ECONOMIC IMPACTS
of
MVSTA Trails and Land Resources
in the Methow Valley

Prepared for the:

Methow Valley Sport Trails Association
209 Castle Street
Winthrop, Washington 98862

Prepared by:

Final Report

Resource Dimensions
7414 30th Street NW
Gig Harbor, WA 98335

This investigation, analysis, and report are subject to important conditions and assumptions that affect the findings and conclusions. As applicable, data gaps or lack of supporting documentation, are identified throughout the report. The reader should review all limiting conditions and assumptions in this report before utilizing or relying upon the conclusions and findings.

Acknowledgements

This report has been prepared with the assistance of many people, to all of whom great thanks are extended. Particular thanks are due to, Jay Lucas and Danica Kaufman of Methow Valley Sports Association, and Sarah Brooks of the Methow Conservancy, for their assistance, detailed insights and great patience throughout this process. MVSTA docents and volunteers provided numerous hours in preparing surveys for distribution, mail sorting, and data entry. Michelle Dewey provided invaluable assistance in implementation of the survey process. Finally, the many people in the Methow Valley communities with whom we consulted and where we stayed should receive special thanks for making our work such a pleasure.

Table of Contents

List of Figures

List of Tables

Executive Summary

This economic impact analysis of the MVSTA trail system and land resources of the Methow Valley has been prepared for the Methow Valley Sport Trails Association (MVSTA). The intent of the 2005 study is to update a 1998 study and extend the analysis to reflect the broad range of economic impacts of the trail network and land resources on local economies.

Key to the report are the findings of two surveys conducted in March 2005 with three groups: Methow Valley residents, trail users (local and non-local), and area businesses. In sum, 681 respondents participated in the resident/trail user survey, and another 137 took part in the business survey. Other methods are also used to define the range of economic impacts, direct and indirect, related to MVSTA trail lands and activities they offer. In addition, local economic impacts related to the unique regional landscape, in particular protected lands are examined.

The Big Picture

Resident / Trail User Views & Values

- ✓ According to nearly 96% of all survey respondents' access to and provision of public and private recreational facilities in the Methow Valley is very important (86%) or important (9.7%).
- ✓ 71.6% of resident and 74% of trail user respondents say the network of MVSTA trails is the **most important** factor to their average visit, with another 14.6% and 21.6% indicating it was an important factor. This compares to the 1998 survey estimate of some 306-trail users where 73% stated the network was a very important factor and (21%) important.
- ✓ Both residents (65.9%) and trail users (62%) report **peak trail months**, in order of use/visits, as **February**, **January**, and **December**, with an average of 64% all respondents reporting trail use in these months. Similarly, the 1998 trail user study reported these as the primary months for trail use with about 65% of all visits reported in the 3-month period. One notable difference between the two survey periods is the trend towards increased trail visits/use occurring throughout the year. For example, April saw more than a tripling in the percentage of reported trail visits, May and November doubled, while June and July also had significant growth (Figs. 9 and 10).
- ✓ Resident and trail user respondents feel strongly about the protection of natural resources and open space in the Methow Valley. A combined average of 92.2% of all respondents stated that they felt it was either **very important** or **important** to preserve the areas natural beauty and open space.
- ✓ Resident and trail user participants indicated their top three reasons or characteristics influencing decisions to move to or visit the Methow Valley are, in order of magnitude, 1) **proximity to recreational opportunities**, 2) **natural beauty**, and 3) **rural character**.
- ✓ Non-local trail user visitors to the Methow Valley stay about 4 days and spend $361 locally per day on average, while local trail users/residents (largely 2nd home owners) stay an average of 11.5 days per visit, with daily expenditures of $127.[1]

[1] Properly addressing expenditures related to trail use/visits requires inclusion of all trail users (local, non-local, resident) within the analysis; thus, all are "visitors." Attribution of "visits" or "per trip" terms related to discussion of residents takes into account the spectrum of the resident population, which consists of a substantial number of second home owners, rental property owners, landowners who camp on their lands, and other's with residential arrangements in the Valley. This simplifies the discussion and adheres to convention for recreation resource studies.

Trail User Expenditures

- ✓ Nearly **$4.5 million** dollars in direct expenditures are made annually (in 2005 dollars) to the Methow Valley economy by local and non-local trail users.
- ✓ Trail user (local, resident, non-local) **expenditures average $1,469 per trip**.
- ✓ As reported in the 1998 study, 2005 business survey respondents indicate that **winter continues to be the season in which the greatest average percentage of revenues for area businesses** (44.1%) are generated by trail users to the region, followed by summer with an average of 41.5% – up by approximately 8.5% over the 1998 study.
- ✓ Trail user **spending is heavily concentrated in the service sector**. Lodging remains in the lead, at about 45.9% of all expenditures followed by restaurant/food/grocery with a combined average share of about 28.2%, and purchase/rental of sporting goods and recreational equipment with a pooled average expenditure share of about 11.5%.
- ✓ Nearly 75% of all business survey respondents indicated a **peak season dependence on tourists** with 41% "dependent on tourists" and 34% "somewhat dependent on tourists."
- ✓ Nearly 88% of all of all business survey respondents indicated that **trail visitors and resource-based tourism has increased** significantly (50.4%) or somewhat (37.2%) over the course of time they have been in business in the Methow Valley. This compares to the estimate of approximately 84% of 1998 business survey respondents reporting moderate (61%) to large (23%) increases in trail-using visitors.

Indirect Economic Impacts

- ✓ Over **$4.1 million dollars of induced or secondary expenditures** within the Valley's economy can be attributed to MVSTA trails network, related natural resource-based recreation and various landscape attributes unique to the Methow Valley.
- ✓ Over 86% of all 2005 business survey respondents state that the areas natural beauty, wildlife, and open space are either "very important" or "important" to the success of their business.
- ✓ **The MVSTA trail network plays strongly into respondent's real estate purchasing decisions.** 81.3% of the 337 respondents who addressed the question, had considered buying real estate in the Methow Valley. Of this, an astounding 92.6% indicated that the trails network was either "most important" (65%) or "important" (27.6%) in their purchasing deliberations.
- ✓ Revenue generation for area businesses, by group, was **highest** for recreational visitors, mountain bikers, nature enthusiasts, and hikers, at 86.1%, 83.2%, and 81.8% an average of respectively.
- ✓ People buying homes and real estate in the Methow Valley are **willing to pay an average of 11.52% ($18,237) more per acre** for properties near particular environmental/amenity characteristics (0 to ½ mile) than for properties without these characteristics (e.g., scenic vistas, open space, agricultural lands, parks, forestlands, trails, etc.). This means more tax revenues are produced from sales of real estate with, or located proximate to lands with particular environmental amenities.

- ✓ The combined active and passive use benefit for the network of lands supporting MVSTA trails and related open space is estimated to be **$18.2 million** per year for the region.[2]

Employment Impacts

- ✓ Against the 1998 MVSTA business survey, there is a general pattern of employment growth for both part-time and full-time workers across seasons. The 2005 survey results indicate greater growth within the part-time employment sector, with summer being the most labor intensive period, as indicated by increases to both FTE and PTE workers. Business survey respondents report an annualized average total of 1027 jobs, equating to 675 FTE and 375 PTE jobs, for an estimated minimum payroll of $15.4 million annually.
- ✓ Approximately 49 full-time jobs and 159 seasonal full-time and/or part-time jobs (equivalent to 128.5 FTEs) can be directly accredited to the network of trails and related lands. Purchases of goods and services made by direct sector businesses create an estimated 124 additional jobs for the employees of suppliers of primary sector industries.

Tax Impacts:

- ✓ In the period between 2003 and 2005, visitors to the Methow Valley have spent an estimated average of $30.4 million annually in direct travel spending in the region. Of this total approximately $11.32 million annually can be attributed to trail users and other visitors attracted to the areas natural resources and outdoor recreation opportunities.
- ✓ Annual expenditures by all trail users (resident, local, and non-local) for the period between 2003-2005 generated an estimated annual average of $173,340 in local (city and county) tax revenues, $47,000 in state-shared transient lodging taxes, $72,400 in additional hotel/motel taxes, and $159,321 in state taxes.
- ✓ Tax receipt distributions attributable to all trail users and other visitors attracted to the Methow Valley's open space and outdoor recreation opportunities over the 2003-2005 period represent about 29% of Okanogan county's regular state-shared lodging tax, and about 45% of the county's additional special lodging taxes collected, on average.

Stated Willingness-to-Pay

Determining "willingness-to-pay" is a method for placing monetary values on assets and impacts that do not have market prices. It achieves this by constructing a hypothetical market and asking individuals, for example, what they are willing-to-pay (WTP) towards protection of a particular environmental good. Given the foundation of this economic impact analysis, questions asked sought answers to respondents expressed preferences (rather than the revealed preferences indicated by market prices) for the provision of outdoor recreation facilities and trails in the Methow Valley. Using two proxies (trust fund and taxes), we determined a similar WTP measure under each scenario, although the trust fund vehicle was more than twice as likely to be supported by respondents. Briefly, we found:

[2] Non-market benefits have value as indicated by measures of consumer surplus applied through travel-cost models and other methods; however, their accounting is applied here only in terms of estimates of active and passive recreation use values. Active and passive use non-market valuation studies require significant time and resources, and are outside the scope of this project.

- ✓ **73.9% of all respondents indicated a willingness to contribute to a trust fund specifically established for the maintenance and development of future outdoor recreation facilities and trails** for the Methow Valley. The stated average WTP contribution per person was $29.74 per person. At the local level, this would generate about $64,500 annually. Extended to the population at large (resident, local, non-local trail users/visitors) at the household level, about $473,818 would be generated annually.
- ✓ For those respondents stating a willingness to support a specific tax for the provision of recreation facilities and trails in the Methow Valley the average WTP measure is $29.61 per person. This produces an estimated local annual contribution of $64,224. Extrapolating to the larger population set (resident, local, non-local trail users/visitors) at the household level, an estimated $471,476 would be generated annually.

The Analysis

The above-summarized findings are based on a combination of comparative, statistical, and economic analyses. Each section of the study focuses on a different set of economic rationales, broadly defined as: resident and non-local trail user (tourist-visitor) views, values and expenditures, area business and employment impacts, and related local and regional economic impacts. Each of these broad categories hosts a diverse and interrelated set of variables that include expenditures both inside and outside the region, as well as major environmental and social impacts.

Resource Dimensions, was commissioned in January 2005 to evaluate the above mentioned economic impacts, which are grounded in the complex question: *"What are the costs, benefits and contributions of MVSTA trail lands and other protected land resources to the Methow Valley region?"* The complexity of the regional, social, and institutional setting required an approach that could address both this question and those embedded in related issues as:

- Assessment of benefits generated beyond direct expenditures and revenues;
- Assessment of costs accrued beyond direct management costs;
- Assessment of local and regional impacts which takes into account sector specific information; and
- Potential to realize present income, while enhancing and protecting the resource base for perpetual benefits generation.

List of Acronyms

BCA	benefit-cost analysis
BEA	U.S. Department of Commerce Bureau of Economic Analysis
BLM	U.S. Bureau of Land Management
CBA	cost-benefit analysis
DNR	Washington State Department of Natural Resources
ESD	Washington State Employment Security Department.
FTE	Full-time equivalent
FY	Fiscal year
IMPLAN	IMpact analysis for PLANning. Computerized database and modeling system used for constructing regional economic accounts and input/output tables.
IAC	Interagency Committee for Outdoor Recreation
I/O	input/output. Type of economic modeling
MC	Methow Conservancy
MVCC	Methow Valley Citizens Council
MVSTA	Methow Valley Sports Trails Association
NRCS	Natural Resource Conservation Service
USFS	U.S. Forest Service
WDFW	Washington State Department of Fish and Wildlife
WOFM	Washington state Office of Financial Management

This page intentionally left blank

Section 1: **Introduction**

1.1 Scope and Limitations

This analysis of the economic impacts of the MVSTA Trails and Land Resources in the Methow Valley has been prepared for the Methow Valley Sports Trails Association (MVSTA) in partnership with the Methow Conservancy (MC).

The study area for this analysis is generally defined and referred to throughout the report as the Methow Valley region. Located in Washington's North Cascade Mountains, the Methow Valley is about four hours north and east of Seattle or four and a half hours north and west of Spokane (Figure 1). The report reflects on historical characteristics of the region's economy, reviews the current economy, forecasts attributes likely to effect near term economic conditions and estimates the economic impacts directly and indirectly related to the MVSTA trails system and aspects of the region's landscape, in particular protected lands, on the local economy.

Figure 1. Methow Valley Region

Source: USDA Forest Service, Region 6 (2005)

The principle communities included within the region and covered in this study include Carlton, Mazama, Methow, Twisp, and Winthrop (Figure 2), which comprise an area of roughly 1,746 square miles in size, or about 1,117,691 acres.

Figure 2. Primary Communities within Study Area

Source: Resource Dimensions, 2005 MVSTA study.

1.2 Background: MVSTA and Its Trail Lands

The opening of the North Cascades Highway (Highway 20) in 1972 enhanced the potential for a range of tourism and development related outdoor activities in the Methow Valley region. The setting of Okanogan County's Methow Valley is inimitable, lending both a perfectly scaled geography and a diversity of resource attributes for a thoroughly integrated natural resource recreation-based, community. Seeing this unique opportunity as a catalyst for the region's economic base while maintaining the spectacular natural attributes of the area, two valley residents, John Hayes and John Sunderland inspired cooperation among private landowners and various agencies to form the Methow Valley Family Sports Club in 1977 and the Methow Valley Community Trail (a/k/a Community Trail). By 1980, the organization changed its name to the Methow Valley Ski Touring Association and shortly after hired its first staff. Since 1995, the organization has been known as the Methow Valley Sport Trails Association. Since its humble beginnings the non-profit organization has grown and has facilitated the development of the nation's second largest Nordic ski trail system; transforming the once disconnected series of trails within the region into an elaborate network containing nearly 200 kilometers of all season trails surrounded by more than a million acres of national wilderness and forest lands.

