular natural features with their iconic fisheries, waterfalls, old-growth forests, and alpine meadows. These protected natural wonders make up a world-class national park that has everything it needs, physical landforms, biological productivity, cultural sites, and history, to be an attractive destination and experience for visitors.

6. Understanding Visitation at the North Cascades National Park Complex

Surveys of visitors to the North Cascades National Park Complex ("Complex" in this analysis incorporates both the NCNP and RLNRA)²⁴ show that close to two-thirds of the visitors are residents of the state of Washington and 50 to 60 percent are from the greater Seattle area. In 2004, 78 percent of the backcountry permits issued by NCNP went to Washington residents. In 2006, a survey of recreationists on Ross Lake found that about 80 percent were Washington residents. Other primary sources of visitors are the greater Vancouver, British Columbia and Portland, Oregon areas.²⁵ This is not surprising. With several large metropolitan areas within a few hours drive of the spectacular mountains, rivers, and forest lands protected by the NCNP Complex, these urban areas are the North Cascades' obvious market for visitors. .

One way to analyze the way in which NCNP can serve the outdoor recreational needs of this regional population is to study the outdoor recreation patterns of that regional population and compare them to the patterns of activities in which visitors to the North Cascades engage.

²² These are average visitation levels for 2004-2009. Actual visitation in 2009 was higher, 288,000 for RLNRA and 27,000 for the NCNP itself.

²³ These numbers are also based on the average of recreational visitation between 2004 and 2009.

²⁴ The "North Cascades National Park Service Complex" also includes the Lake Chelan National Recreation Area which we do not include in our analysis and is not affected by the proposed park expansion.

²⁵ Surveys of Visitors to Ross Lake National Recreation Area: State Route 20 Corridor User Survey and Ross Lake User Survey, Jane E. Swanson and Darryll R. Johnson, Technical Report NPS/PWR/PNWCESU-2007/03 NPS D-286, January 2007, p.20. North Cascades Scenic Highway Corridor Management Plan, Washington State Department of Transportation, December 1999, p. 4.2. North Cascades National Park Wilderness Information Center 2004 analysis of backcountry permits as cited in Upper Skagit Watershed Recreational Needs Assessment, Skagit Environmental Endowment Commission, September 2005, p.58.

6.1. Outdoor Recreation Patterns in the State of Washington

The State of Washington has conducted statewide surveys of the outdoor recreation patterns of its citizens since the late 1960s. The two most recent surveys were carried out in 2001 and 2006.²⁶ The survey in 2001 recruited 1,200 households to keep active diaries of their outdoor recreation activities for 12 months. The 2006 study relied on twelve consecutive monthly samplings of Washington households, questioning them about their household activities that month. Because of the different approaches to gathering reliable data, the results of the studies cannot be directly compared. This makes it impossible to use the studies to establish trends in outdoor recreation activities over the years. We will use the most recent survey data both because it is most current and because it explicitly sought to provide a statistically reliable sampling of the population.

However, the 2006 data, because it is monthly and based on different samples of people, does not allow us to estimate the full extent of an individual's participation in outdoor activities across the year. The authors of the study recommended using the data from the peak month of participation in each type of activity as the lower limit on the level of participation across the whole year. It is a lower limit because some participants during the year are likely not to have participated in the peak month of that activity and therefore were not counted as participating. In addition the data on the frequency with which an individual participated in that activity is only for that month. We do not know what the frequency of participation was across the full year.

Table 13 below indicates the peak month participation rates for Washington residents in various outdoor recreation activities that are likely to take place in national parks.

6.2. Activity Patterns of Visitors to the NCNP Complex

All national park units report monthly and annual estimates of the total volume of visitors and the pattern of overnight stays within the park broken down by the type of accommodations: RV camping, tent camping, backcountry camping, staying at a park lodge, and overnight stays at other accommodations within the park.

In addition, a 2005 survey was carried out of the visitors to the RLNRA. Recall that of the total visitation to NCNP and RLNRA, 93 percent are visitors to Ross Lake. The 2005 survey asked visitors to identify all of the activities in which they engaged while in the NCNP Complex.²⁷ This survey was not designed to be a random sample of visitors. It clearly oversampled visitors recreating on the shores of Ross and Diablo Lakes and in campgrounds.

²⁶ 2006 Outdoor Recreation Survey: Final Report, Clearwater Research, August 2007, prepared for the Washington State Recreation and Conservation Office. Washington Interagency Committee for Outdoor Recreation (IAC), An Assessment of Outdoor Recreation in Washington State: A State Comprehensive Outdoor Recreation Planning Document 2002-2007, 2002.

²⁷ Surveys of Visitors to Ross Lake National Recreation Area: State Route 20 Corridor User Survey and Ross Lake User Survey, Jane E. Swanson and Darryll R. Johnson, Technical Report NPS/PWR/PNWCESU-2007/03 NPS D-286, January 2007.

Table 13

Activity	Washington Outdoor Recreation Participation Rates
	2006 Survey Peak Month
Sightseeing-at a scenic area	42%
Nature-visiting interpretive centers	16%
Fishing	17%
Picnicking	78%
Rafting	3%
Kayaking	18%
Motorboating	27%
Hiking-mountain/forest trails	25%
Rock Climbing and Ice Climbing	10%
Cross-Country/ Back-Country Skiing	3%
Backpacking	8%
Camping Tent, developed campground	25%
Camping RV, developed campground	20%

Source: 2006 Outdoor Recreation Survey: Final Report, Clearwater Research

That oversampling, however, can be largely corrected using National Park Service visitor use data.²⁸ Table 14 below makes that correction and reports the estimated volumes of outdoor recreation activity of visitors to the NCNP and RLNRA. Note that the NCNP Complex does not currently collect statistics on cross-country skiing.

6.3. The Outdoor Recreation “Market” of the NCNP Complex

As discussed above, judging by the place of residence of visitors to the North Cascades over the last 15 years, it is primarily the Puget Sound metropolitan areas and, secondarily, southern British Columbia, especially the greater Vancouver area, that contribute to NCNP visitation.²⁹ The estimated and projected populations of the Washington counties and British Columbia Regional Districts which are within approximately a three hour drive of the NCNP Complex are shown in Table 15.

Over each of the next two decades, the population of the region within approximately a three-hour drive of the NCNP is projected to add a million people, more or less evenly divided between the Washington and British Columbia sides of the international border.

²⁸ For instance, we know the number of visitors who stayed at the Ross Lake Lodge. That allows us to weight the Ross Lake recreationists so that their responses about staying at the Ross Lake Lodge match the actual overnight guests there. In addition, we know how many visitors stayed in the campgrounds either as tent campers or RV campers. We also know the number of backcountry campers going into the North Cascades National Park itself. By weighting the various samples to match these known quantities, we were able to remove the worst of distortions.

²⁹ A 2005 survey of visitors to the North Cascades Scenic Highway through the Ross Lake NRA and visitors recreating on Ross Lake found that 62 percent of visitors who had stopped at overlooks and interpretive features along the highway corridor and 69 percent of recreationists on Ross Lake were from the state of Washington.

By 2030, the North Cascades “market” will have expanded by 1.7 million people or by more than a quarter.³⁰

Table 14

Participation Rates in Different Activities by National Park Visitors		
Type of Outdoor Activity	NCNP and Ross Lake NRA 2004-2009 Average Visitation Levels Used	
	% Visitors Engaged In	Estimated Number of Visitors Engage In
Nature Sightseeing	80.1%	240,171
Nature-visiting interpretive centers	57.0%	171,043
Fishing	7.1%	21,391
Picnicking	29.9%	89,576
Rafting	0.0%	144
Kayaking	4.1%	12,420
Motorboating	4.0%	11,965
Hiking	60.1%	180,295
Climbing -alpine, rock, ice	1.6%	4,854
Backpacking	10.9%	32,782
Tent Camping	7.3%	21,924
RV Camping	3.7%	11,069

Source: Surveys of Visitors to Ross Lake NRA, Swanson and Johnson, 2007, Table 3.3
Survey results adjusted for over-sampling of campground and Ross Lake Visitors

Table 15

Population Projections for North Cascades NP Complex "Market"					
County or Regional District	2010	2020	2030	Change 2010-2030	%Change 2010-2030
<u>Northwestern Washington</u>					
Island	80,703	94,275	107,126	26,423	33%
King	1,934,124	2,114,415	2,262,977	328,853	17%
Kitsap	249,050	283,242	314,610	65,560	26%
Pierce	836,688	947,923	1,050,953	214,265	26%
San Juan	17,327	20,857	24,041	6,714	39%
Skagit	123,888	150,305	178,036	54,148	44%
Snohomish	725,963	844,541	950,066	224,103	31%
Thurston	256,113	311,730	359,383	103,270	40%
Whatcom	195,633	230,008	261,416	65,783	34%
Northwest Washington Sub-Total	4,419,489	4,997,296	5,508,608	1,089,119	25%
<u>Southwestern British Columbia Regional Districts</u>					
Okanagan-Similkameen	83,430	87,831	91,407	7,977	10%
Fraser Valley	286,440	337,549	386,050	99,610	35%
Greater Vancouver	2,354,286	2,757,615	3,129,337	775,051	33%
Capital	371,630	411,443	448,206	76,576	21%
Southwestern BC Sub-Total	3,095,786	3,594,438	4,055,000	959,214	31%
Total North Cascades Region	7,515,275	8,591,734	9,563,608	2,048,333	27%

Sources: WA Office of Finance and Management and BC STATS, Government of British Columbia

³⁰ Washington State Office of Finance and Management projects county populations; BC Stats projects regional district populations.

These population data can be combined with the information on Washington residents' participation in the types of activities likely to be carried out in the NCNP Complex, to estimate the potential regional demand for the recreational opportunities the North Cascades have to offer in 2010. In doing so, we are assuming that the information on Washington residents' outdoor recreation activities provides a reasonable approximation of the outdoor recreation activities of the Puget Sound and greater Vancouver areas. Calculating the size of the total market for the outdoor activities the North Cascades has to offer is simply a matter of multiplying the participation rates times the frequency of that participation³¹ times the regional population.³² This leads to

³¹ As discussed earlier, this is a lower limit to the actual volume of recreational activity because we are using peak month participation rates which underestimate annual participation rates and are using monthly frequency of participation during the peak month rather than annual frequency.

³² This population-based method of projecting likely changes in recreational activity has been used informally to project increased use of the NCNP Complex in a variety of studies.³² It was also used by the Skagit Environmental Endowment Commission (SEEC) in its 2005 *Upper Skagit Watershed Recreational Needs Assessment*.³² That study also pointed out several potential weaknesses of this population approach to projecting park use. First, the surveys of recreational participation and frequency were for the total population regardless of age. The age structure of the population, however, is changing, with the older cohorts growing and the younger cohorts shrinking. These demographic changes can be expected to change the rates of participation in different types of outdoor recreation. Second, recreation patterns change over time with new activities entering the mix and other activities fading in popularity. The rather dramatic increase in mountain biking and kayaking, as well as the rise in motorized off-road recreation over the last two decades are a few examples. The decline in hunting activity is another. Finally, SEEC pointed out that to the extent that other Washington outdoor recreation locations and facilities become increasingly congested due to the much higher levels of current use compared to the North Cascades, a larger proportion of the increase in that recreational activity could shift towards the North Cascades because of the relatively low density of use there at the present time. These are important warnings that the future is always difficult to predict. We will discuss some of these issues below. Our population-based approach, however, provides a transparent and plausible approach to projecting potential future recreation levels.

It should also be understood that the level of visitation to any given national park is not entirely determined by external demographic, cultural, and economic forces. The level of public understanding of what the park has to offer, the range of park and non-park amenities supporting visitation, and the accessibility of the park to a broad range of visitors with disparate physical abilities, experiences, and interests all have an impact too. As we will discuss below, these latter factors are under the control of the National Park Service and the business sector within the surrounding communities.

In 2003, the Washington Interagency Committee for Outdoor Recreation released its "Estimates of Future Participation in Outdoor Recreation in Washington State."³² That analysis explicitly recognized the importance of taking into account the changing age structure of the population. In addition, it drew on national trends in the relative popularity of different types of outdoor recreation by using the National Survey for Recreation and the Environment 2000 (NSRE 2000) for the Pacific Region, which included the State of Washington. [The Interagency National Survey Consortium, Coordinated by the USDA Forest Service, Recreation, Wilderness, and Demographics Trends Research Group, Athens, GA and the Human Dimensions Research Laboratory, University of Tennessee, Knoxville, TN. Also see papers based on the survey in *Outdoor Recreation in American Life: A National Assessment of Demand and Supply Trends*, 1999, Ken H. Cordell et al. Sagamore Publishing, Champaign, IL]

The recreational trends in this national and regional analysis did, of course, take population growth into account. Both the national analysis and this Washington State analysis also took into account the role of the "supply" of recreational lands and facilities that support outdoor recreation. The Washington analysis took state-specific trends in access to public and private lands and changes in land designation into account. The analysis also sought to take into account changes in the economy which can support or discourage outdoor recreational activities that require an investment in expensive equipment or require payment of costly entrance fees. Finally, other factors that are more difficult to

estimated annual volumes of different types of recreational activities in the region as high as 17,000,000 for picnicking and as low as 100,000 for whitewater rafting. See Table 16. The last column shows the resulting annual “volume” of each particular type of outdoor recreation listed in the first column. That “volume” of recreational activity is an estimate of the number of times during the year residents in the region engage in that activity. Given limitations on data availability, we are only able to show some of the types of outdoor recreation activities that typically take place in national parks.

Table 16

Projected Annual Volume of Different Types of Recreational Activity in NW Washington and SW British Columbia			
Type of Outdoor Activity	Washington State ICA 2006 Outdoor Recreation		2010 Potential Regional Annual Volume of Recreational Activity
	Participation Rate (in peak month)	Frequency (per month)	
Nature Sightseeing	41.7%	2.12	6,643,804
Nature-visiting interpretive centers	15.90%	1.14	1,362,219
Fishing	17.0%	2.17	2,772,385
Picnicking	78.4%	2.95	17,381,328
Rafting	3.4%	0.36	91,987
Kayaking	18.0%	1.11	1,501,552
Motorboating	26.7%	1.44	2,889,473
Hiking	24.6%	1.54	2,847,087
Climbing -alpine, rock, ice	9.9%	0.86	639,851
Cross-Country / Back-Country Skiing	3.1%	1.20	442,875
Backpacking	8.3%	0.71	442,875
Tent Camping	24.6%	0.73	1,349,593
RV Camping	20.3%	0.89	1,357,785

Source: See text.

6.4. The NCNP Complex’s Current Outdoor Recreation Share of the Market

We can compare the estimated outdoor recreation activities of visitors to the NCNP and RLNRA to these total regional volumes of outdoor activity to see what part of the total regional market for those types of outdoor recreation in northwest Washington and southwest British Columbia is actually being filled by those national park units. To

quantify, such as social pressures and “fads,” were incorporated using judgment. The 2003 Washington study emphasized, however, that “The future defies mathematics,” (p. 9.) meaning that forecasts based entirely on mechanical formulae are likely to be inadequate.