As the region has grown with an increasing number of second homes and lodging facilities, the trails have become a central attraction and have contributed to both the near-term and long run economic stability of the valley. The 32-kilometer Community Trail remains the central corridor through the valley and connects the northwest community of Mazama with Winthrop and Sun Mountain Lodge. Today, however, the Community Trail is only one of dozens of trail offerings within the valley. The four main trail systems include the Methow Community, Sun Mountain,

Rendezvous, and Mazama Trails. Trails within these main trail networks comprise about 84% of all trails within the MVSTA system.

As reported in later sections of this report, today the network of trails generate about $4.5 million directly, another $4.1 million indirectly, and another $2.7 million annually through related industry earnings in the Methow Valley. Additionally, some 49 full-time jobs and 159 seasonal full-time and/or part-time jobs can be directly accredited to the network of trails and related land. In the less than spectacular 2004-05 season an estimated 21,900 skier-days brought in approximately $260,000 in trail pass revenues alone; this figure is exclusive of landowner, lifetime, and season passes holders.[3] Table 1 reflects total skier-day estimates for the period 1998 through 2004. Primary winter season uses of the trails include, Nordic or Cross-country skiing and snowshoeing. In the summer, the trails become a mountain biker and hiker Mecca. Other trail uses include equestrian riding, dog walking, running, nature observation, access to fly fishing areas, etc.

Table 1. History of Skier Days by Season (1998 through 2005)[4]

Season	MVSTA Estimated Skier-Days
1998-99	23,000
1999-00	24,600
2000-01	25,100
2001-02	27,300
2002-03	24,000
2003-04	25,000
2005-05	21,900

Source: MVSTA, 2005

The trail network is generally contained within a system of federal, state, and private lands.

Some 52% of the trail system is on U.S. Forest Service (USFS) lands with another 0.02% on U.S. Fish & Wildlife Service (USFWS) lands. Of the remaining lands, 2.1% is on Washington State Department of Natural Resources (DNR) land, and another 1.7% is on Washington State Department of Fish & Wildlife (WDFW) lands with 20-year permits (MVSTA 2005). The remainder runs over a complex of private lands on which MVSTA has entered into long-term agreements with landowners.

[3] The 2004-2005 winter season was generally warmer and drier than normal in Washington. Snowpack was at record low levels in the mountains; skiing facilities, snowparks and other snow-based activity areas were closed several weeks before the scheduled season closure. After reaching a maximum depth, mainly between 2 and 4 feet (or about half of normal), in the middle of January, snowpack declined for the rest of the winter. Many recall this being the worst season for skiing since the mid-1970's.

[4] Figures do not include season passes, landowners, patrollers, instructors, lifetime pass holders, ski team, or trade for trail passes, which would add add approximately 15,000 to all seasons (1998-2005)

Figure 3. Cascade Range near Study Area: Harts Pass

Source: Resource Dimensions, 2005 MVSTA study.

Since 1998, the valley has hosted an annual average of about 24,414 skier days on MVSTA trails each year. Additionally, over this same seven seasons there has been an annual average of 15,000 skier days for various in-kind season pass holders (e.g., landowners, patrollers, instructors, lifetime pass holders, ski team, and trade for trail pass holders), for a total annual average of 39,414 skier days (MVSTA 2005). Over all for the same period, use has grown by about 10% per year. About half as many mountain bikers pedal the trails in summer and their numbers are growing much faster. However, the MVSTA has not yet devised a method for getting revenue from bikers.

In addition to building and maintaining the trail system, MVSTA sponsors ski races, clinics and a variety of family oriented trail-based events. Both MVSTA and the Methow Conservancy are non-profit organizations. Their missions, while different in focus and coverage, convene on common ground.

1.3 Purpose

The primary intent of the study is to update and expand on the 1998 Economic Impacts and Characteristics report (RJR 1998). The ensuing analysis uses various methods to demonstrate the full range of direct, indirect, and cumulative economic impacts of the MVSTA trails systems within the region, and includes an assessment of economic impacts that can be attributed to MVSTA's system of trails and other protected lands within the valley. Generally, such impacts are referred to as non-market or non-use benefits that flow to and through the communities in the region. Finally, the analysis assesses the costs and the benefits to the economy of the Methow Valley and its communities related to the system of trails and protected lands in the region. This multi-method approach offers a more complete understanding of the broad range of services provided by the valley's intricate system of trails, greenways, river corridors and other protected areas and their related economic contributions provided to individual residents, businesses and visitors to the Methow Valley.

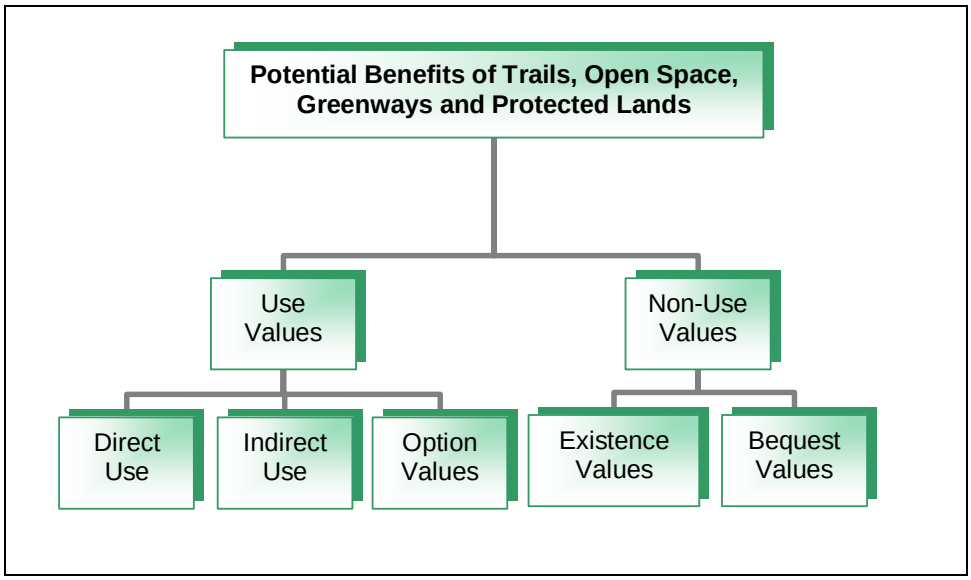
Thus, within the confines of resources and access to reliable data, the question: "What are the economic impacts and contributions of MVSTA trails and land resources of the Methow Valley on the counties economy?" is examined.

The question, while seemingly straightforward, rests within the complex framework of associated direct and indirect benefits and costs. Examining costs and benefits attributable to trail lands and the Methow Valley's protected landscape is key to this study. However, deciphering other less obvious costs and benefits is equally important to answering the question.

The stream of use and non-use benefits that flow to and through the communities in the region include direct use benefits derived from goods and services provided by recreational trails, greenways, and protected areas. Use benefits or values are both direct and indirect. ***Direct use*** benefits include things as lodging, food, clothing and recreation related equipment purchases and rentals, fuel, regional gifts, and so on (Figure 4).

On the other hand, ***indirect use*** benefits are functional in nature and include goods and services as flood control, water filtration, and provision of wildlife viewing and recreational opportunities, amenity values, cultural resources, viewsheds, and other passive use benefits. In recognition of the role of ecosystems in providing such benefits, they have been coined as "ecosystem" or "ecological" services. Studies conducted to date on the value of ecological services produced by nature; for example fish and wildlife habitat in Washington state indicates that such habitat is producing services worth many billions of dollars annually. Ecological services provide an indispensable complement to the human-created economy. As a result, people in communities across the state are becoming increasingly aware, that making informed decisions about local and regional economic sustainability and resource management cannot exclude from the equation this vast range of goods and services. ***Option value*** is the value society places on having such things as land and other natural resources available for possible future uses, as opposed to current uses. ***Non-use*** benefits are typically defined as the ***bequest value*** attached to the ability to bequeath, for example, a network of recreational trails and protected lands to future generations. ***Existence value***, the value society places on having such resources in reserve/available whether or not people ever use the area for any human activity.

Figure 4. Spectrum of Potential Benefits Generated by Trails and Protected Lands



Source: Gustanski, J.A. (2003)

The complex of trails and protected lands provide the Methow Valley with a range of recreational opportunities, cultural and historical attributes, improved environmental quality, nutrient cycling, biological controls, habitat, water supply, and particular amenity values that contribute to the quality of life. Across the country, communities that have made investments in the protection and enhancement of trails and open space resources are creating dynamic self-sustaining communities that are better positioned for economic stability. From improved potential for stimulating job creation and diversity, to enhanced property values and opportunities for local business expansion, to decreases in local government expenditures, and increases in local tax revenues, lands that provide resource-based recreation and protected areas have repeatedly proved their power in promoting healthy, vibrant and economically sound communities (ANJEC 1996; Backman and Backman 1993; Fausold and Lillieholm 1996; Gustanski 2001a, 2001b, 2003; Lawton 1986; TPL 1999). Given the far reaching network benefits provided and their important role in future decision-making for communities of the Methow Valley, we examine and quantify such benefits, where possible, in monetary terms.

Section 2: Methow Valley Regional Overview

2.1 Economy & Trends

2.1.1 Economic Setting

The Methow Valley's primary economic generators include agriculture, forestry, government, tourism, construction, real estate, and recreation. Agriculture in the Valley has included apples, cattle, sheep, beans, peas, corn, and alfalfa. While crop, fruit, and livestock production have declined over the past decade; alfalfa, orchards and cattle production continue to make up the bulk of the agricultural activity that remains (WASS 2001; NASS 2002). Additionally, timber continues to play an important role in the region's economy, despite the mill closing in Twisp in the late 1970's, and the more recent USFS cutbacks in timber sales

Resource-based recreation and tourism have been positioning to lead the post as primary economic sectors in the region for at least the past decade. With its discovery, the Valley's real estate and construction sectors boomed as the Valley's attraction as a second home market for the Greater Seattle area grew. The primary centers of Mazama, Twisp and Winthrop contain the majority of the area's galleries, hotels, restaurants, shops, and host a number of special events, which are most common between April and October when the North Cascades Highway (Hwy. 20) is open. Even so, Nordic or cross-country skiing, snowshoeing and snowmobile related businesses have been experiencing steady expansion in visitor activity over winter months.

Uniquely positioned, the Methow Valley has a diversity of recreational opportunities for residents and visitors including backcountry hiking, hunting, fishing, mountain biking, river rafting, rock climbing, backcountry skiing, snowmobiling, and snowshoeing. Area accommodations include several B&Bs, campgrounds, guest ranches, rental properties, hotels of all shapes and sizes, and a luxury resort. Area golf courses and others capitalize on their location in the foothills of the Cascade Mountains and attract convention business as well as other tourists who take advantage of the varied year-round recreational activities.

2.1.2 Regional Economy

Historic Economic Base

Okanogan County is located in the north central region of Washington State, immediately adjacent to British Colombia, Canada. Historically, the economy in Okanogan County began with fur trapping, trading, and gold mining during the first part of the 1800's. Later, the economy moved to sheep and cattle ranching, agriculture, and lumber and wood harvesting.

The construction of the Grand Coulee, Wells and Chief Joseph dams in the 20th century provided substantial employment in the region and allowed expansion of the county's agricultural sector. Later, the North Cascades Highway was constructed, allowing greater access from the population centers to the west and the North Cascades National Park Complex was created by an act of Congress in 1968. These two events have led to the expansion and development of a recreation and tourism industry in Okanogan County.

Apples are the primary agricultural product of Okanogan County and the largest major industrial sector. However, the apple industry is facing challenges to its dominance internally and externally. Within the region, cherry growing is creating competition for resources, and foreign countries, with lower labor costs, are expanding their production of apples.

Other established industries are constricting. Logging and lumber firms have reduced employment as timber lockups and industry restructuring have expanded. Mining and livestock production have also shrunk in size and importance to the county.

Population

The last U.S. Census, reports the population in Okanogan County was 39,600, representing less than one percent of the State of Washington population[5]. Residents living within the Methow Valley comprised only 6% of the county's population. Two incorporated towns, Twisp, population 960, and Winthrop, population 360, are located within the valley. Roughly half the valley's population lives within the boundaries of Twisp and Winthrop, while the remaining live in unincorporated areas. The largest population centers are located in the eastern part of Okanogan County; Omak, population 4,700, and Okanogan, population 2,435. These two towns represent 46% of the incorporated population of Okanogan County.

Table 2. Okanogan County and Incorporated Cities' Populations

County / Municipality	Census 2000	Estimate 2005	Estimate 2006	Estimate 2007
Washington State	5,894,143	6,167,800	6,246,747	6,326,706
Okanogan	39,564	41,458	41,964	42,475
Unincorporated	23,647	23,875	23,921	23,966
Incorporated	15,917	15,733	15,698	15,661
Winthrop	349	360	360	360
Twisp	938	960	960	960
Mazama*	96			
Carlton*	567			
Methow*	262			

Note: * unincorporated, ZIP Code area used.

Source: WOFMa 2004, U.S. Census 2000.

Okanogan County has not followed the same growth rate as the State of Washington. The County has experienced a lower growth rate than the state for all of the past 25 years, with the exception of a brief period in the early 1990's. Projections indicate that Okanogan County will continue to grow slower on average when compared to the whole State. Methow Valley experienced sustained population decline for the 20-year period ending in 2000.