This Washington study provided estimates of the growth in a variety of outdoor recreation activities between 2000-2010 and 2010-2020. The growth rates varied significantly among the various activities with some actually declining. Equally important is that the growth in recreation activity was not related in a simple way to the growth in the population. Some activities such as nature activities, picnicking, and canoeing/ kayaking were projected to increase significantly faster than population while others were projected to significantly lag behind population growth. But note that all of the activities, except fishing, were projected to increase significantly with population. If we weight various growth rates by their relative importance to residents (as measured by participation rates), this group of “park-related” outdoor recreation is projected to increase somewhat faster than population in the first decade and grow at somewhat less than population in the second decade. This provides a warning that the projections we provided above that assumed *all* recreational activity would increase proportionately with population are overly simplified. However, the assumption that population growth is a significant driver in the growth of outdoor recreational activity is valid.

approximate the visitor activities in the North Cascades in 2010, we have used the average visitation between 2004 and 2009, about 300,000 visitors and the 2005 visitor survey data discussed and analyzed above. This comparison is shown in Table 17.³³ The NCNP and RLNRA appear to be serving as high as 12.6 percent of the regional volume of one park activity (nature interpretation) and less than one percent of many other park-related activities (mountaineering, RV camping, picnicking, motor boating, whitewater rafting, kayaking, and fishing). These two NCNP Complex units appear to be providing a significant share, four to seven percent, of the regional demand for backpacking, hiking, and nature-based sightseeing.

When all of these park-related recreational activities are weighted by their participation rates, the NCNP and RLNRA were capturing about two percent (i.e., 2.06%) of the total regional market for this group of activities.³⁴ Note that because data on cross-country skiing in the NCNP Complex are not collected, cross-country skiing, an activity very important to the recreational economy in the Methow Valley, is not included in these tables.

Table 17

The Current Role of the NCNP and Ross Lake NRA in Serving the Outdoor Recreational Needs of the Region				
Type of Outdoor Activity	NCNP and Ross Lake NRA		2010 Potential Regional Annual Volume of Recreational Activity	% of Potential Volume Captured by NCNP in 2010
	% Visitors Engaged In Activity	Estimated Number of Visitors Engage In Activity in 2010		
Nature Sightseeing	80.1%	240,171	6,643,804	3.6%
Nature-visiting interpretive centers	57.0%	171,043	1,362,219	12.6%
Fishing	7.1%	21,391	2,772,385	0.8%
Picnicking	29.9%	89,576	17,381,328	0.5%
Rafting	0.0%	144	91,987	0.2%
Kayaking	4.1%	12,420	1,501,552	0.8%
Motorboating	4.0%	11,965	2,889,473	0.4%
Hiking	60.1%	180,295	2,847,087	6.3%
Climbing -alpine, rock, ice	1.6%	4,854	639,851	0.8%
Backpacking	10.9%	32,782	442,875	7.4%
Tent Camping	7.3%	21,924	1,349,593	1.6%
RV Camping	3.7%	11,069	1,357,785	0.8%

Source: See text.

6.5. Potential Growth in the Use of the NCNP Complex Due to Population Growth

Given the projected growth in the population of the region, one would expect the volume of outdoor recreational activities to rise. If the 2006 Washington pattern of participation in outdoor recreation were to continue into the future and the NCNP Complex's percentage share of that activity were also to continue into the future, two assumptions we will discuss below, we can project the increase in the recreational uses of the NCNP

³³ The "estimated number of visitors engaged in activity" is simply the visitor participation rate in column 2 multiplied times the average visitation between 2004 and 2009 which was 304,373. The "percent of potential captured by NCNP" is simply column 3 divided by column 4.

³⁴ The actual percentage is a little larger, 2.06 percent which was used in the tables and calculations.

and RLNRA. This projected increase in both regional recreational activity and NCNP Complex recreational activity is shown in Table 18.³⁵

The projected increase in North Cascades National Park Complex recreational activity is significant, but not dramatic. Over the next decade most recreational activities would increase by about 14 percent. Over the following decade, the growth rate would be about 11 percent for a compound impact of 27 percent over the next two decades.

Table 18

Potential Impact on Outdoor Recreational Activity in the North Cascades NP and Ross Lake NRA Due to Population Growth				
Type of Outdoor Activity	Growth in the Regional Outdoor Recreation Market		Growth in North Cascades Recreational Activity if Capture Share of Regional Market Is Unchanged	
	2010-2020 Based on a Regional Population Increase of 1,076,459	2010-2030 Based on a Regional Population Increase of 2,048,333	2010-2020	2010-2030
Nature Sightseeing	951,633	1,810,808	34,401	65,460
Nature-visiting interpretive centers	195,119	371,281	24,499	46,619
Fishing	397,106	755,630	3,064	5,830
Picnicking	2,489,634	4,737,385	12,831	24,415
Rafting	13,176	25,072	21	39
Kayaking	215,077	409,257	1,779	3,385
Motorboating	413,877	787,543	1,714	3,261
Hiking	407,806	775,990	25,825	49,141
Climbing -alpine, rock, ice	91,650	174,395	695	1,323
Backpacking	63,436	120,708	4,696	8,935
Tent Camping	193,311	367,840	3,140	5,976
RV Camping	194,484	370,072	1,585	3,017

Source: Author's calculations based on An Assessment of Outdoor Recreation in Washington State: A State Comprehensive Outdoor Recreation Planning Document 2002-2007, Washington Interagency Committee for Outdoor Recreation, 2002.

7. Projecting the Economic Impact of the American Alps Legacy Project

As discussed above, the improvements in NCNP that have been proposed as part of the American Alps Legacy Project would make the park more visible, accessible, and attractive to visitors. It would do this by:

- Extending the National Park name and the level of recognition and protection it confers on adjacent world-class natural landscapes:** The expanded park will include the more accessible parts of the RLNRA and other world-class natural landscapes and wildlife that were originally proposed as part of the national park but were not included as a result of decisions made more than 40 years ago. Studies of conversion of lands previously protected as national monuments, national wildlife refuges, etc. into national parks, show that when lands move from a lower level of protection to national park status, visitation permanently increases solely as a result of that reclassification. We expect exactly that type of increased visitation as a result of the RLNRA and sections of US National Forest Service lands being reclassified as a national park. The naming of a natural area as a national park “signals” to potential

³⁵ Recreation use is assumed to increase with population which for the region is projected to increase 14 percent 2010-2020 and 27 percent 2010-2030. If NCNP continues to serve the same percentage of the total market, recreational activity in the park will increase at the same rate.

visitors that national- and world-class landscape and wildlife features are located there. This helps potential visitors decide where they are going to visit.³⁶

- **“Bringing the Park” to adjacent communities, especially the Methow Valley, but also communities in the State Route 20 corridor to the west:** The Methow Valley is so far to the east of current park lands that local businesses do not focus on serving park visitors. With the park expansion, Winthrop and Mazama will be adjacent to the park and Twisp much closer. These new “gateway” communities, in turn, will be able to provide private support services to the increased park visitors.
- **Establishing new visitor centers and formal park entrances:** More accessible visitor centers and visible park entrances in or very near communities in the Methow and Skagit Valleys will attract visitors to these “gateway” communities as well as to the park. The formal entrances and visible visitor centers will announce “You are entering one of the nation’s premier natural landscapes,” just as such park entrances and visitor centers do at other national parks such as Mount Rainier or Yellowstone National Parks.
- **Relabeling and managing State Route 20 as the North Cascades Parkway:** Relabeling State Route 20 as the North Cascades Parkway will enhance the national park experience and establish the highway itself as a visitor destination.
- **Constructing about 25 miles of new short front country family-friendly trails along State Route 20:** With hiking being one of the most popular recreation activities at the regional and NCNP levels, establishing these new family-friendly trails will provide opportunities for additional visitors to enjoy NCNP.
- **Developing more than two dozen natural and cultural interpretive sites off of State Route 20 and the Cascade River road:** With nature sightseeing being one of the most popular recreational activities in the Pacific Northwest, improved trails and interpretive facilities will open the natural and cultural wonders of NCNP to many more visitors.
- **Expanding visitor amenities:** Improved amenities, such as overlooks, signage to guide visitors, interpretive facilities, refreshment and educational facilities, campgrounds, parking areas, and restrooms will create a more pleasant experience and encourage visitors to return.
- **Moving the national park headquarters to the edge of the park:** Locating the park headquarters in the western gateway community of Marblemount will help

³⁶ See Weiler, S. 2005. “A Park by Any Other Name: National Park Designation as a Natural Experiment in Signaling.” Research Working Papers, The Federal Reserve Bank of Kansas City, Economic Research Department. Also Weiler, S. and Seidl, Andrew. 2004. “What’s in a Name? Extracting Econometric Drivers to Assess the Impact of National Park Designation.” *Journal of Regional Science*. 44(2):245-262.

focus public awareness on this park gateway community and establish it as a park destination.