[5] The U.S. Census Bureau identifies population by the place of primary residence. Therefore, it is assumed that the figures provided are for those residents reporting primary residence within the Methow Valley and that population estimates do not reflect the number of people who have recreational and/or second homes in the Methow Valley.

Table 3. Annual and Projected Average Rate of Change in Population (1980 – 2020)

Period	Methow Valley	Okanogan County	Washington State
AARC, 1980-1990	-0.08%	0.84%	1.78%
AARC, 1990-1995	-0.08%	3.14%	2.31%
AARC, 1995-2000	-0.08%	0.32%	2.04%
Projected AARC, 2000-2005	0.66%	0.94%	1.03%
Projected AARC, 2005-2010	0.85%	1.22%	1.28%
Projected AARC, 2010-2015	0.70%	1.00%	1.34%
Projected AARC, 2015-2020	0.48%	0.68%	1.31%

Source: WOFMc 2003.
Notes: AARC = Annual Average Rate of Change.

Table 4. Population Trends, Historic and Projected

Year/Measure Area	1970	1980	1990	2000	2005	2010	2015	2020
Washington State	3,413, 250	4,132,353	4,866,669	5,984,121	6,291,772	6,693,325	7,142,144	7,610,089
Okanogan County	25,867	30,663	33,350	39,564	41,458	44,061	46,315	47,920
Methow Valley area								
Winthrop	371	413	302	349				
Twisp	756	911	872	938				
Carlton	n/d	n/d	n/d	567	400*	N/A	N/A	N/A
Mazama	n/d	n/d	n/d	96	197*	N/A	N/A	N/A
Methow	n/d	n/d	n/d	262	762*	N/A	N/A	N/A

Notes:N/A – No known estimates or projections have been made; n/d – no data could be identified. *Estimates are based on unincorporated area zip code data as used by the U.S. Census, which reports figures slightly different from the WOFM, and may exclude a percentage of the region's population due to reporting methods.

Sources: U.S. Census 2000 and WOFMa

Employment and Labor Force

In 2000, Okanogan County's labor force consisted of approximately 20,860 workers, representing 0.7% of Washington state's labor force. The labor force has declined at an average annual rate of 1.75% since 1995. This decline is in opposition to the State's annual growth rate of 1.66% for the same period. A cycle of employment boom in the early 1990's, followed by an employment bust in the late 1990's is the reason for the decline. Over a 10 to 20-year period, Okanogan County has had a low but positive growth rate in its labor force, which is consistent with its population growth rate. (Table 4)

The average annual unemployment rate in Okanogan County fluctuates in a narrow range (Table 5). Over the last 30 years, the average unemployment rate has been double the national average and 5% higher than the average for Washington State. In 2000, the Washington State Employment Security Department (ESD) estimated that 41.3% of the industry in Okanogan County is seasonal, "characterized by large employment increases and decreases in particular and recurring months of the year" (ESD 2002). This agricultural and therefore seasonal nature of Okanogan County's economy creates a varying unemployment rate throughout the year. For

example, in 2001 the unemployment rate was approximately 15.3% in January and rose a further 0.9% in February, then gradually declined to 6.2% in October, the peak period of the apple harvest (ESD 2002). While the Methow Valley does experience seasonal fluctuations in employment, as reported in Section 6, its unique resource-based recreation niche and natural attributes lends greater stability, and contributes to an average unemployment rate typically about 2% below that of the County (see Section 2.2, Table 11).

Table 5. Okanogan County Civilian Labor Force

Year/Time Period	Total	Employed	Unemployed (Average for the Year)	Unemployment Rate
1980	16,450	14,170	2,280	13.9
1990	18,860	17,090	1,770	9.4
1995	22,790	20,400	2,390	10.5
1996	23,210	20,560	2,650	11.4
1997	23,440	21,250	2,190	9.3
1998	23,270	20,810	2,460	10.6
1999	21,460	19,380	2,090	9.7
2000	20,860	18,580	2,280	10.9
AARG, 1980-1990	1.38%	1.89%		
AARG, 1990-1995	3.86%	3.60%		
AARG, 1995-2000	-1.75%	-1.85%		
AARG, 1990-2000	1.01%	0.84%		

AARG = Average Annual Rate of Growth
Source: WOFMb 2003.

As shown in Table 6, the greatest number of business establishments in the Methow Valley are those typically falling within that of the service sector, accounting for about 52% of all area business establishments as reported and defined by the NAICS business code classification system[6] (U.S. Census 2002).

[6] The NAICS was developed jointly by the U.S., Canada, and Mexico to provide comparability in statistics about business activity across North America. ZIP Code Business Patterns presents data on the total number of establishments, employment and payroll. In addition, the number of establishments for nine employment-size categories is provided by detailed industry for each ZIP Code. Most ZIP Codes are derived from the physical location address reported in Census Bureau programs. The Internal Revenue Service provides supplemental address information. Those employers without a fixed location or with an unknown ZIP Code are included under an "Unclassified" category indicated by ZIP Code 99999.

Table 6. Business patterns of the Methow Valley, by NAICS code (2002)

Industry Code	Industry Code Description	Carlton Total #	Mazama Total #	Methow Total #	Twisp Total #	Winthrop Total #	Valley est. Total #
11----	Forestry, fishing, hunting, and agriculture	3	-	-	7	1	11
21----	Mining	-	-	-	-	1	1
22----	Utilities	-	-	-	-	2	2
23----	Construction	10	2	2	28	34	76
31----	Manufacturing	-	-	-	3	4	7
42----	Wholesale trade	1	-	-	2	-	3
44----	Retail trade	-	2	-	19	19	40
48----	Transportation & warehousing	-	-	-	1	2	3
51----	Information	-	-	-	3	2	5
52----	Finance & insurance	-	-	-	6	1	7
53----	Real estate & rental & leasing	-	3	-	2	10	15
54----	Professional, scientific & technical servi	-	1	-	7	9	17
56----	Admin, support, waste mgt, remediation ser	-	-	-	2	6	8
61----	Educational services	-	1	-	-	1	2
62----	Health care and social assistance	-	-	-	11	7	18
71----	Arts, entertainment & recreation	-	2	-	1	5	8
72----	Accommodation & food services	2	4	-	8	27	41
81----	Other services (except public administration)	1	-	1	9	7	18
99----	Unclassified establishments	-	-	-	-	2	2
	TOTAL	17	15	3	109	140	284

Source: U.S. Census 2002

Tables 7 and 8 reflect the breakdown of the labor force by industry group (Table 7) and occupation (Table 8) for communities of the Methow Valley, and provide composite averages for the Valley region.

Table 7. Workforce by Industry for the Methow Valley

	Carlton		Mazama		Methow		Twisp		Winthrop		Methow Valley	
Subject	#	%	#	%	#	%	#	%	#	%	#	Avg. %
Work Force by Industry												
Civilian Labor Force Employment												
Employed in Manufacturing	6	2.7	0	0.0	0	0.0	27	3.0	33	3.7	66	1.9
Employed in Retail Trade	25	11.1	7	29.2	20	17.1	72	7.9	104	11.8	228	15.4
Employed in Education	3	1.3	0	0.0	12	10.3	122	13.4	83	9.4	220	6.9
Employed In Health Care & Social Assistance	14	6.2	0	0.0	9	7.7	87	9.5	47	5.3	157	5.7
Employed in Other Industries	177	78.7	17	70.8	76	65.0	603	66.2	616	69.8	1,489	70.1
Unemployed Persons in CLF	11	4.7	10	29.4	8	6.4	134	12.8	88	9.1	251	12.5
Total employed in CLF	225	95.3%	24	70.6%	117	93.6%	1,045	87.2%	971	90.9%	2,411	87.5%

Note: Universe = employed civilian labor force
Source: U.S. Census 2000

As reflected in Table 8 some 78% of civilian labor force employment in the Methow Valley is in various service sector occupations, as defined by the U.S. Department of Labor, with about 22% in production sector occupations (e.g. agriculture, manufacturing, mining, and construction). In comparison, the nationwide the service sector comprises about 71% of all U.S. employment and is the largest component of the U.S. economy, making up (BLS 2001). Thus, while the estimate for the Methow Valley is slightly higher than the national estimate it is certainly in keeping with general trends for similar gateway communities in transition both in Washington state and across the nation.

Table 8. Workforce by Occupation for the Methow Valley

	Carlton		Mazama		Methow		Twisp		Winthrop		Methow Valley	
Subject	#	%	#	%	#	%	#	%	#	%	Total #	Avg. %
Work Force by Occupation												
Management, professional & related occupations	74	32.9	11	45.8	28	23.9	367	40.3	332	37.6	812	36.1
Service occupations	40	17.8	0	0.0	12	10.3	177	19.4	130	14.7	359	12.4
Sales and Office occupations	52	23.1	13	54.2	32	27.4	175	19.2	211	23.9	483	29.6
Farming, Fishing & Forestry occupations	23	10.2	0	0.0	12	10.3	38	4.2	24	2.7	97	5.5
Construction, extractions & maintenance occupations	32	14.2	0	0.0	15	12.8	73	8.0	127	14.4	247	9.9
Production, Transportation + material moving occupations	4	1.8%	0	0.0%	18	15.4%	81	8.9%	59	6.7%	162	6.6%

Note: Universe = employed civilian labor force
Source: U.S. Census 2000

Industry

The 2003 Employment Security Department information (ESD 2003) shows employment in agriculture, forestry, and fishing in Okanogan County was the second of all sectors, representing 26.5% of total employment. Annual wages in the agriculture, forestry, and fishing sector represented 16% of total annual wages, indicating that agricultural workers' wages are lower than wages in other economic sectors within Okanogan County. The situation is almost the opposite for the government sector, which has the highest employment levels. Government jobs account for 33.8% of total employment, and 48.4% of total wages, indicating relatively higher wages compared to other sectors. The retail trade and services sectors represent 13.6% and 15.1% of total employment and 9.6% and 13.5% of total wages, respectively. The agriculture, forestry, and fishing; retail; and services sectors exhibit a lower share of total wages than of total employment indicating relatively lower wages in these sectors. Within the agriculture, forestry, and fishing sector, crop production has the highest employment followed by agricultural services, together representing 96% of the agricultural sector.

Income and Wages

Okanogan County's average annual wage was approximately $19,700 in 2000, approximately 53% of Washington's average wage, indicating that workers in Okanogan County earn less per hour than workers in other counties in the state, or that they work fewer hours (i.e., seasonal employment). Similarly, per capita personal income in Okanogan County represented 60%t of

the state per capita personal income in 2000. Okanogan County's total personal income in 1999 accounted for 0.4% of the state's personal income in 2000 (Table 9).

Table 9. Okanogan County Income and Wages

Year	Annual Avg. Wage (1999)	Personal Income Per Capita (1999)	Total Personal Income (1999)
Okanogan County	$19,659	$20,068	$771,256
Adams County	$21,528	$20,941	$458,366
Chelan County	$23,874	$25,483	$1,550,254
Grant County	$22,473	$19,424	$1,398,915
Douglas County	$20,896	$19,204	$656,611
Washington State	$37,038	$30,380	$174,876,529

Source: ESD 2001d; ESD and BEA 2001.

Okanogan County's annual average wage ranked last among the five north central counties and is last among the 39 counties in Washington State Okanogan County ranks third in terms of per capita income and third in terms of total personal income. These wage measures do not include agricultural wages. However, in the eastern half of the state in 2000, the median wage for agriculture, forestry, and fishing was $15,420 and the mean (average) wage was $17,840 (ESD 2001c), substantially lower than the state as a whole.

According to 2000 Census data for Okanogan, the median household income in 1999 was $29,726 and the per capita income was $14,900 (U.S. Census 2000).

Table 10. Estimate of Methow Valley's Non-Agricultural Businesses, Employees, and Payroll (2002)

	Number of Establishments	Number of Employees	Annual Payroll (in $1,000)
Carlton	17	27	$659,000
Mazama	15	96	$1,644,000
Methow	3	1	$37,000
Twisp	109	325	$7,071,000
Winthrop	140	596	$14,443,000
Total	284	1045	$23,854,000

Source: U.S. Census 2000; WOFMd, 2003.

2.1.3 Agriculture

Employment

As stated above, the chief agricultural activity in the north central group of counties in Washington, of which Okanogan County is a part, is crop production. Within the crop production category, the highest employment in 2000 was in the production of apple crops. Cherry crops, pears and other fruits accounted for the remaining crop production employment.

During the apple season, the highest employment took place in September and October, the harvest season (ESD 2002). Employment generally increased during the 1990's until 1998. From that time forward, agricultural employment decreased 29% to 2002.

There has been increased diversification in agriculture as more growers have moved to cherry and pear production. Okanogan County has experienced a large shift away from fruit growing with approximately 30% of its orchards being taken out of production since 1997 (Schotzko 2003).

Crop Production

In Washington as a whole, the value of fruit and nut crop production has decreased approximately 0.7%, from $1.191 billion in 1991 (27% of total value of production in the state) to $1.182 billion in 2000 (22% of total value of production in the state). Fluctuations among interim years were up to 16%. More recently, the value of fruit and nut crop production experienced a 5% decrease between 1999 and 2000. The apple industry remains the leading industry in the state, but experienced an 11% decrease in value of production between 1999 and 2000 (WASS 2001).

In comparison, Washington's total value of agricultural production increased 2% between 1999 and 2000. Individual farms in Washington have generally been growing in terms of value of production, during the period 1969 to 1997. In total, however, production by Washington farms has been steadily decreasing since 1982, although prior to that (since 1974), it had been rising. The growing size of farms explains, in part, why individual farm production is growing but total production is falling.