- **Combining public and private efforts to market NCNP:** Coordinated marketing efforts between the National Park Service and organizations such as local Chambers of Commerce, economic development agencies, and educational institutions will better inform residents of Washington, the Pacific Northwest (including British Columbia), and the nation of what the expanded NCNP has to offer visitors.
- **Encouraging local communities to develop visitor infrastructure outside of the park:** Private businesses will need to provide the increasing numbers of visitors with the services they need for extended visitations to the park, surrounding public lands, and private recreation facilities.

7.1. The Potential Economic Impact of Visitor Spending in an Expanded and More Visitor-Friendly NCNP

The data discussed above reveals the size of the potential outdoor recreation market within about a three-hour drive of the NCNP: 7.5 million residents in 2010, increasing to 9.6 million over the next twenty years. Of course, the nation and the world are also part of the market from which the expanded park will draw. Forty percent of the visitors to RLNRA and Mount Rainier National Park come from outside the state of Washington. At Olympic National Park, almost 60 percent of the visitors come from outside Washington.³⁷ Clearly there is a large market available to be tapped.

The outdoor recreation activities of this “nearby” population are also known. Some of the most popular outdoor recreation activities, such as nature viewing and interpretation, picnicking with the family, hiking, and camping are provided by NCNP. In the recent past, visitation to NCNP and RLNRA has tapped into only a very small part of the northwest Washington and southwest British Columbia recreation market, about two percent.³⁸ An expanded national park that is more attractive to visitors should not only maintain this share of visitation as the regional market increases, but it should also be able to increasingly tap into this very large market.

We have modeled the economic potential associated with the expanded, more accessible, and more family-friendly national park in three steps:

- i. We assume that over the next five years the American Alps Legacy Project proposal will be widely publicized within the region, will be ultimately adopted by

³⁷ 43 percent of visitors were from outside of the state of Washington. “Olympic National Park Visitor Study, Summer 2000” conducted by the Visitor Service Project (Report 121) at the Cooperative Park Studies Unit, University of Idaho, May 2001, Table 5, p. 12.

³⁸ Table 17 above shows the current role of these national park units in serving the outdoor recreational needs of the region. The annual number of outdoor activities reported by North Cascades and Ross Lake visitors represents 2.06 percent of the estimated 2010 regional volume of those activities.

Congress, and will be implemented by the National Park Service. During this initial five-year time period, we assume NCNP will be able to maintain its current market share as regional population increases.

- ii. After the expansion of the park, the conversion of the RLNRA to national park status, and upgrades in the visitor-supporting amenities are put in place, we assume that NCNP will slowly increase its share of park-related outdoor recreational activities in the region from the current level of about two percent to four or five percent over a 15-year period. This is a modest projection when compared to the share of the total “park-related” outdoor recreation market captured by other major national parks in the region. Olympic National Park is currently serving 22 percent and Mount Rainier National Park more than seven percent of that market.³⁹ The expanded NCNP would still be serving a much smaller share of the regional market than Mount Rainier National Park and only a fraction of the regional market compared to Olympic National Park.
- iii. As visitation to NCNP increases, we assume that businesses in adjacent communities will increase the range and attractiveness of visitor services to support a transformation in the type of visitors from a high volume of day-visitors (the pattern now found in the North Cascades and Mount Rainier National Parks) to a significant number of extended overnight visitors staying in surrounding communities (the pattern now found in the Olympic National Park). This change will significantly increase the local economic impact of visitors.

We base our expectation that the expanded NCNP will gain an increasing share of the regional outdoor recreation market on several considerations. First, the percentage share that the NCNP Complex currently has is unusually low for a national park unit, as discussed earlier. Second, conversion of the RLNRA to national park land should, according to empirical studies of other such conversions, lead to increased visitation. See the discussion and studies presented above. Third, the expanded NCNP is more strategically located relative to the greater Vancouver area than Mount Rainer National Park and is at least as well located relative to the greater Puget Sound area. Fourth, the improved park “visibility,” visitor amenities, visitor services, and public-private marketing of the “new” park will allow it to capture more of the potential visitors from Washington, British Columbia, the nation, and the world.

³⁹ Based on visitor surveys of activities in each of these national parks: Figure 18, p. 27 in the 2000 Olympic NP Visitor Survey (C.D. Ormer et al. Visitor Services Project, Report 121, National Park Service and University of Idaho Cooperative Park Studies Unit, Moscow, ID); and Figure 22, p. 26 of the 2000 Mount Rainier NP Visitor Survey (Visitor Services Project Report #124, National Park Service and University of Idaho Cooperative Park Studies Unit, Moscow, Idaho.) In calculating these percentages, we have focused only on those park visitor activities that were reported in the visitor survey that have been carried out at these three national park units and included in the Washington outdoor recreation activity survey. The market share of Olympic NP is as high as it is because that park has the largest percentage of visitors from out-of-state (57 percent). Mount Rainier and the Ross Lake NRA had 40 and 38 percent of their visitors from out-of-state, respectively. Clearly Olympic NP was drawing on a larger national and international market.

It should be noted that if the expanded NCNP captures five percent of the regional market by the year 2030, it will still be 30 percent below the Mount Rainier National Park share assuming no displacement from Mount Rainier. If it only captures four percent of the market, it will be almost 50 percent below Mount Rainier in terms of local market penetration.

The annual visitation to the expanded NCNP would rise by about 83,000 over the next 20 years if the park can simply maintain its current share of the regional demand for outdoor recreation of the sort the park can readily provide. The increase in NCNP's share of that market from two to five percent between 2015 and 2030 would increase visitation to about 940,016, almost 2½ times what a continuation of the current share would allow and more than triple the estimated visitation in 2010. See Table 19.⁴⁰

If, on the other hand, the market share attained by the expanded NCNP were to increase from about two percent to only four percent, the visitation at the end of the period would increase to 752,000 rather than 940,000. That would be approximately two times the estimated visitation if the park just maintains its current share of the market through 2030.

The economic impact we project, however, would expand much more than either of these visitation statistics suggest. Those economic impacts will be discussed below.

Table 19

Projected Growth in NCNP Complex Visitation Following Expansion and Improved Visitor Amenities						
Year	Population within a ~3 Hour Travel Time of NCNP Complex	Volume of Park-Like Outdoor Recreation for This Population	NCNP Complex Share of This Recreation Volume if Share Fixed @ 2.06%	Recreation Visits to NCNP Complex If It Can Keep This Share	Recreation Visits to NCNP Complex if Share of NCNP Complex Increases After Park Expansion from 2.06% to 5.0%	Expanded NCPC % Share of Regional Outdoor Recreation Market
2010	7,515,275	39,279,938	809,262	304,373	304,373	2.06%
2015	8,035,499	41,998,982	865,281	325,443	354,466	2.24%
2020	8,591,734	44,906,244	925,177	347,971	534,165	3.16%
2025	9,064,655	47,378,053	976,103	367,124	727,271	4.08%
2030	9,563,608	49,985,919	1,029,831	387,332	940,016	5.00%

Source: Author's calculations based on the method used in the Skagit Environmental Endowment Commission, Upper Skagit Watershed Recreational Needs Assessment, Section 3.5, SEEC Recreation Assessment, 2005 pp. 66-71.

⁴⁰ The "volume" of outdoor recreation in the third column is derived by multiplying the population by the participation rate in a particular outdoor recreation activity and the frequency with which people engage in that activity. The 2.06 percent NCNP share was calculated by combining park visitor survey figures on the percentage of park visitors who engage in particular activities and comparing that volume of activity with the same figure for the region as a whole. The volume of recreation activities in the park is not the same as visitors to the park. Visitors can engage in multiple outdoor recreation activities while visiting the park. For the set of activities common to all three Washington national parks' visitor surveys, on average a visitor engaged in approximately 3 activities (2.66). The number of recreation visits to the NCNP, shown in the fifth column is the volume of recreation activity in the fourth column divided by 2.66.