The Washington Agricultural Statistics Service (WASS 2001) reports that the average price for apples in Washington fluctuated up to 56% during the period 1991 to 2000, as shown in Table 13. Other fruits that have experienced a price decrease during the same period include apricots, Bartlett pears, Winter pears, and prunes. Fruits that experienced an increase include sweet cherries and peaches (WASS 2001).

2.1.4 Local Economy and Established Business Districts

As stated in earlier sections, there is a shift occurring in the valley — a shift that began in the 1970s and continues today within the small communities and the unincorporated areas that comprise the Methow Valley. Principal employers are the timber, agriculture and recreation industries. All of these forms of employment are directly affected by seasonal weather variations. These fluctuations and lack of employment opportunities have been recognized as issues for consideration in planning for the region for some time (MVP 1976).

Timber and agriculture have been declining in the number of people employed over the past several decades leaving recreation and new industry as the basic source of potential employers. In general, heavy industry is not compatible with the geography or transportation routes within the immediate region.

Two incorporated towns, Twisp (population 960) and Winthrop (population 360) contain roughly half the valley's population. The balance lives in unincorporated areas. The majority of the areas galleries, hotels, restaurants, shops, and special events are held in the primary centers of Mazama, Twisp and Winthrop.

2.2 Demographic Characteristics & Trends

Recent research from rural demographers and sociologists has documented the vastly different demographic and economic trends of the nation's rural communities. According to Nothdurft (2002), the relatively dramatic increase in the average of populations (as illustrated in the Methow Valley) is part of a larger trend witnessed in many high amenity areas, particularly in the rural West. (Harris, et al 2000). This specific trend does not adhere to the traditional theories of labor market analysis, which predicts that people will migrate to places with higher wages. Nothdurft argues that although many of these regions are near urban areas, this factor alone does not explain the sum of all growth that has occurred.

Several hypotheses attempt to explain the nature of growth, and population shifts being experienced in these high amenity rural areas. For example, a Harvard University demographer believes that the growth is primarily due to baby boomers reaching retirement age and using the equity they have raised in their primary home and investment income to move to lower cost, higher amenity communities in the inland West and the Northwest (Nothdurft 2002). The second hypothesis put forth in Nothdurft's report is that the growth in these counties reflects the accelerating in-migration of retirees and self-employed individuals for whom remoteness is no longer a handicap. Thirdly, Larry Swanson an economist from the University of Montana contends that, "It is not the retirees in the traditional sense, it's the footloose and aging baby boomers who are making lifestyle changes (Nothdurft 2002, p.14)." Finally, William Beyers (2000), a geographer at the University of Washington who studied the economic and demographic trends of four high-amenity communities in the rural West, found that many middle-aged people were willing to forego high wages of the metropolitan areas for the environmental "quality of life" amenities of these rural counties.

Rural demographers have also categorized rural areas into certain types, each having its own set of characteristics. Thomas Johnson, in "The Rural Economy in a New Century," categorizes rural communities into "the isolated rural community" and "the connected rural community." Nothdurft (2000) categorizes rural communities into those with high natural amenities and those without. Johnson describes the connected rural community as having high levels of natural and man-made amenities and higher levels of income, education, and population growth than more isolated communities with an abundance of local niche agricultural and manufacturing shops. Johnson also contends that one of the results of these trends is "serious land use issues" as these communities become less and less rural and more and more suburban. Johnson reports that in many of these areas, traffic will overwhelm the local roads, much of the rural farmscape will have been replaced by large-lot residential development, campus-style industrial and commercial development, and strip malls. Should this occur within the Methow Valley, all of these could have detrimental impacts on the character and desirability of the region.

Implications of the County's demographic trends

Since 1970, the population of Okanogan County has increased by 53%; or 1.4% on average annually for the thirty-year period. By comparison the state's total population grew by 73%; an average of 1.8% growth annually. This growth, however, has not been even. In general a review of census data over the course of the past three decades reveals that in 1972-73 and again in 1985-86 actual population for the county decreased, and overall population remained stagnant for both the first half of the 1970's and 1980's, and was generally close to that of the state (U.S. Census, 1970-2000; ESD 1997, 2002).

Population changes usually echo shifts in local and regional economies—that is, people tend to move with employment opportunities. A review of natural change and migration which together comprise population change reveals the impact of in-migration. Generally, natural change (births minus deaths) tends to remain fairly constant and typically reacts only to major social disruptions (e.g. the baby boom in WWII's aftermath).

In Okanogan County, the natural change added 2,105 people to the population in the decade from 1990 to 2000. The migratory factor of population change, however, is the element that responds most quickly to changes in economic conditions. At 4,109, the migratory factor was nearly twice that of the natural increase for the same period. Together, they yield a population increase of 6,214 for the decade. In-migration is the dominant factor in the county's recent population growth. The implication is that the population, particularly in communities that have been undergoing a long-term shift from producing economies to service-based economies as those in the Methow Valley, should continue responding to changes in the economic climate.

Unlike other areas of the county, the Methow Valley is markedly ahead in its transition from an extractive resource-based economy to a more diversified one with significant service and trade components. In much of Okanogan county a significant proportion of the labor force is still based in traditional industries such as lumber and wood products, agriculture and agricultural products; although service-based employment is gaining ground over goods production countywide.

In addition, the distribution of population into various age groups has undergone some significant changes over the past few decades; indications are that this will continue for at least the foreseeable future. The median age for the Methow Valley as of the last census was 39.8, compared to the county and national median of 37.7 and 36.5 respectively. The "baby boomers," those born between 1946 and 1964, comprise a considerable segment of the population and the older ones are pushing 50+ years of age. In the next two decades, they are going to start moving into the ranks of the retired. While this is a fairly universal trend, the demographics of the Methow Valley puts its communities a few years ahead of the state/county curve, which will undoubtedly have implications on the need for and the provision of social and health services in the area. That is, older people generally require a much higher level of these services. The distribution of the population among various age groups as well as changes in that distribution over time can show aspects of the population that are not revealed by just the overall numbers.

The reason for briefly exploring some demographic trends in this section (population growth rate, population shift, increase in average age of residents, and higher education levels) is that they all have significant bearing on both the Methow Valley and the County's economy, and on future decisions about economic development strategies. The impacts discussed are largely from studies of other high amenity areas (Harris, et al. 2000). These studies have shown that the types of demographic trends of the Methow Valley present both opportunities and challenges for the local economy (Beyers 2000). In the following section, we briefly discuss some of the tourism trends and potential impacts related to demographic trends outlined above.

Table 11 provides various comparative demographic statistics for the communities of the Methow Valley against the county's metro area and the nation.

Table 11. Methow Valley Demographics compared to County/Metro Area and Nation

Population	Carlton	Mazama	Methow	Twisp	Winthrop	Avg. Methow Valley	Metro area	National
Population	400	197	762	2,454	1,384	1,039	39,006	285,658,441
Pop. density	3.3	0.6	4.8	4.5	6.7	4.0	30.2	1161.6
Percent male	50.9%	50.3%	53.6%	50.7%	49.0%	50.9%	51.5%	49.6%
Percent female	49.1%	49.7%	46.4%	49.4%	51.0%	49.1%	48.5%	50.1%
Median age	39.6	42.6	36.9	40	39.8	39.8	37.7	36.5
People per household	2.5	2.3	2.6	2.3	2.3	2.4	2.5	2.6
Percent married	66.1%	72.9%	66.1%	63.7%	65.3%	66.8%	61.3%	58.3%
Percent single	33.9%	27.2%	33.9%	36.3%	34.7%	33.2%	38.7%	41.6%
Median household income	$42,373	$47,787	$34,385	$34,495	$35,921	$38,992	$30,884	$38,353
Avg. income per capita	$17,323	$31,190	$12,909	$16,704	$22,143	$20,054	$15,031	$17,970
Housing	**Carlton**	**Mazama**	**Methow**	**Twisp**	**Winthrop**	**Avg. Methow Valley**	**Metro area**	**National**
Median home value	$156,900	$272,600	$117,400	$142,800	$187,500	$175,440	$133,727	$126,047
Median age of homes (years)	17.5	9.6	27.1	18.8	15.7	17.74	20.6	27.8
Home appreciation	7.3%	7.1%	7.2%	7.2%	7.2%	7.2%	7.2%	7.7%
Percent owning home	58.4%	24.3%	54.0%	57.7%	46.2%	48.1%	50.7%	63.4%
Percent renting home	12.1%	6.9%	21.9%	19.4%	16.5%	15.4%	20.8%	21.7%
Percent homes vacant	29.4%	68.8%	24.1%	22.9%	37.3%	36.5%	28.5%	14.8%
Percent commuting by carpool	11.4%	0.0%	19.8%	12.0%	11.6%	11.0%	15.3%	14.6%
Percent commuting by auto	72.2%	81.6%	58.1%	71.2%	69.5%	70.5%	67.7%	71.6%
Percent working at home	10.2%	18.4%	1.2%	9.8%	8.4%	9.6%	7.4%	5.6%
Education	**Carlton**	**Mazama**	**Methow**	**Twisp**	**Winthrop**	**Avg. Methow Valley**	**Metro area**	**National**
High school graduates	82.6%	91.6%	80.6%	81.7%	86.9%	84.7%	77.7%	76.5%
College degree - 2 year	13.9%	20.0%	4.0%	13.7%	10.0%	12.3%	9.6%	8.2%
College degree - 4 year	13.9%	34.7%	16.9%	15.5%	22.1%	20.6%	16.3%	14.9%
Graduate degree	11.4%	17.9%	8.9%	7.5%	10.0%	11.1%	6.5%	7.0%
Expenditures per student	$6,807	$6,753	$5,312	$6,756	$6,713	$6,468	$6,046	$5,896
Students per teacher	n/a	19.3	21.7	n/a	19	20	20.2	16
Students per librarian	584	584	642	584	584	595.6	617	934
Students per guidance counselor	759	759	514	759	759	710	690	560
Economy	**Carlton**	**Mazama**	**Methow**	**Twisp**	**Winthrop**	**Avg. Methow Valley**	**Metro area**	**National**
Unemployment rate	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	4.6%
Recent Job Growth	-3.4%	-3.4%	-3.4%	-3.4%	-3.4%	-3.4%	-3.4%	0.9%
Future Job Growth	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	11.4%
Sales tax	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	5.6%
Income tax	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%
Cost of living index	109	140	99	106	118	114.4	103	101

Source: U.S. Census 2001.

2.3 Tourism Trends & Effects

The people of Washington state are very active outdoor recreationists. Nearly three-quarters of the adult population participate in an outdoor sport each year. Hiking is the single most common activity with 44% participation, or in excess of 2 million Washingtonians. Bicycling on paved roads follows with 36%, and camping at 30%, car camping is at the same level, 30% (Table 12).

In winter some 346,000 persons go cross-country skiing, while an additional 77,000 do telemark skiing. Snowshoeing has 160,000 participants.

Table 12. Washington State - Participation Rates in Outdoor Recreation (2002)

Outdoor Activity	No. of Participants	% of Population*
Backpacking	582,737	12.8%
Bicycling: Paved Roads	1,638,947	36.0%
Bicycling: Off-road	1,033,447	22.7%
Bicycling: Single Track	951,500	20.9%
Bird Watching	368,763	10.2%
Camping	464,368	30.2%
Car Camping	1,374,895	30.2%
Canoeing	582,737	12.8%
Climbing: Natural Rock	77,395	17.0%
Climbing: Artificial Rock	77,395	17.0%
Climbing: Ice	27,316	0.6%
Fly Fishing	346,000	7.6%
Hiking	2,012,263	44.2%
Kayaking: Recreation/Sit-on-top	264,053	5.8%
Kayaking: Touring/Sea	291,368	6.4%
Kayaking: Whitewater	132,026	2.9%
Rafting	478,026	10.5%
Skiing: Cross-county/Nordic	346,000	7.6%
Skiing: Telemark	77,395	1.7%
Snowshoeing	159,342	3.5%
Trail Running	1,083,526	23.8%
All Activities	3,039,763	72.7%

*Note: +/- 1.2%, persons 16 years or older.
Source: Outdoor Industry Foundation, 2002

The USFS Region 6, the "Pacific Northwest" region includes national forest units in Oregon and Washington. As of 2000, it is estimated that the region as a whole received 33.9 million visits +/ 45.1% at the 80% confidence level (USFS 2001). For the Okanogan National Forest recreation use for calendar year 2000 at the 80% confidence level was 389,929 National Forest visits +/-23.1%. Some 72.8% of all visitors interviewed for USFS study indicated that their trip was primarily for recreation and that their trip included time spent within other areas, such as the Paysaten Wilderness Area, the Methow Valley area.

Significant growth is projected for outdoor recreation in Washington. The Interagency Committee for Outdoor Recreation (IAC) has forecasted that winter sports like cross-country skiing will increase by 23% during the period 2003-2013 and snowmobile riding will increase a dramatic 42% during the same period. Summertime activities are also projected to grow with hiking, bicycling, and nature activities increasing by 10%, 19%, and 23% respectively (Table 13).

Table 13. Washington State Estimated Growth (decrease) in Outdoor Recreation (2003)

Outdoor Activity	Estimated 10 Year Change	Estimated 20 year change
Walking	23%	34%
Hiking	10%	20%
Outdoor team and individual sports	6%	12%
Nature activities	23%	37%
Sightseeing	10%	20%
Bicycle riding	19%	29%
Picnicking	20%	31%
Motor boating	10%	No estimate
Non-pool swimming	19%	29%
Visiting a beach	21%	33%
Canoeing/kayaking	21%	30%
Downhill skiing	21%	No estimate
Cross-country skiing	23%	No estimate
Snowmobile riding	42%	No estimate
Fishing	(-5%)	(-10%)
Camping - primitive dispersed	5%	No estimate
Camping - backpacking	5%	8%
Camping - developed (RV style)	10%	20%
Off-road vehicle riding	10%	20%
Hunting-shooting	(-15%)	(-21)%
Equestrian	5%	8%
Air activities	No estimate	No estimate

Source: IAC (2003)

As demonstrated in Sections 4, 5 and 6 of this report, and several earlier studies, recreation and tourism plays an important role in Okanogan County and the Methow Valley economy and makes a substantial contribution to the quality of life of local residents (Okanogan County 1989; Okanogan County 1993; RJR 1998). In line with overall projections for the state, participation rates in outdoor recreation and nature-based tourism activities including wildlife observation, snow sports, water sports, hiking, mountain biking, and equestrian trail riding are projected to continue growing for the region into the foreseeable future.

This page intentionally left blank.

Section 3: **Methodology**

3.1 Introduction

Trials and greenways contribute to the quality of life in our communities. They foster economic growth, reduce congestion, improve the environment, contribute to personal health, and provide community identity. Yet most trails do not reach their full potential in all of these areas. To make the most of this resource trail stewards need to understand their audience. Surveys are valuable tools toward accomplishing this goal. By understanding the user, why they are there, and how they are changing, we can better manage today and better anticipate the needs for the future. The 2005 study was designed to both examine questions both similar to those asked in the 1998 survey and to pose new questions to aid trail managers with a new perspective on the MVSTA trail-user base and to evaluate any changes that have occurred.

3.2 Concepts

Many factors determine the attendance on a trail system, such as location, weather, amenities, and demographics. Without the benefit of exact counts, the best approach combines these diverse factors using a scientific regression approach. This combined with information from MVSTA relative to season passes and known draw counts for particular events provides a fairly accurate year-round trail use estimate. This value is of interest in estimating local use versus users traveling to the Methow Valley for several reasons, the primary being the importance of out-of-area financial inputs into the local economy. In addition, this estimate aids in understanding the complexion and extent of year round trail use, as well as potential implications of future trail development decisions. For this analysis, Resource Dimensions has used data on historical visitor attendance at Washington state parks conjoined with the MVSTA ski-days estimate to develop the independent variable used in the regression model.

Miscellaneous variables are used to explain expected visit characteristics. Resource Dimensions has classified these variables into three categories: 1) demographic - includes population, length of residency, and income of the region; 2) location - includes proximity to an interstate highway, colleges, parks, resource-based activities; and 3) capacity and amenities, including variables such as size and whether there is river/lake access, boating, and camping facilities, etc.

Regression results show that most variables behave as expected. While there is a significant portion of visitors from more than 100 miles away, local population impacts on trail use is also important. Proximity to interstate highway can boost visitor use by making a trail or other resource amenities more accessible to non-local visitors. The range of amenities such as camping and boating facilities can also attract more people and families with varied interests and different needs for trail use. The size of the trail system also matters, as larger networks can typically accommodate more visitors than smaller ones.

Based on the location and amenities of the Methow Valley and the MVSTA trail system, the regional population and income level, Resource Dimensions estimates the total annual visits to MVSTA trails and other resource-based amenity areas in the valley to be about 54,250 visitor days per year. There are a few factors appear to work against the trail, such as the lack of immediate access to an interstate highway, and lack of camping and water access facilities along

the trail. However, even in winter months when the northern approach (Hwy. 20) to the valley is closed, access from Seattle-Tacoma, Tri-Cities and Spokane metropolitan areas is relatively good. The resident population also provides a good local visitor base. In addition, the communities of Twisp and Winthrop, in particular, offer a range of alternative activities to valley visitors which may influence increased trip duration; thereby expenditures.

3.3 Approach & Assumptions

The study sought to examine the impact of the existing trail system and related land resources in the Methow Valley, particular focus was given to three distinct groups:

- residents living within the valley (including second home owners),
- trail users and trail pass holders, and
- Methow Valley area businesses

To comprehensively address the range of economic impacts a variety of methods were used to elicit value estimates relative to the scope, purpose and objectives identified in Section 1. Below we discuss the approach implemented relative to Sections 4 and 5 in particular.

3.3.1 Survey Approach

Following the method of much previous trail research, two surveys were designed to address issues relative to particular population subgroups — residents and trail-users, and area businesses. Areas of importance include trail use/visits, estimated expenditures and perceived values related to both trail lands and other land based amenities of the Methow. For the region's businesses the principle objectives were to identify peak periods in terms of business activity and if it was related to known peak periods of trail activities and to estimate the range of goods and services and primary and secondary expenditures attributable to trail visit generation.

To ensure statistical reliability of results a confidence interval goal of 95% was established. In other words, there is only a 5% chance that the differences observed among groups surveyed are due to chance. The return ratios secured for all groups surveyed surpassed the valid response rate required to infer results at a 95% level of confidence for each of the population subsets, thus ensuring the validity and reliability of results.

The resident/trail user survey is divided into five parts (Appendix B). The first seeks to obtain general information on respondent's primary residence and proximity to trails and/or MC protected lands in the valley. The second is directed toward learning more about resident and trail user (local and non-local) views and preferences on: general recreation, future opportunities for developing various recreation elements, relative importance of trails and protected lands in providing various environmental benefits to area communities, and importantly the stated willingness-to-pay (WTP) for development and maintenance of area recreation facilities. The third focuses more narrowly on trail use in the Methow Valley and the relationships between trail and other recreational activities, length of visits by non-local users and residents with second homes in the Valley, expenditures, and importance of resource attributes of the Methow Valley region. The fourth section aims to obtain critical information about respondent's views on open space and protected lands to the Valley. Lastly, the fifth, seeks to obtain general demographic information of the respondent population for purposes of analyzing data and extrapolating results to make inferences to the broader population.

Similarly, the business survey was divided into three main parts (Appendix C). The first seeks to obtain general business demographic and characteristics information on issues as location, size, business activities, business structure, and length of time in business, etc. The second focuses on identifying the relationship between the various business activity attributes identified by respondents and the level of importance ascribed to the trail and various natural resource attributes of the Methow Valley region. Finally, the third, seeks to understand the distribution of annual gross revenues across seasons and attribution to visitors, both general and those specifically using the network of trails.

Two primary question techniques were used for both resident/trail user and business survey:

- Direct closed-ended questions employing simple multiple-choice options (Robson 1993; Fink and Kosekoff 1998), and
- Short-answer, open-ended questions. This approach was used to reduce problems that may arise with narrative type questions, while allowing the participant an opportunity to expand their views and provide opinions (Mitchell and Carson 1989; Robson 1993; Fink and Kosekoff 1998).

Distribution Methods

Resident Sample

Using the mail survey approach, a random sample of 1,200 valley residents from zip codes 98814 (Carlton), 98833 (Mazama), 98834 (Methow), 98856 (Twisp), and 98862 (Winthrop) were asked about trail attributes, local land conservation strategies, trip duration and expenditures, types of use, expectations, direct and indirect impacts and a variety of quality of life issues. Recognizing that not all households in these areas are trail users, we also included questions about the frequency and type of trail usage by household members.

Some 477 surveys were returned from the resident sample distribution, a response rate of 40%. Following assessment for completeness and accurate use of response mechanisms a total of 461 surveys were verified for a 96.4% validity rate.

The third mechanism for survey distribution included making area residents and trail users aware that the survey was available on-line. Here they could down load the file, take the survey and post it back to the MVSTA office. Of the distribution methods, it appears to have been the least used. To attain the greatest success, Resource Dimensions has found that the availability of such surveys must be widely and repeatedly announced through various media channels. In addition, we have found that the availability and ability to take and submit surveys directly via the web enhances the likelihood that people will use this particular medium. These are considerations for future survey work and do not impact the validity of the responses received.

Trail User Sample

Primary distribution channels for the trail user sample included mail, on-trail availability President's Day weekend 2005, availability through several area hotels, and through the MVSTA website. As with the resident distribution, mailed surveys were sent to the trail user sample in early March 2005 using a random set of known local and non-local trail users. Trail user sample distribution consisted of 500 surveys with approximately 225 surveys returned for a 45% response rate. Of those surveys returned, assessment revealed 221 valid surveys, or a validity rate of 98.2%.

MVSTA trail users were randomly selected to participate in the survey on site at locations along the trails during President's Day weekend 2005. On agreement to participate, skiers were handed a survey to complete at their own leisure and return in the attached postage paid envelope. As a result of this sampling technique the responses are not completely random. However, given the efforts made to minimize extraneous influences on the data collected, this factor is not expected to have a significant impact on the findings of the survey.

Business Sample

The business survey was personally delivered and/or mailed to a list of approximately 180 area businesses in the communities of Carlton, Mazama, Methow, Twisp, and Winthrop. Roughly 63% of Methow Valley area businesses were included within the distribution; therefore the approach did not employ a bona fide census method. Only one particular subsector segment was identified by the client for exclusion from the list of area businesses developed; religious and educational institutions.

Of those surveys distributed, 137 valid surveys were returned, a 76.1% response rate. The survey provided a format through which area businesses were invited to provide information and express their views related to the economic impacts of Methow Valley trails and the natural environment on their business and related revenue streams. Results of the survey provide invaluable information on the relationships between the trails network and related recreation, the natural landscape and various dimensions of the valley's economy.

3.3.2 Method for Estimating Composition of Visits

While not an explicit objective of the study, an estimate of annual MVSTA trail use is necessary to undertake the economic impact objectives discussed throughout the report. Project budget limitations precluded conducting a probabilistic sampling procedure leading to a statistically valid count of trail users. Therefore model estimates for annual visits (local and non-local) were determined using an averaged estimate based on available visitation data for other resource-based recreation and amenity areas in the region[7] together with actual MVSTA trail pass data, and IMPLAN coefficients calculated for the project area (see Section 6).

The first iteration calculates an average annual visitation of about 470,369 visitor days. However, this includes all area visitors. To approximate the trail and related recreational visitors two other calculations are required. First, we estimate for the percentage of all visitors to the region (outside the Methow Valley) who made a specific trip to the Methow Valley as part of their trip using a factor of 13.98%, which yields a total of about 65,758 visitors. The second adjustment accounts for the percentage of these visitors whose primary purpose for visiting was trail related. Here we estimate a factor of 82.5 %, which renders an estimated 54,250 person-visits annually.

As discussed within this report, the economic impacts related to MVSTA trails comes mostly from visitor spending. To the extent possible, we have classified visitors into three categories based on their spending patterns: local users, non-local day users, and non-local overnight users for purposes of defining the economic impact model used in our analysis.

[7] Visitor use/visitation information used to estimate total visitor days included that from USFS Region 6, Okanogan National Forest, Pasayten Wilderness Area, Wenatchee National Forest, North Cascades National Park, and Loomis State Forest, together with actual MVSTA trail pass data. (USDA, 1989, 1990, 2001 and 2002; US DOI 1988; OCOPD, 2000; and MVSTA 2005).

The percentage of local visits varies greatly for many trail systems as that found in the Methow Valley. In addition, the composite of visitors fluctuates with seasons. For example, winter users may be more likely to be comprised of non-locals from distances nearer the region, while warm weather users may come from a larger geography. To account for expected fluctuations, a hybrid approach was developed to estimate the composition of trail visits and the contribution of tourism related activity to the regions economy. The regression model used indicates that the number of visits is dependent on population, amenities, and road conditions. Factors such as proximity to interstate have a large impact on non-local visits but will matter little on local visits. There is strong reason to believe that the number of local visits is correlated with the local population while the number of non-local visits is driven by many other factors.

For this assessment, it is assumed that the number of local visits to MVSTA trail lands by locals should be approximately the same percentage as that of non-locals (82.5%). The five communities through which MVSTA trails pass, have an estimated year round resident population of about 3,000 in 2005; thus about 2,475 local visits annually. Extrapolating to the primary population bases from which (winter) trail users and area visitors travel, we estimate approximately 54,250 non-local trail visitor days annually, +/- 16.8% at a confidence interval of 90%. This indicates that about 4.5% of all visits to MVSTA trails and the Methow Valley will be local visits, and 96.4% will be non-local visits.

Used together the confidence level and error rate define the reliability of the estimated visits. The confidence interval defines the range of values around the estimated visits with a specified level of certainty. The error rate is the upper and lower bounds of the confidence interval. The lower the error rate and the higher the confidence level the better the estimate. Given available data for the region, we believe 90% is very acceptable on a regional scale. The two terms are used to statistically describe the estimate. For example, at the 90% confidence level there are 54,250 non-local trail visits annually plus or minus 16.8%. In other words, we are 90% confident that the true number of MVSTA trail visits annually lies between 45,136 and 63,364.

3.4 Steps & Data Inputs

This particular project entailed three primary phases: 1) background/regional investigation and secondary data collection, 2) survey and interview design and implementation, and 3) data input, analysis and report on findings. Within each of these phases, various steps or tasks were conducted to ensure the integrity of project design and ultimately the quality of data obtained via the principal mechanisms, which included both primary data and secondary data sources.

Key steps included:

1. research and secondary data collection
2. survey design and development
3. acquisition of survey sample(s) and mechanics of distribution
4. other primary data collection, including miscellaneous area interviews
5. data sorting, validity testing, and completeness assessment
6. data input of both qualitative and quantitative information
7. data clean-up/processing and coding of qualitative data from interviews and surveys

8. quantitative and qualitative data analysis using SPSS, MS Excel, and The Ethnograph
9. interpretation of results and preparation of written reports

Central to the accuracy of results obtained for any economic impact analysis is the reliability of data inputs used to generate benefit and /or impact estimates. Primary inputs for the various analyses carried out were determined from the surveys administered to trail users, residents, and Methow Valley businesses.