7.2. The Impact of a Changing Pattern of Visitation from Day-Use to Overnight Use When NCNP Amenities Are Improved

As discussed above, currently the vast majority of the visitors to what would become an expanded NCNP are actually visiting the RLNRA. Many of the visits to RLNRA are day trips that begin and end west of RLNRA in communities in the metropolitan I-5 corridor. This is true for several reasons. First, the Puget Sound metropolitan belt is in very close proximity to RLNRA, making day trips feasible. Second, the National Park's features are not easily visible or accessible to visitors. As a result, visitors do not see a reason to spend more than a day during a visit. They simply drive a loop that begins and ends west of RLNRA. Third, an extensive and diversified, private infrastructure for visitors has not developed in the communities surrounding RLNRA. As a result, it is not as attractive as it might otherwise be for visitors to choose to spend the night (or several nights) in the communities adjacent to RLNRA. Fourth, neither the current NCNP nor RLNRA comes close to the communities located east of the park. As a result, the businesses in Mazama, Winthrop, and Twisp do not focus on park visitors and many eastbound park visitors do not travel much beyond RLNRA, never reaching those Methow Valley communities.⁴¹

As mentioned above, this makes the current NCNP Complex more like Mount Rainier National Park than Olympic National Park. The share of visitors to Mount Rainier National Park who do not live within 50 miles of the park but are on day trips is 63 percent larger than that share at Olympic National Park. Similarly, the share of visitors to Olympic National Park who stay overnight outside of the park is almost twice (1.92 times) that share at Mount Rainier National Park. Because visitor parties that stay overnight spend a lot more money than those who just visit the park for part of a day and then travel on, this difference in the pattern of visitation to a national park can significantly change the economic impact of the park.

The expansion of NCNP is intended to provide a much broader range of activities for visitors. This can be expected to keep those visitors longer in the park and increase the likelihood that they will spend one night or more within or outside the park in one of the gateway communities. They then can return to the park to take advantage of more of the park's recreational opportunities or spend time engaging in recreational activities associated with other public lands in the area or the recreational opportunities provided by private resorts in surrounding communities.

If, as a result of the expansion of the NCNP and the upgrades to its visitor facilities and programs, the park shifts from the Mount Rainier pattern of day-trip visitation to the Olympic pattern of overnight stays, the economic impacts, even at the existing level of visitation, would increase significantly (about 70 percent). These impacts would come

⁴¹ Efforts have been made to encourage a change in this pattern of days trips. The Cascade Loop Association, for instance, seeks to encourage such longer trips with an overnight stay along the way. Other outdoor recreation areas in the United States and Canada have been successful with this sort of promotion.

in the form of local tourist spending, employment, personal income, and value added.⁴²
See Table 20.

Table 20

Annual Economic Impacts of Visitor Spending: Mount Rainer NP Pattern Versus Olympic NP Pattern High Non-Local Day Trips Versus High Overnight Stays Applied to North Cascades NP Visitor Levels							
Visitation Pattern	Direct Sales (\$1,000s)	Total Sales (\$1000s)	Direct Jobs	Total Jobs	Direct Personal Income (\$1,000s)	Total Personal Income (\$1000s)	Direct Value Added (\$1,000s)
Olympic NP Pattern	\$12,254	\$15,746	258	302	\$4,870	\$5,843	\$7,052
Mount Rainier NP Pattern	\$7,221	\$9,314	150	177	\$2,843	\$3,425	\$4,037
Olympic/Rainier Pattern Impact	1.70	1.69	1.72	1.71	1.71	1.71	1.75

Source: MGM2 Model

The overall projected total economic impact of the proposed expansion of NCNP and the proposed upgrades of visitor amenities would be a combination of the two and one half to three fold increase in the visitation level (associated with increased population and higher market shares of four and five percent) and the approximate seventy percent increase in the economic impact associated with the shift in the visitation pattern towards overnight stays rather than day trips.

We have used the MGM2 model to project the local economic impact of changes in the quantity and character of the park visitation. We have calculated the impact on the small towns and rural areas adjacent to the park, as well as the larger region including the I-5 metropolitan corridor to the west. This larger region (including both the rural areas near the park and the metropolitan I-5 corridor) will actually accrue more benefits associated with the expansion of NCNP, since more developed areas do a better job of capturing and holding dollars. See Table 21.

The table's four panels report the economic impacts for two different geographic areas (rural and metropolitan plus rural) and two different assumptions about the success of the expanded park in increasing its share of the regional market from two percent to either five percent or four percent by the year 2030.

The first part of this study estimated that less than 200 jobs⁴³ and less than \$4 million in personal income for the rural economy is associated with current visitation to the NCNP Complex. Most would agree that this level of impact is quite modest. The potential impact of an expanded NCNP with upgraded visitor services that captures five percent

⁴² Visitor mix from each of the two national parks was used along with 2004-2008 North Cascades NP and Ross Lake NRA visitation levels. Because Olympic NP has multiple entrances, overnight visitors enter the Park multiple times. Since additional visitations to the national park by overnight visitors does not increase the economic impact of the visitors, the MGM2 Model takes this into account when converting visitation levels to party-night levels which is what drives the economic model. Since North Cascades NP has only two primary motorized entrances the large number of multiple entrances to Olympic National Park by overnight visitors would not be a feature of the North Cascades NP.

⁴³ "Jobs" are defined simply as a person filling a paid employment position. Thus a person may hold more than one job and that job may be less than full-time. It might also be seasonal, but since the jobs are measured on an annual basis, a seasonal job would appear as a fraction of a job. A part-time job and a full-time job throughout the year, however, would both be counted as one job. So "jobs" are a mix of full-time and part-time employment opportunities.

of the regional outdoor recreation market in 2030 is far more significant, almost 1,100 jobs and \$21 million in personal income. If the expanded park captures only four percent of the regional market, the rural impact of increased visitation and increased overnight stays would still be very significant, more than 870 jobs and almost \$17 million in annual personal income. Keep in mind that these are just the impacts associated with park visitor spending. Below we will also estimate the impact of National Park Service spending in supporting these visitors and protecting park resources. The total impact will be the sum of these two impacts.

Table 21

Expanded and Upgraded North Cascades National Park Annual Economic Impacts of Higher Visitation Levels and Increased Over-Night Stays in the Park Region				
Case Modeled	Annual Local Economic Impacts			
	Direct Sales (\$1,000s)	Jobs	Personal Income (\$1,000s)	Value Added (\$1,000s)
I. Expanded Park Captures 5% of the Regional Outdoor Recreation Market				
<u>Rural Area</u>				
Current Baseline	\$9,321	177	\$3,428	\$5,147
Expansion in Visitation Only	\$31,643	603	\$11,740	\$17,568
Expand Visits & Increase Over-Night	\$57,018	1,095	\$21,220	\$32,279
<u>Rural & I-5 Metropolitan Area</u>				
Current Baseline	\$10,574	177	\$3,906	\$5,907
Expansion in Visitation Only	\$35,893	603	\$13,354	\$20,129
Expand Visits & Increase Over-Night	\$64,498	1,062	\$24,162	\$36,914
II. Expanded Park Captures 4% of the Regional Outdoor Recreation Market				
<u>Rural Area</u>				
Current Baseline	\$9,321	177	\$3,428	\$5,147
Expansion in Visitation Only	\$25,360	483	\$9,401	\$14,072
Expand Visits & Increase Over-Night	\$45,407	872	\$16,894	\$25,701
<u>Rural & I-5 Metropolitan Area</u>				
Current Baseline	\$10,574	177	\$3,906	\$5,907
Expansion in Visitation Only	\$28,767	483	\$10,695	\$16,126
Expand Visits & Increase Over-Night	\$51,366	845	\$19,238	\$29,393

Source: MGM2. Note: This table reports only on the impact of visitor spending. The impact of the spending of the National Park Service itself in supporting visitors and protecting the park will be analyzed and combined with these visitor impacts later in this report.