Section 4: Survey Findings — Residents and Trail Users

4.1 Introduction

As stated in Section 3, a survey of both visitors and residents was distributed through three primary channels; mail, area hotels, and made available on the internet through both the MVSTA and MC websites. Mail distribution was accomplished for both MVSTA trail users and area residents in early March 2005 using a random set of 500 addresses of known users and a random set of 1,700 Valley residents' addresses. In addition, between February 18 and 21, MVSTA volunteers at various locations along the trails randomly selected users to participate in the survey.

Return rates and validity ratios for mailed surveys are shown in Table 14 below.

Table 14. Survey distribution, return rates and valid returns

Respondent Group	Total Surveys Distributed	Total Return	Return Rate	Total Valid Surveys	Validity Rate
MVSTA Trail Users	500	225	45.0%	221	98.2%
MV Residents	1,200	477	39.8%	460	96.4%
Total(s)	1,700	702		681	
Average(s)			42.4%		97.3%

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Because of the various techniques used, not all responses were completely random, which can result in over sampling of certain populations and introduce bias into results. However, given the size of the sample return rate against the Methow Valley resident population, and other checks in place, this factor is not expected to have a significant impact on survey findings.

As noted previously in Section 3, to validate any unique features that may set users versus the resident population apart, we maintained totally segregated databases and the following analysis is reported as such.

4.2 Demographics & Respondent Characteristics

The representativeness of responses received by the two respondent groups was assessed against several socio-demographic characteristics of the population from which they were drawn; see Table 7 in Section 2.2 for comparative statistics for the region. As can be seen in Table 15, the respondent population on average, has a higher proportion of female respondents than does the population for the region with the average of 50.9% male and 49.1% female (U.S. Census 2001). Generally, we would not expect this factor to have significant impacts on results. This disparity between the accessible sample and the population at large presents a problem only if males and females respond in significantly different ways to the survey questions posed. An assessment of response patterns was conducted on selected characteristics to test for potential need for

weighting to adjust for disproportionate representative male: female sample ratio. In all cases, response rates and responses to questions across the survey were not significantly different at a level of significance of $\alpha = 0.01$. Therefore, no weighted adjustment was made for the gender factor.

Table 15. Distribution of respondents by gender

Respondent Group	Male	% Valid Male	Female	% Valid Female	No Response	% No Response	Total Valid
MVSTA Trail Users	92	42.2%	116	53.2%	13	6.0%	218
MV Resident	196	42.6%	242	52.6%	23	5.0%	460
Total(s)	288		358		36		678
Average		42.4%		52.9%		5.5%	

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Although dispersal of questionnaires was not controlled by gender, age, education or other socioeconomic profile data, representation across the spectrum for the Methow Valley appears good. In Table 16, distribution of respondents, by age groups, is shown. The median age estimated for the respondent population is 44.8 compared to 38.9 for the region, and 44.0 in the Methow Valley CCD (U.S. Census 2000). As with male/female sample set demographics, Resource Dimensions ran an assessment of response patterns to test for potential need for weighting to adjust for age disparity between sample set and actual population. In all cases, responses across the survey were not significantly different at a level of significance of $\alpha = 0.01$. Therefore, no weighted adjustment was made for age.

Table 16. Distribution of respondents by age groups

Respondent Group	16-19		20-29		30-39		40-49		50-59		60-69		70+		No Response	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
MVSTA Trail Users	3	1.4%	12	5.4%	29	13.1%	66	29.9%	70	31.7%	21	9.5%	9	4.1%	11	5.0%
MV Residents	11	2.4%	50	10.9%	69	15.0%	135	29.3%	128	27.8%	27	5.9%	24	5.2%	16	7.2%
Total counts	14		62		98		201		198		48		33		27	
Average % of Population (Base)		1.9%		8.1%		14.1%		29.6%		29.8%		7.7%		4.6%		6.1%

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Table 17 provides a distribution breakdown for the length of residency for respondents living in the Valley. In that a proportion of respondents from the 'trail users' population reported on this question, several assumptions with regard to the 'trail user respondent population' must be made.

Assumptions made are as follows: 1) it is likely that some trail users approached on trail were not visiting users, but local or resident users; 2) it is equally likely that some resident users could have obtained and completed a survey questionnaire from one of the various establishments throughout the Valley in which surveys were available from mid-February through mid-March 2005; 3) some may be part-time residents, in that the Methow Valley may be the location of their family, vacation or 2nd home (see Table 18).

As with previous demographic subsets, Resource Dimensions assessed response patterns to evaluate potential need for correcting disparity by weighting the sample set. The correlation between users and residents and their responses across the survey is fairly linear and for this particular variable set testing proved again that there is little or no range of variability at a level of significance of $\alpha = 0.01$; thus, providing statistical evidence to support the accuracy of findings from the sample set obtained without weighting results.

Table 17. Distribution of respondents by length of residency

Respondent Group	Less than 1 Year		1 to 5 Years		6 to 10 years		11 to 20 Years		Over 20 Years		No Response		Total # Reporting
	#	%	#	%	#	%	#	%	#	%	#	%	
MVSTA Trail Users	3	1.4%	32	14.5%	24	10.9%	27	12.2%	26	11.8%	109	49.3%	221
MV Residents	4	0.9%	75	16.3%	69	15.0%	68	14.8%	78	17.0%	166	75.1%	460
Total(s)/Avg. % of Population (Base)	7	1.1%	107	15.4%	93	12.9%	95	13.5%	104	14.4%	275	62.2%	681

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Table 18 reports responses to question one of the survey; "Approximately how far is your residence from the Methow Valley?" As can be seen, an average of about 67% of all respondents (trail users and residents) does live in the Valley. For those reporting as a Methow Valley resident, some 23% report that they live between 25 and 200 miles outside the valley, or outside the state of Washington.

Table 18. Respondents by distance from Methow Valley

	Trail Users	Residents	Total
Live in Valley			
Number	128	330	458
% of Total	57.9%	71.7%	67.3%
25-50 miles			
Number	2	12	14
% of Total	0.9%	2.6%	2.1%
51-100 miles			
Number	13	23	36
% of Total	5.9%	5.0%	5.3%
101-150 miles			
Number	3	17	20
% of Total	1.4%	3.7%	2.9%
151-200 miles			
Number	73	73	146
% of Total	33.0%	15.9%	21.4%
Outside WA State			
Number	2	5	7
% of Total	0.9%	1.1%	1.0%
TOTAL(s)	221	460	681

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Table 19, provides some insights to assist in this evaluation and helps point to potential areas of discrepancy between reporting. For the most part it appears that explanation can be found in the number of respondents reporting whose second home is in the Valley, combined with those who have rental properties or other residential arrangements in the Methow Valley; however, there is no absolute correlation across these variables.

Table 19. Respondent residence status

	MVSTA Trail Users	MV Residents	Total
Primary Residence			
Number	102	271	373
% of Total	46.2%	58.9%	54.8%
Second Home			
Number	28	44	72
% of Total	12.7%	9.6%	10.6%
Used as a Rental			
Number	1	6	7
% of Total	0.5%	1.3%	1.0%
Unoccupied			
Number	4	6	10
% of Total	1.8%	1.3%	1.5%
Other			
Number	4	8	12
% of Total	1.8%	1.7%	1.8%
No Response			
Number	82	125	207
% of Total	37.1%	18.4%	30.4%
TOTAL(s)	221	460	681

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

In an effort to better understand the relationship between respondents and potential correlations between answers provided across the survey process, Part I, question 3a asks respondents who live in or own property in the Methow Valley to indicate the proximity of MVSTA's trail(s) in relation to their property (Table 20).

Table 20. Proximity of respondents to MVSTA trail lands or Conservancy protected lands

	MVSTA Trail Users	MV Residents	Total
MVSTA Trail on Property			
Number	4	15	19
% of Total	1.8%	2.2%	2.8%
Mvsta Trail along property boundary			
Number	13	29	42
% of Total	5.9%	4.3%	6.2%
Nearest MVSTA trail < 1 mile			
Number	32	74	106
% of Total	14.5%	16.1%	15.6%
Nearest MVSTA trail 1 - 5 miles			
Number	42	97	139
% of Total	19.0%	21.1%	20.4%
Nearest MVSTA trail 6 - 15 miles			
Number	28	53	81
% of Total	12.7%	11.5%	11.9%
Nearest MVSTA trail > 15 miles			
Number	3	12	15
% of Total	1.4%	2.6%	2.2%
Property protected by Conservancy			
Number	0	2	2
% of Total	0.0%	0.4%	0.3%
Property is near lands protected by Conservancy			
Number	6	22	28
% of Total	2.7%	4.8%	4.1%
DK if property is near MVSTA trail or Conservancy lands			
Number	3	16	19
% of Total	0.7%	3.5%	2.8%
Not Applicable			
Number	2	6	8
% of Total	0.9%	1.3%	1.2%
No Response			
Number	88	134	222
% of Total	39.8%	29.1%	32.6%
TOTAL(s)	221	460	681

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Table 21 shows the total number of respondents (28) reporting in question 3a that their land/property is: a) near property protected by the Methow Conservancy, b) the average estimated distance from Conservancy protected lands, and c) the percentage of those so reporting by trail user and Methow Valley resident respondent distributions.

Table21. Respondent proximity to Conservancy lands

	Trail Users		MV Residents	
	No. Respondents	Avg. Distance (miles)	No. Respondents	Avg. Distance (miles)
Average distance for respondents proximate to Conservancy protected lands				
Number of respondents	6	3.42	22	1.80
% of Total reported	21.4%		78.6%	

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Question 3b, asked respondents not living in or owning a home in the Methow Valley to give the location of their primary residence. Table 22 provides results for those respondents reporting.

Table22. Primary residence not in Methow Valley

	Trail Users	MV Residents	Total
Eastern Washington			
Number	7	17	24
% of Total	3.2%	3.7%	3.5%
Western Washington			
Number	67	78	145
% of Total	30.3%	17.0%	21.3%
California, Idaho, Oregon			
Number	2	5	7
% of Total	0.9%	1.1%	1.0%
Other U.S. State			
Number	1	7	8
% of Total	0.5%	1.5%	1.2%
Canada			
Number	1	5	6
% of Total	0.5%	1.1%	0.9%
Not Applicable / No Response			
Number	143	348	491
% of Total	64.7%	75.7%	72.1%
TOTAL(s)	221	460	681

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Table 23, reflects respondents responses as to location of primary residence if other than the Methow Valley, by area of Washington (east/west), other U.S. states or Canadian provinces.

Table 23. Breakdown of respondent's primary residence other than Methow Valley

	Washington		Other U.S. States								Canadian Provences	
Group	Eastern	Western	AZ	CA	CO	ID	MT	NV	OR	TX	BC	SK
MVSTA Trail Users	7	67	0	1	0	0	0	1	1	0	1	0
MV Resident	17	78	1	3	1	1	2	1	1	2	4	1
TOTAL(s)	24	145	1	4	1	1	2	2	2	2	5	1

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

4.3 Attitudes, Values & Perceptions

In Part II of the survey, questions 4 through 8, focus was on learning more about respondents attitudes, values and general perceptions regarding recreational facilities and trail resources in the Methow Valley.

So, just how important are public and private recreational facilities in the Methow Valley?

According to more than 680 respondents comprised of area residents, local and non-local trail users 586 (86%) felt it was very important. Another 66 (9.7%) believe it is important. Combined nearly 96% of the respondent population indicated, in response to question four, that public and private recreational facilities were either very important or important to the area. Table 24 provides the breakdown between trail users and area residents.

Recognizing the similarity in responses between the two population samples, Spearman's rank correlation coefficient test was conducted to examine correlation more closely. In doing so, we found a very strong correlation across all grouped responses $r = 0.9311$. While outliers, people holding different views and values, certainly occurred, the majority were found to express similar feelings as to the general importance of public and private recreational facilities in the Valley.

Table 24. Importance of public and private recreational facilities in the Methow Valley

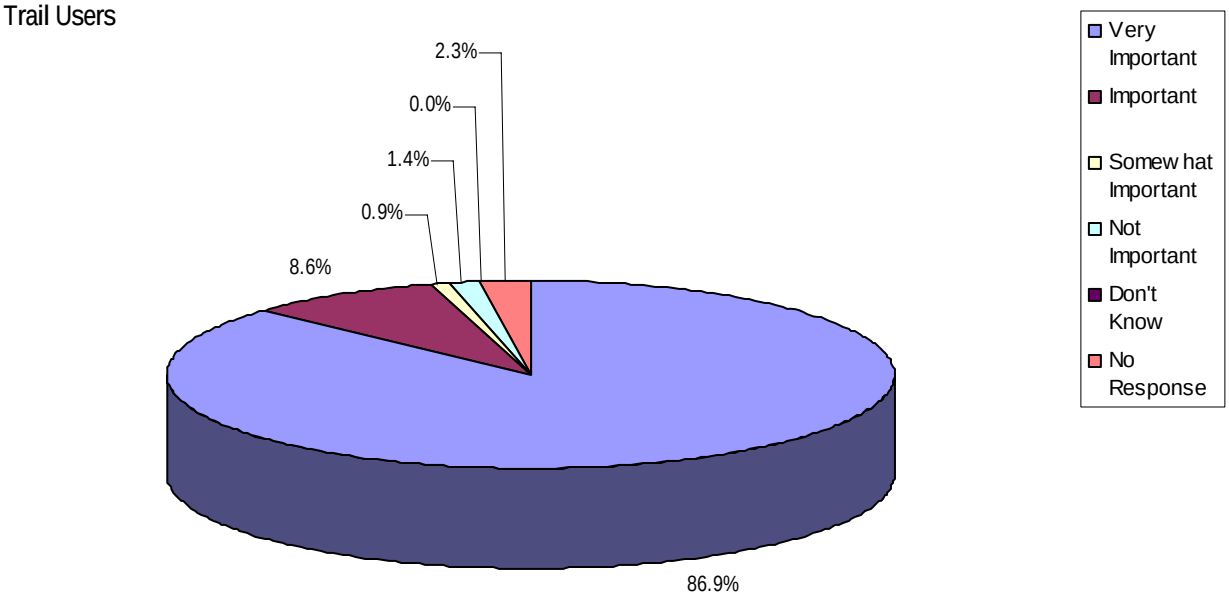
Respondent Group	Very Important	Important	Somewhat Important	Not Important	Don't Know	No Response	Total Valid
MVSTA Trail Users	192	19	2	3	0	5	221
MV Residents	394	47	8	6	2	3	460
Total(s)	586	66	10	9	2	8	681

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

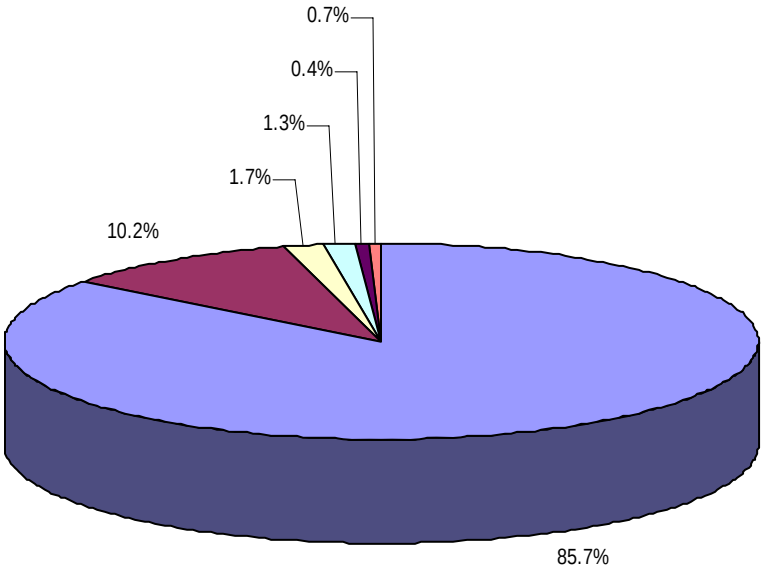
Figure 5 provides a graphic comparison of the representative respondent population pool. As shown, the two population subsets have strong and comparable feelings on the matter.

Figure 5. Comparison of respondent group views on importance of public and private recreational facilities in the Methow Valley

Trail Users



Methow Valley Residents



When asked in question 5a "Do you believe that the Methow Valley has enough trails, parks, playgrounds, and other outdoor recreation facilities to meet your family's or the community's needs?" trail users providing an answer to the question gave a "Yes" response slightly more frequently than did resident respondents , at 38.5% and 34.8% respectively. The resident respondent population, however, was slightly more likely to give a "No" response than were trail users at 53.5% and 48.4% respectively. The percent of respondents providing no response at all, 11.3% for trail users and 9.6% for residents, is of greater significance than the small percentage of all respondents indicating "Don't Know" (Table 25).

Table 25. Perceived recreational facility needs of community.

	Trail Users		MV Residents		Total	
	(#)	(%)	(#)	(%)	(#)	(%of total)
Yes						
	85	38.5%	160	34.8%	245	36.0%
No						
	107	48.4%	246	53.5%	353	51.8%
Don't Know						
	4	1.8%	10	2.2%	14	2.1%
No Response						
	25	11.3%	44	9.6%	69	10.1%
TOTAL(s)	221	100.0%	460	100.0%	681	100.0%

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Respondents giving a "No" answer were directed to a follow-on question (5b) which asked them to identify recreational facilities they felt most important to be developed in the community. In Table 26, summary results are provided for both resident and trail user groups. Figures 6 and 7 provide graphic illustration on the relative importance of various recreational facilities identified by respondents for development in the community. Comparative assessment of trail users versus resident respondents indicates striking agreement amongst most of the nine categories of recreational facilities ranked from the list of service/facilities presented on the survey. As can be seen in Figures 6 and 7 the top five for each respondent group, in order are:

1) Cross-country skiing trails
2) Walking/Jogging/Snowshoeing/Dog Trails
3) Mountain biking trails
4) River access
5) Swimming pool

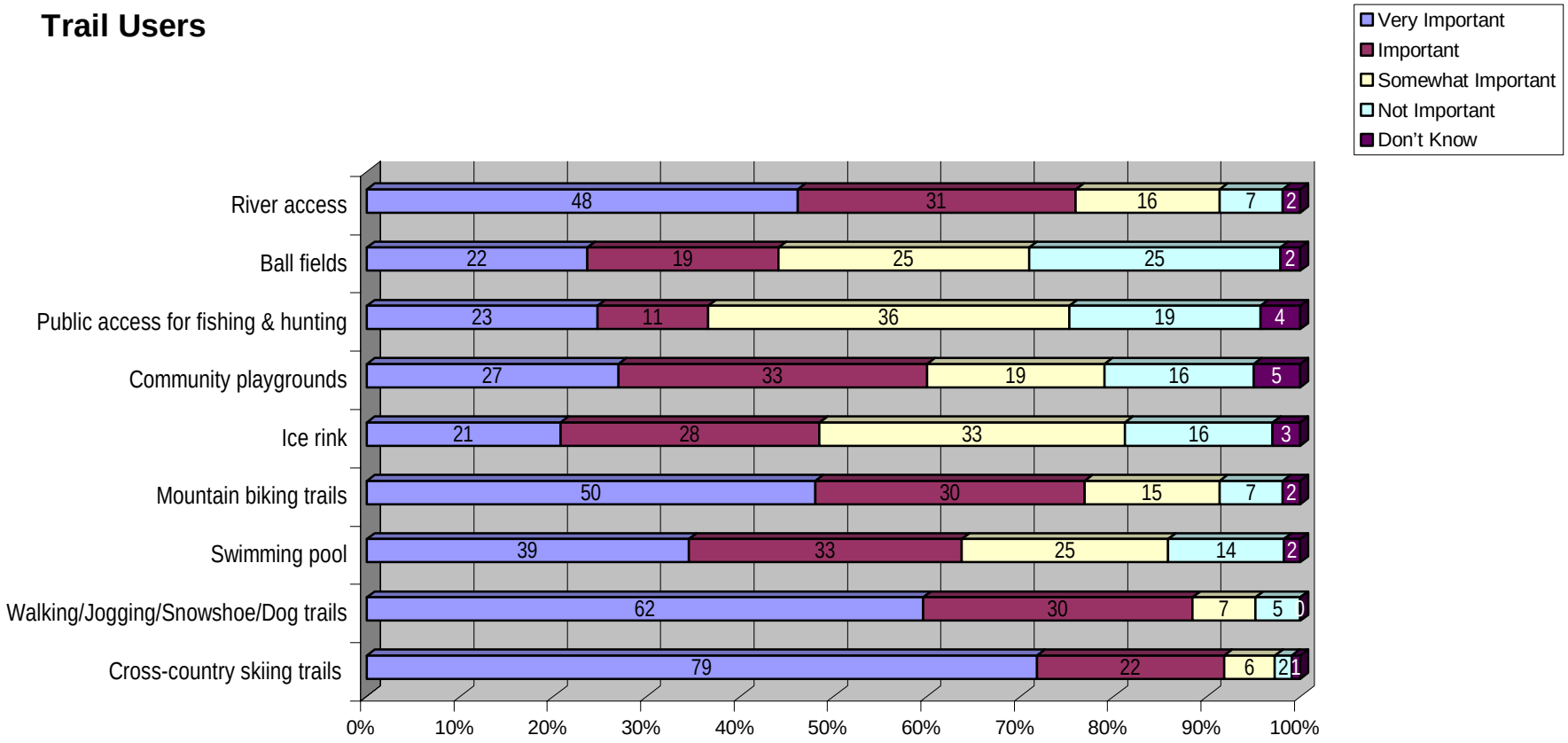
While some separation on importance of particular recreation facilities occurred between the resident and trail user responses for those respondents who completed the "Other" selection

Table 26. Recreational facility needs ranking by respondents

Recreational Facility Type	Respondent Group	Very Important	Important	Somewhat Important	Not Important	Don't Know	No Response	Total Valid
Cross-country skiing trails	MVSTA Trail Users	79	22	6	2	1	111	221
	MV Residents	157	56	25	2	10	210	460
Walking/Jogging/Snowshoe/Dog trails	MVSTA Trail Users	62	30	7	5	0	114	218
	MV Residents	131	71	34	8	5	211	460
Swimming pool	MVSTA Trail Users	39	33	25	14	2	108	221
	MV Residents	86	60	61	33	10	208	458
Mountain biking trails	MVSTA Trail Users	50	30	15	7	2	117	221
	MV Residents	100	75	38	13	14	220	460
Ice rink	MVSTA Trail Users	21	28	33	16	3	120	221
	MV Residents	47	73	64	39	11	226	460
Community playgrounds	MVSTA Trail Users	27	33	19	16	5	121	221
	MV Residents	62	68	32	44	19	235	460
Public access for fishing & hunting	MVSTA Trail Users	23	11	36	19	4	128	221
	MV Residents	46	35	75	43	19	242	460
Ball fields	MVSTA Trail Users	22	19	25	25	2	128	221
	MV Residents	56	48	46	56	17	237	460
River access	MVSTA Trail Users	48	31	16	7	2	117	221
	MV Residents	95	63	40	16	14	232	460

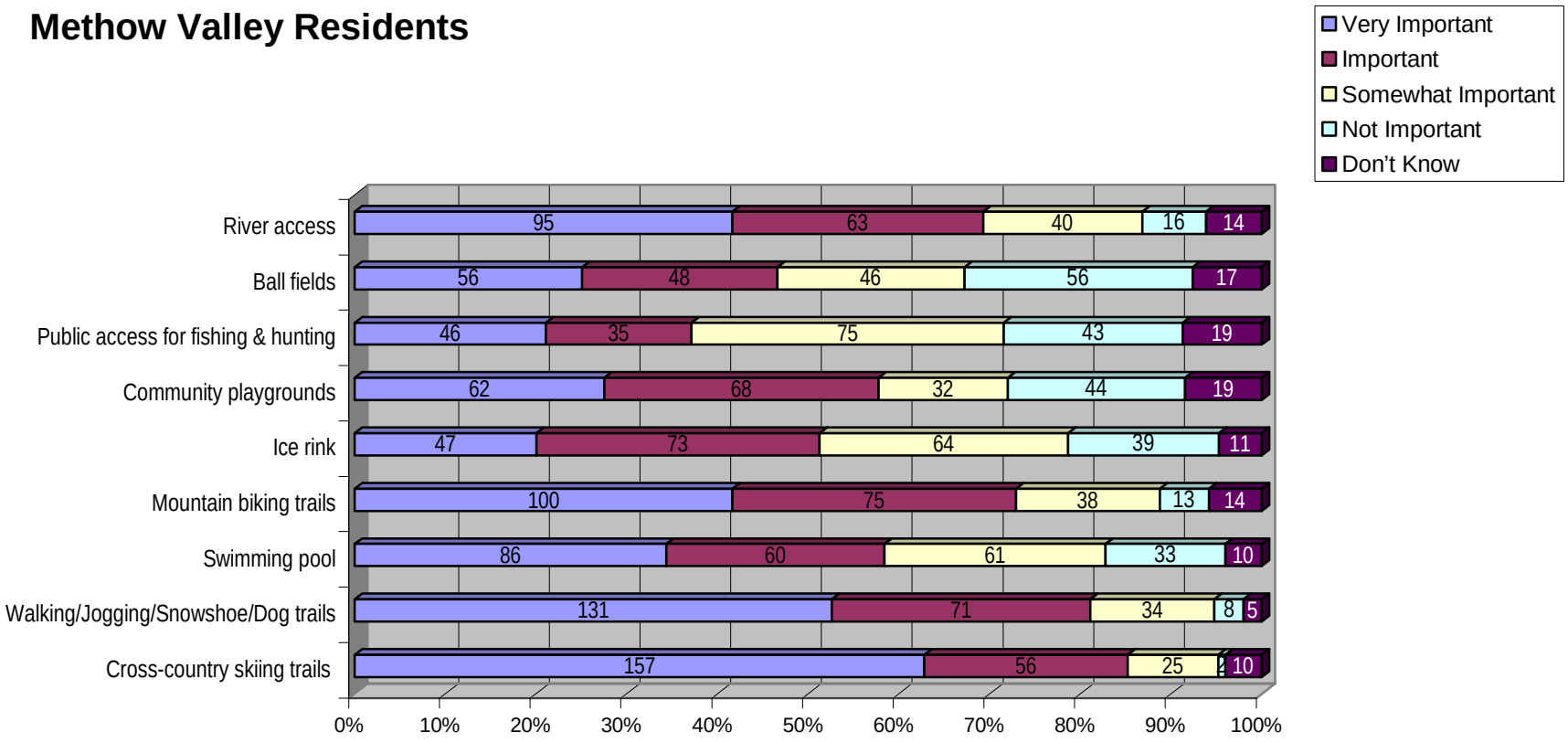
Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Figure 6. Recreational facilities identified as important for development in the Methow Valley by trail users



Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Figure 7. Recreational facilities identified as important for development in the Methow Valley by residents



Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

and provided one or more write-in answers on the question of recreational facilities they felt important for development in the Methow Valley, the majority of responses were generally quite similar. Below we list the top five "Other" responses provided by each respondent group, in order of total counts (Table 27).