As with the earlier modeling of the impact of current visitation on employment opportunities, the employment impact is more or less the same whether we focus on the rural areas alone or combine them with the metropolitan areas. The lower wage levels in rural areas encourage a higher use of labor in serving visitors. In the metro areas higher-cost labor is used more conservatively. As a result, even though the income multiplier is higher in the metropolitan area as more of the dollars spent are captured and circulated, the employment multipliers are actually smaller. The combination of these two characteristics on total employment impacts is that they are similar in the rural as well as the metropolitan areas.

7.3. The Local Economic Impact of the Larger Park Budget Associated with an Expanded and Upgraded NCNP

The expanded park amenities, such as the two new visitor centers, expanded campgrounds, and the significant expansion of the front country trail system and interpretive sites, will require additional staffing. Further, the projected increase in the level of visitation will take additional staffing to manage and serve those additional visitors. The broader range of visitor amenities in the park will also require an expanded operation, maintenance, and repair budget. Finally, these new amenities will require an initial construction budget that will also have regional economic benefits, although those construction impacts would be one-time-only events, not ongoing impacts.

We have projected new park budgets by assuming that employment and payrolls will move more or less proportionately with operations, maintenance, repair, and special projects budgets. Additional new staff will need offices, which require utilities and repairs. The additional staff will also need travel and support budgets. Trail, campground, and interpretive site maintenance will require additional staff, as well as additional materials.

Thus, we begin by projecting future staffing and payroll. On the basis of that, we project the way the non-payroll part of the budget will have to expand. We assume that all of the expansion in staffing and budget is associated with the expanded NCNP (which will, among other things, have incorporated most of RLNRA). We assume all of the additional staff will live and work along the North Cascades Parkway between Concrete and Twisp.

Employment at national parks is determined by, among other things, the level of visitation and the physical size of the park. Regression analysis of 2008 national park staffing on visitation levels and the number of acres in each national park reveals that the variation in just these two factors across all the non-Alaska national parks explains two-thirds of the variation in park staffing.⁴⁴ This highly significant statistical relationship allows us to use the projected increase in visitation and expansion in park acreage to project the new level of staffing.⁴⁵ That statistical relationship accurately predicted the current NCNP Complex staffing level and projected an increase in the staffing level of 55 new employees for the expanded park by the year 2030.

This increased staffing dictates the salaries and benefits part of the expanded NCNP budget and is assumed to affect the operations, maintenance, and repair budgets in a similar manner. As with the analysis of the current impact of NCNP and RLNRA on the

⁴⁴ Very large national parks have been established in Alaska, many of which have very low visitation levels because of their isolation.

⁴⁵ The overall regression equation is significant at below the 1 percent level and all of the coefficients on the visitation and park size variables were also significant below the 1 percent level. The intercept was significant at the 4 percent level. Each additional million visitors leads to an additional 56 employees; each additional million acres of park land lead to an additional 92 employees; a park with very low visitation and a very small land area would still have 54 employees.

local economy, we have not included the Lake Chelan National Recreation Area part of the current total budget. In the analysis of the impact on the park expansion on the rural areas around the park, we have also removed the Sedro Woolley current park headquarters portion of the payroll and budget, which is assumed to impact primarily the metropolitan I-5 corridor.

The projected National Park Service spending associated with the expanded NCNP and its upgraded visitor amenities and services are shown in Table 22.⁴⁶ All dollar figures are in 2010 dollars. That is, the impact of future inflation is removed.

By 2030, staffing and budget are projected to increase about 57 percent in the small town and rural areas and 45 percent in the larger area including the metropolitan I-5 corridor. This may seem modest compared to the three-fold increase in visitation that is projected. However, as the statistical analysis of national park staffing revealed, staffing is not exclusively driven by visitation levels and there are economies of scale in serving visitors as the volume of visitors increases.

Table 22

Projected Change in the Expanded North Cascades NP Budget				
Budget Component	Current Budget		Expanded Park Budget	
	Rural & Metro Components	Rural Component	Rural & Metro Components	Rural Component
Salaries	\$ 5,347,126	\$ 4,283,777	\$ 7,772,823	\$ 6,709,474
Benefits	\$ 1,507,051	\$ 1,207,353	\$ 2,190,718	\$ 1,891,020
Operations	\$ 1,709,797	\$ 1,369,781	\$ 2,485,438	\$ 2,145,422
Special Projects	\$ 3,095,555	\$ 2,479,962	\$ 4,499,839	\$ 3,884,245
Total	\$ 11,659,529	\$ 9,340,873	\$ 16,948,818	\$ 14,630,161
Annual Employees	98.2	78.7	142.8	123.3
Seasonal Jobs- FTE	23.7	19.0	34.5	29.8
Total Annual FTE Jobs	122.0	97.7	177.3	153.0

Source: North Cascades NP Complex budget and author's projections and calculations.

The local economic impact of these higher levels of National Park Service spending, including the multiplier impacts as that spending circulates in the local economy, are shown in the table below. We again report both on the impact on the rural economy as well as the impact on the larger combined metropolitan and rural economy. By 2030, about 280 rural jobs (park service and local business jobs) would be associated with the higher budget for the expanded park. For the larger metropolitan economy, 352 jobs would be associated with this higher level of park spending. The multiplier impacts can be seen by contrasting the 153 rural and 177 metro plus rural jobs directly associated with the expanded park budget in the previous table with the 281 rural and 352 metro jobs after the multiplier effects are taken into account in Table 23.

⁴⁶ The budget numbers in this table do not represent the full budget of the existing North Cascades NP Complex or the full future budgets. As discussed earlier in the text, the budget of the Lake Chelan NRA is removed since we are focused on the North Cascades NP and the Ross Lake NRA and, for the rural analysis, the payroll and supporting budget for NPS workers who live in the I-5 corridor and work at the park headquarters are also not included.

Table 23

Projected Annual Local Economic Impact of the Expanded North Cascades National Park's Expenditures					
Type of Park Expenditure	Park Expenditure	Annual Local Economic Impacts Including Multiplier Effects			
		Sales	Jobs	Personal Income	Value Added
Rural Area Adjacent to Park					
Payroll	\$ 8,600,494	\$ 3,460,743	201	\$ 9,585,686	\$ 10,558,231
Operations	\$ 2,145,422	\$ 862,764	12	\$ 277,374	\$ 634,381
Repair & Construction	\$ 3,884,245	\$ 4,857,174	68	\$ 2,163,753	\$ 2,547,544
Total	\$ 14,630,161	\$ 9,180,682	281	12,026,813	\$ 13,740,156
Rural Area and Metro I-5 Corridor					
Payroll	\$ 9,963,540	\$ 6,526,062	260	\$ 12,252,019	\$ 13,843,811
Operations	\$ 2,485,438	\$ 1,065,494	12	\$ 349,357	\$ 778,629
Repair & Construction	\$ 4,499,839	\$ 6,302,521	80	\$ 2,903,735	\$ 3,500,339
Total	\$ 16,948,818	\$ 13,894,078	352	\$ 15,505,112	\$ 18,122,779

Source: MGM2 Operate Model

7.4. The Combined Impact of Visitor and Park Service Spending

As shown earlier, for the existing NCNP and RLNRA, the level of visitation was so modest that the local economic impact of the park budget was as large as or larger than the impact of visitor spending. For the expanded park, this is not the case. The economic impact of visitor spending is about two to three times the economic impact of the National Park Service's spending because of the higher spending associated with both the larger volume of visitors and the increase in overnight stays outside the park. See Table 24.

Table 24

Projected Total Local Economic Impact of an Expanded and Upgraded North Cascades National Park in 2030				
Geographic Area and Type of Spending	Annual Local Economic Impacts Including Multiplier Effects			
	Sales	Jobs	Personal Income	Value Added
I. Expanded Park Captures 5% of the Regional Outdoor Recreation Market				
Rural Area Adjacent to Park				
Visitor Spending	\$ 57,018,000	1,095	\$ 21,220,000	\$ 32,279,000
National Park Service Spending	\$ 9,180,682	281	\$ 12,026,813	\$ 13,740,156
Total	\$ 66,198,682	1,376	\$ 33,246,813	\$ 46,019,156
Rural Area and Metro I-5 Corridor				
Visitor Spending	\$ 64,498,000	1,062	\$ 24,162,000	\$ 36,914,000
National Park Service Spending	\$ 13,894,078	352	\$ 15,505,112	\$ 18,122,779
Total	\$ 78,392,078	1,414	\$ 39,667,112	\$ 55,036,779
II. Expanded Park Captures 4% of the Regional Outdoor Recreation Market				
Rural Area Adjacent to Park				
Visitor Spending	\$ 45,407,000	872	\$ 16,894,000	\$ 25,701,000
National Park Service Spending	\$ 9,180,682	281	\$ 12,026,813	\$ 13,740,156
Total	\$ 54,587,682	1,153	\$ 28,920,813	\$ 39,441,156
Rural Area and Metro I-5 Corridor				
Visitor Spending	\$ 51,366,000	845	\$ 19,238,000	\$ 29,393,000
National Park Service Spending	\$ 13,894,078	352	\$ 15,505,112	\$ 18,122,779
Total	\$ 65,260,078	1,197	\$ 34,743,112	\$ 47,515,779

Source: The two previous tables and MGM2 and MGM2 Operate models

Total job impacts associated with the expanded park are about 1,000 above the impacts associated with the existing NCNP and RLNRA. The total job impact for the expanded park approaches 1,400 by the year 2030. The impact on annual personal income is \$33 to \$40 million, depending on whether only the rural area and small towns are the focus or whether the more densely settled urban area is included.

If the future economy expands at about the same rate as we have assumed the population of the region expands, the relative importance of these impacts will be very significant in the rural communities around the park. The projected 1,400 jobs associated with the expanded park obtaining five percent of the regional recreation market would represent over a quarter (27 percent) of all jobs in the rural communities in 2030. The impact on wages and salaries is not as great in percentage terms. The \$33 million impact on local earnings would represent about 18 percent of all wages and salaries received by residents of the rural communities in the year 2030.⁴⁷

If the expanded park is able to achieve only a four percent share of the local outdoor recreation market by 2030, the employment impact in the rural areas would represent about a fifth of total employment (21.9 percent) while the impact on total wages and salaries would be about one-sixth (15.9 percent).

Because of the vastly larger size of the metropolitan economies associated with the I-5 corridor between Mount Vernon and Bellingham, even though the impact on the combined metropolitan and rural areas is larger in absolute terms, in percentage terms it is very small: only about one-half of one percent for employment and labor earnings under either the five or four percent market share scenarios.

7.5. The Distribution of the Economic Impacts among Rural Communities

If the current commercial infrastructure available to serve visitors to the NCNP Complex is used as an indicator of how the rural economic impacts associated with the expanded park will be distributed, 80 percent of the impact would be felt on the Methow Valley side of the park and 20 percent on the Skagit Valley side. This calculation is based on

⁴⁷ Wages, salaries, and the earnings of the self-employed make up about 60 percent of total personal income. Besides labor earnings, personal income also includes investment income (dividends, rent, and interest), some retirement-related income (Social Security, Medicare, etc.) and some income support programs (unemployment compensation, "welfare," and Medicaid). If the impact of the park expansion is expressed in terms of contribution to total personal income, the percentage impact would be smaller, 11 percent rather than 18 percent.

The difference between the relative importance in terms of jobs as opposed to earnings is tied to the relatively low pay associated with the jobs created by visitor spending. Many of these jobs are seasonal and part-time and are in the relatively lower paid service jobs (retail trade, accommodations, eating and drinking establishments). The relatively high paid National Park Service jobs partially offset that, but as pointed out above, the economic impact of visitors on employment (the lower paid sector) is three times larger than the economic impact on employment of the park budget (the higher paid sector). In addition, when park employees spend their income, that income tends to flow towards some of the same relatively low-paid sectors of the economy such as retail trade. The net result is that the percentage impact of the expansion on earnings is less than the percentage impact on jobs.

the number and character of the business establishments in the zip code areas adjacent to the NCNP Complex along State Route 20.⁴⁸ The results are the same whether we count all types of business establishments, only those specifically serving visitors (e.g. recreation, entertainment, accommodations, and eating and drinking establishments), or all business establishments that are not engaged in production for export (e.g. forestry, agriculture, manufacturing, etc.) but, rather, serve local residents and visitors. The results are the same if the number of business establishments are weighted by their size or an unweighted business count is used.⁴⁹

Because we are considering both the impact of visitor and National Park Service spending and the multiplier impacts that result as recipients of the income, in turn, increase their spending, the distribution of all locally-oriented businesses is probably the most relevant to the capacity of a local community to capture and hold income that flows into it. See Table 25. In that table, the communities of Rockport, Marblemount, and Newhalem are combined because the U.S. Postal Service combines Rockport with distant Newhalem in one zip code while carving out Marblemount, which is located in between them, as a separate zip code.

Table 25

Percent Distribution of Business Enterprises among the North Cascades NP Rural Communities 2007 Zip Code Areas, number of enterprises weighted by size of employment							
Type of Business Enterprise	Communities						
	Concrete	Rockport- Marblemount Newhalem	Skagit Valley	Mazama	Winthrop	Twisp	Methow Valley
All Businesss	15.2%	6.6%	21.7%	7.0%	36.1%	36.1%	78.3%
Visitor-Oriented Business	16.8%	8.1%	24.9%	16.4%	29.9%	28.7%	75.1%
All Locally-Oriented Business	13.7%	7.2%	20.9%	7.2%	36.5%	35.4%	79.1%

Source: Zip Code Business Patterns, 2007

It is clear that both the visitor economy and the overall economy of the Twisp-Winthrop-Mazama areas are more fully developed, putting them in a better position to expand to serve the new visitors. In addition, because the majority of visitors will come from the westside metropolitan areas, many of their trips are likely to consist of traveling through the park, enjoying what it has to offer, and then spending the night or several nights in the Methow Valley so that they can make additional visits to the park or take advantage of recreational opportunities offered by other public lands and private businesses before returning to the Puget Sound area. This, however, is not inevitable.

To the extent that Skagit Valley communities develop attractive visitor service facilities that clearly differentiated them in physical and social environments from accommodations, restaurants, etc. in the I-5 corridor, they could take advantage of the

⁴⁸ Concrete, Rockport, Marblemount, and Newhalem in the Skagit Valley on the west and Mazama, Winthrop, and Twisp in the Methow Valley on the east.

⁴⁹ Using just the number of establishments could be misleading since the size of the establishment is not taken into account. The number of establishments, however, does say something about the range of opportunities entrepreneurs see at that particular location. As it turns out, taking business size into account does not change the percentage distribution.

shorter driving distance from the metropolitan areas. Visitors could be lured into staying on the west side of the park by both the new park attractions on that side of the park and by the new commercial visitor services available.

If the projected increase of 1,000 jobs and \$22 million in personal income associated with the expansion of NCNP were to be distributed in the way businesses are currently distributed in the communities along State Route 20, the impacts in the communities are shown in Table 26 for the five percent market share scenario. By 2030, the communities of Winthrop and Twisp would each see an increase of about 400 jobs and \$8 million in annual income. The community of Mazama and the combined communities of Rockport-Marblemount-Newhalem would each see an increase of about 75 jobs and \$1.6 million in annual income by 2030. Concrete would add about 140 of the new park-related jobs and \$3 million in annual income.

Of course, the actual distribution of the economic impacts will depend on how existing and new businesses respond to the increased visitation and park spending. The businesses that do the best job at offering services that visitors desire are the ones that will actually create the jobs, generate the income, and determine the geographic distribution of the economic impacts. For the four percent market share scenario, the impacts would be about 15 percent lower.

Table 26

Distribution of the Projected Economic Impact of an Expanded and Enhanced North Cascades NP Based on the Current Distribution of Businesses: 5% Outdoor Recreation Market Share in 2030					
Type of Economic Impact Due to Park Expansion	Communities				
	Concrete	Rockport-Marblemount-Newhalem	Mazama	Winthrop	Twisp
Additional Jobs	140	74	73	372	361
Additional Annual Income	\$ 3,035,430	\$ 1,598,334	\$ 1,593,144	\$ 8,084,390	\$ 7,828,515

Source: Author's calculations based on Zip Code Business Patterns.

7.6. The Local Economic Impacts of the Construction Expenditures Associated with the New Visitor Amenities in an Expanded Park

As discussed above, the American Alps Legacy Project proposal involves incremental improvements in the services and amenities provided for visitors to the expanded NCNP. A complete list is contained in an appendix to this study. They include two new visitor centers, one in the Methow Valley near or in Winthrop and one in the Skagit Valley near or in Marblemount. Also included would be many miles of relatively short front-country trails along with new national park interpretive facilities. Campgrounds and parking facilities would be expanded and improved. New scenic overlooks and interpretive kiosks would be built. The total cost of these new visitor facilities is estimated to be about \$23 million. That construction activity, of course, would also have an impact on the regional economy. That impact would be of shorter duration than the ongoing impact of visitor and National Park Service spending on annual operations

simply because the construction activities would be completed within a period of a few years.

Table 27 summarizes the expected economic impacts of this construction activity on the larger regional area including the metropolitan areas to the west of the park. This broader area was used because the larger construction projects, such as the building of the two visitor centers, will require the use of construction companies, skilled workers, and purchased equipment and materials from beyond just the rural areas and towns surrounding the park.

An estimated 250 construction jobs would be created by the construction activity and about \$10 million in additional personal income would be received by construction workers during the construction period. These are not ongoing “permanent” jobs and income such as we have calculated for the National Park Service’s ongoing budgets and visitors’ ongoing expenditures. The jobs and income flows would only last until the construction of specific items was completed.

Table 27

Local Economic Impacts of New Construction Associated with the Expansion of the North Cascades NP and Its Visitor Amenities					
Type of Construction	Construction Budget	Total Sales	Local Economic Impacts Total Jobs	Total Personal Income	Total Value Added
Major Trails, Parking Areas, Campgrounds	\$ 4,366,000	\$ 4,866,974	45	\$ 1,587,465	\$ 1,977,828
New Visitor Centers and Staff Housing	\$ 17,100,000	\$ 19,003,504	178	\$ 7,616,727	\$ 9,291,369
Short Trails, Interpretive Kiosks, Signage,	\$ 1,378,000	\$ 2,015,591	27	\$ 963,339	\$ 1,157,878
Total Construction	\$ 22,844,000	\$ 25,886,070	250	\$ 10,167,531	\$ 12,427,075

Source: MGM2 Operate Model

8. Conclusion on the Projected Impacts of the Expanded Park

Visitation to NCNP is currently unusually low. This is partly due to the fact that the park cannot be reached by a paved road. Long gravel roads or foot and horse trails are the exclusive access. The low visitation is also due to the fact that the most heavily visited part of the North Cascades, the Ross Lake region which is accessible by paved road, was not made part of the national park when it was established. Instead it became a national recreation area. As a result of this historical arrangement, NCNP is largely “invisible” and unvisited. This has dramatically reduced its contribution to the small town and rural economy surrounding it.

The American Alps Legacy Project proposes to change this by folding most of RLNRA into the national park while also adding important public recreation lands to the park that will bring the national park boundary much closer to the towns of Mazama, Winthrop, and Twisp. New visitor centers in Marblemount and Winthrop will make these towns true gateway communities to the national park. As proposed, State Route 20, which now bisects the park, will become the North Cascades Parkway, providing access to the

newly configured park. Along that parkway, a number of new interpretive sites will be developed along with interpretive kiosks and short, well maintained hiking trails. Improved signage and parking will facilitate visitor use of these new facilities. In addition, new scenic overlooks will be developed and campgrounds expanded. The spectacular backcountry of the park will still be managed as it is currently, which is to preserve a vibrant North Cascades ecosystem and the Wilderness designation that have made this park so unique and valuable to the national park system.

There is ample reason to believe that these changes to NCNP will increase visitation considerably over the next two decades. National parks have stronger drawing power than national recreation areas. The national park title conveys an important message to potential visitors: “There are world-class natural treasures located here.”⁵⁰ That is certainly true of the North Cascades. The size of that increased visitation and the location and intensity of the economic impacts associated with it will importantly depend on how the local business community responds in developing the private visitor infrastructure of attractive accommodations, restaurants, retail stores, recreation guides and opportunities, etc. outside the park. The business community will have to work jointly with the park to market the “new” North Cascades National Park and make it more visible to regional, national, and international visitors.

This combination of actions can introduce many more Washingtonians and Americans to the North Cascades, while also having a very positive impact on the economies of the small towns and rural areas surrounding NCNP.

⁵⁰ See Weiler, S. 2005. “A Park by Any Other Name: National Park Designation as a Natural Experiment in Signaling.” Research Working Papers, The Federal Reserve Bank of Kansas City, Economic Research Department. Also Weiler, S. and Seidl, Andrew. 2004. “What’s in a Name? Extracting Econometric Drivers to Assess the Impact of National Park Designation.” *Journal of Regional Science*. 44(2):245-262.

Appendix: Proposed New or Enhanced Visitor Amenities

New or Enhanced Amenities for the Proposed Expanded NCNP	
<p style="text-align: center;"><u>Visitor Centers</u></p> <p style="text-align: center;">Skagit Valley Visitor Center Methow Valley Visitor Center</p>	<p style="text-align: center;"><u>Ecotourism and Cultural Sites</u></p> <p style="text-align: center;">Baker River Low Elevation Habitat Old Baker Lake Resort Marblemount Native Plant Center Cascade River Bacon Creek Salmon Viewing Bacon Creek Riparian Trail Newhalem Rock Shelter Newhalem Research Station Diablo Lake Diablo Overlook Rainy Pass Washington Pass Pine Creek Trail Early Winter Creek</p>
<p style="text-align: center;"><u>Entrance Arches and Signage</u></p> <p style="text-align: center;">Skagit Valley Portal and Kiosk Methow Valley Portal and Kiosk</p>	
<p style="text-align: center;"><u>Trails & Related Parking and Signage</u></p> <p style="text-align: center;">Skagit Valley Park Entrance Scenic View Trail Bacon Creek Lowland Riparian Trail Goodell Creek Landslide Trail Diablo Lake Grand Loop Hiking Trail Swamp Creek Scenic View Trail Washington Pass Scenic View Trail Pine Creek Waterfall and Nature Trail</p>	
<p style="text-align: center;"><u>Interpretive Sites with Short New Trails (<0.5 mi)</u></p> <p style="text-align: center;">Johannesberg Falls Soldier Boy Falls Newhalem Creek Falls Ladder Creek Falls Granite Gorge Falls Bouck Falls Davis Peak Falls Buster Brown Falls Colonial Creek Falls John Pierce Falls Cedar Hollow Falls Rainy Lake Falls Emerald Falls Willow Creek Falls Pine Creek Falls Cedar Falls</p>	<p style="text-align: center;"><u>Food/Beverage</u></p> <p style="text-align: center;">Gateway Community Coffee Shop</p>
	<p style="text-align: center;"><u>Campgrounds</u></p> <p style="text-align: center;">New Bacon Creek Campground Early Winters Campground Upgraded Lone Fir Campground Upgraded Klipchuck Campground Upgraded</p>
	<p style="text-align: center;"><u>Interpretive Centers and Amenities</u></p> <p style="text-align: center;">Washington Pass Interpretive Center Baker River/ Swift Creek Interpretive Center Parking and Restrooms at Washington Pass Parking and Restrooms at Baker River Signage on State Route 20 to Visitor and Interpretive Centers</p>

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