Table 27. List of "Other" recreational facilities identified as important to Methow Valley by respondents.

Methow Valley Residents:

1) Swimming – lake access & pools
2) Dog trails/parks
3) Paved commuter bike trails
4) Separate trails for snowmobiles
5) Horse trails and access

Trail Users:

1) Ski trails connecting Twisp and near Twisp.
2) Swimming – lake access & pools
3) Horse trails and access
4) General "parks" for picnicking, etc.
5) Trails connecting the Valley's communities/town walking trails

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Other less frequently mentioned recreational facilities mentioned by respondents as important facilities for the Methow Valley include: tennis courts, public campgrounds, skateboard/roller blade park, and general playing fields. Some of the more unique responses presented by respondents include: community art center, curling facility, fog lines for road cycling, back country full service huts, and a biathlon range.

In question 5C, respondents were asked to list up to three of the recreational facilities identified in 5B (inclusive of write-ins) that they felt were "most important." Table 28 enumerates, in rank order, those recreational facilities identified by resident and trail user respondents.

Results for individual respondent groups indicate that there is no significant difference between resident and trail user respondents' rank order preferences for particular recreational facilities. The significance of such indicators, in so far as the Methow Valley region is concerned, reveal similar values and interests between residents and non-local visitors relative to their views and preferences for particular recreation amenities.

As seen in Table 28, rank order preferences for the three most frequently selected facilities are:

1) Cross-country skiing trails,
2) Walking/Jogging/Snowshoe/Dog trails, and
3) Mountain biking trails

Table 28. Recreational facilities importance ranked by trail users and resident respondents

Recreational Facility Type	Respondent Group	1	Cumulative Rank Total	2	Cumulative Rank Total	3	Cumulative Rank Total	Total Valid	Cumulative Total
Cross-country skiing trails	MVSTA Trail User	114	322	10	50	3	18	499	762
	MV Resident	208		40		15		263	
Walking/Jogging/Snowshoe/Dog trails	MVSTA Trail User	20	77	66	187	15	53	365	581
	MV Resident	57		121		38		216	
Swimming pool	MVSTA Trail User	13	48	25	68	14	42	168	274
	MV Resident	35		43		28		106	
Mountain biking trails	MVSTA Trail User	4	21	34	103	34	98	196	346
	MV Resident	17		69		64		150	
Ice rink	MVSTA Trail User	3	11	5	22	16	43	57	109
	MV Resident	8		17		27		52	
Community playgrounds	MVSTA Trail User	2	10	6	18	19	56	55	112
	MV Resident	8		12		37		57	
Public access for fishing & hunting	MVSTA Trail User	3	13	4	14	11	30	45	84
	MV Resident	10		10		19		39	
Ball fields	MVSTA Trail User	1	2	6	21	9	36	39	82
	MV Resident	1		15		27		43	
River access	MVSTA Trail User	6	19	8	31	27	83	91	183
	MV Resident	13		23		56		92	
Other	MVSTA Trail User	14	36	6	19	6	21	81	131
	MV Resident	22		13		15		50	

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

In Part II, question 8, respondents were asked to consider a list of various public benefits that trails and trail corridors may provide to surrounding communities. Respondents were then asked to rank (1 = extremely important to 5 = not at all important) the extent to which they feel the Methow Valley trails are important in providing the benefits listed to the region. Scale attributes are such that the lower the score, the higher the level of importance. Rank averages provide an estimate as to how the respondent groups generally view and value contributions made by the various attributes. Resident (1.77) and trail user (1.26) respondents ranked "Preserving undeveloped open space" as the most important service provision; followed by "Opportunities for health and fitness" with resident and trail users averages of 1.77 and 1.79 respectively. The third most highly ranked is "Aesthetic beauty" at a resident average score of 1.81 and 1.95 for trail users. Resident and trail user respondent average rank scores for all but two benefits listed, reducing air pollution and improving water quality, were the same; thus suggesting similar utility across both populations. Table 29 presents the results for both respondent groups.

Table 29. Ranking of respondent views on importance of public benefits provided by Methow Valley trails

Public Benefits of Trails & Trail Corridors		Extremely Important	Important			Not at All	No Opinion	Total Valid	Average Scale Rank
Preserving undeveloped open space	MVSTA Trail Users	158	27	12	4	2	18	221	1.26
	MV Residents	320	74	29	10	7	20	460	1.77
Aesthetic beauty	MVSTA Trail Users	144	43	17	1	3	13	221	1.95
	MV Residents	288	110	28	10	5	19	460	1.81
Community pride	MVSTA Trail Users	87	62	35	5	5	27	221	2.79
	MV Residents	172	128	83	15	15	47	460	2.68
Tourism and related economic development	MVSTA Trail Users	100	50	44	6	11	10	221	2.30
	MV Residents	197	107	95	21	29	11	460	2.23
Traffic reduction and transportation alternatives	MVSTA Trail Users	61	39	57	27	13	24	221	3.20
	MV Residents	137	82	119	59	22	41	460	2.98
Opportunities for health and fitness	MVSTA Trail Users	140	51	17	5	1	7	221	1.79
	MV Residents	268	123	43	9	5	12	460	1.77
Access for persons with disabilities	MVSTA Trail Users	49	62	66	13	7	24	221	3.10
	MV Residents	116	147	118	31	9	39	460	2.79
Public recreation opportunities/location for special events	MVSTA Trail Users	63	67	50	17	5	19	221	2.82
	MV Residents	123	156	101	36	9	35	460	2.70
Public education about nature and the environment	MVSTA Trail Users	67	77	48	10	6	13	221	2.56
	MV Residents	151	162	98	23	9	17	460	2.30
Increasing nearby property values	MVSTA Trail Users	28	30	55	36	44	28	221	3.98
	MV Residents	52	71	105	83	104	45	460	3.85
Improving water quality	MVSTA Trail Users	76	55	45	14	7	24	221	2.90
	MV Residents	163	118	92	30	14	43	460	2.72
Reducing air pollution	MVSTA Trail Users	78	53	40	15	13	22	221	2.89
	MV Residents	174	100	79	42	25	40	460	2.75

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Part III of the resident and trail user survey dealt more specifically with actual Methow Valley trail use by respondents. Although the majority of this section of the survey (questions 9 through 19) was directed to visitors and part-time residents, all respondents were encouraged to read and complete questions within the section as applicable. Thus, the total number of respondents providing answers to any given question in the section is variable. Results from this portion of the survey are therefore discussed and shown for this subpopulation of respondents.

In question nine, respondents were asked to indicate which days of the week they were most likely to spend in the Methow Valley on a visit to the area. Results are shown in Table 30 and presented graphically in Figure 8. Saturday and Sunday are peak days for both trail users and residents.

To examine the particular resident group that provided an answer to this question, and others posed in Part III of the survey, a pattern frequency was conducted and a Spearman's rank correlation coefficient run on relationship between high visit days and responses to question 11, which asks respondents what type of accommodations they stay in on an overnight to the Methow Valley. We found that approximately 28% of respondents stating "visit days" indicated they stayed in their second home or on their own land in the Valley. Spearman's coefficient is $r = 0.9107$, indicating a very strong correlation between resident respondents whose primary domicile is other than the home in which they stay while in the Methow Valley. This is important to understanding some of the subsequent findings.

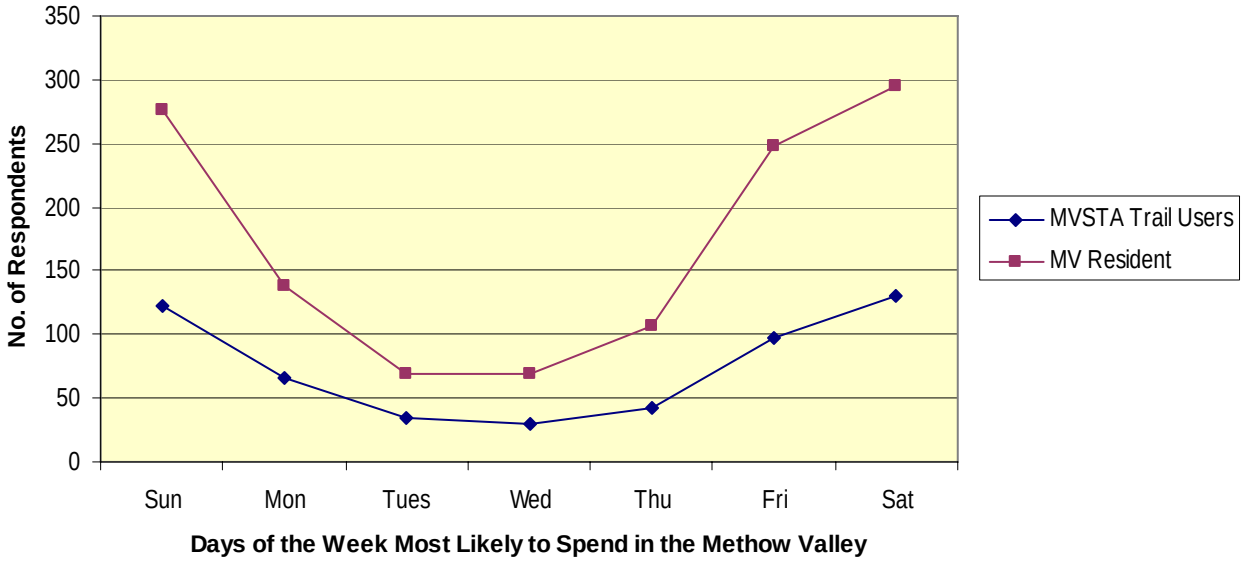
Table 30. Respondent Counts for Days of the Week Most Likely to Spend in the Methow Valley

Respondent Group	Sun	Mon	Tues	Wed	Thu	Fri	Sat	Cumulative Total
MVSTA Trail Users	123	66	35	30	43	98	130	525
MV Residents	276	138	69	69	107	248	295	1202
Total (days of the week)	399	204	104	99	150	346	425	1727

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

As seen in Figure 8, the curve for the trail user sample is generally concave, while the curve for residents appears to be both concave and somewhat convex. A likely explanation is that non-local trail users are more likely to visit at the weekend given work and family obligations at home that would typically preclude frequent extended weekend trips, for example. On the other hand, resident respondents with a second home in the Methow Valley are likely to have organized their work and family life in a way that allows them to use their homes; thus, traveling to the Methow more frequently and for longer visits on average. The convexity of the curve that occurs between Thursday and Saturday indicates that a greater proportion of this population begin their Methow Valley stay on Thursday, rather than only Friday or Saturday. Overall, they also travel to the area with greater frequency across the sample than their trail user counterparts.

Figure 8. Days of the Week Most Likely to Spend in the Methow Valley



Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

To gain a better understanding of visit duration, question 10a asked respondents how many days on average they spend on a visit. Results for both respondent groups are shown in Table 31. On average, non-local trail users stay 4.09 days and residents' averaged 11.55 days. Given the conclusions drawn from the correlation analysis about the resident respondent group, the results are predictable. Question 10b asked respondents how many days they spent on Methow Valley trails during their last visit. Findings reflect that trail users averaged 3.05 days and residents 6.09, indicating a greater percentage of on-trail time allocated per trip by trail users (74.5%) compared to 52.7% for residents.

Table 31. Average number of visitor days to Methow Valley Visit and trails use.

Respondent Group	
MVSTA Trail Users	
Total number respondents	115
Average number of visit days*	6
Adjusted average number of visit days[Y]	4
Average number of trail days on last visit	3
Total days spent by all respondents	615
MV Residents	
Total number respondents	285
Average number of visit days*	12
Average number of trail days on last vist	6
Total days spent by all respondents	3,208
Total visitor days both respondent groups	3,823

*Outliers removed for apparent residents, e.g. response of 365 days.
Second tier outliers removed, e.g. responses indicating potential of seasonal residence (30+ days).

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

For those visitors who stay overnight in the Methow Valley, question 11 asks respondents to identify up to three accommodation types they typically use, by numerical preference order from a list of eight accommodation types most commonly found in the region. The "Other" alternative provided respondents an opportunity to identify an accommodation type not listed. For those survey participants selecting "Other" the single most frequently provided response was camping on land or property they owned in the Methow Valley. Table 32 reflects respondent preferences for overnight accommodation type by rank order.

Table 32. Respondent preference ranking for Methow Valley accommodation

Accomodation Type	Respondent Group	1	Cumulative Rank Total	2	Cumulative Rank Total	3	Cumulative Rank Total	Total Valid	Cumulative Total
Hotel/Motel	MVSTA Trail Users	16	46	14	41	9	27	39	114
	MV Residents	30		27		18		75	
Inn/Bed & Breakfast	MVSTA Trail Users	12	30	15	44	6	16	33	90
	MV Residents	18		29		10		57	
Second Home	MVSTA Trail Users	27	68	3	9	3	8	33	85
	MV Residents	41		6		5		52	
Public Campground	MVSTA Trail Users	7	17	13	32	6	13	26	62
	MV Residents	10		19		7		36	
Private Campground	MVSTA Trail Users	1	4	3	11	2	5	6	20
	MV Residents	3		8		3		14	
Family/Friends Home	MVSTA Trail Users	15	52	4	10	2	4	21	66
	MV Residents	37		6		2		45	
Cabin/Lodge Rental	MVSTA Trail Users	39	104	6	16	8	24	53	144
	MV Residents	65		10		16		91	
Other	MVSTA Trail Users	2	12	2	7	0	4	2	21
	MV Residents	10		5		4		19	

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

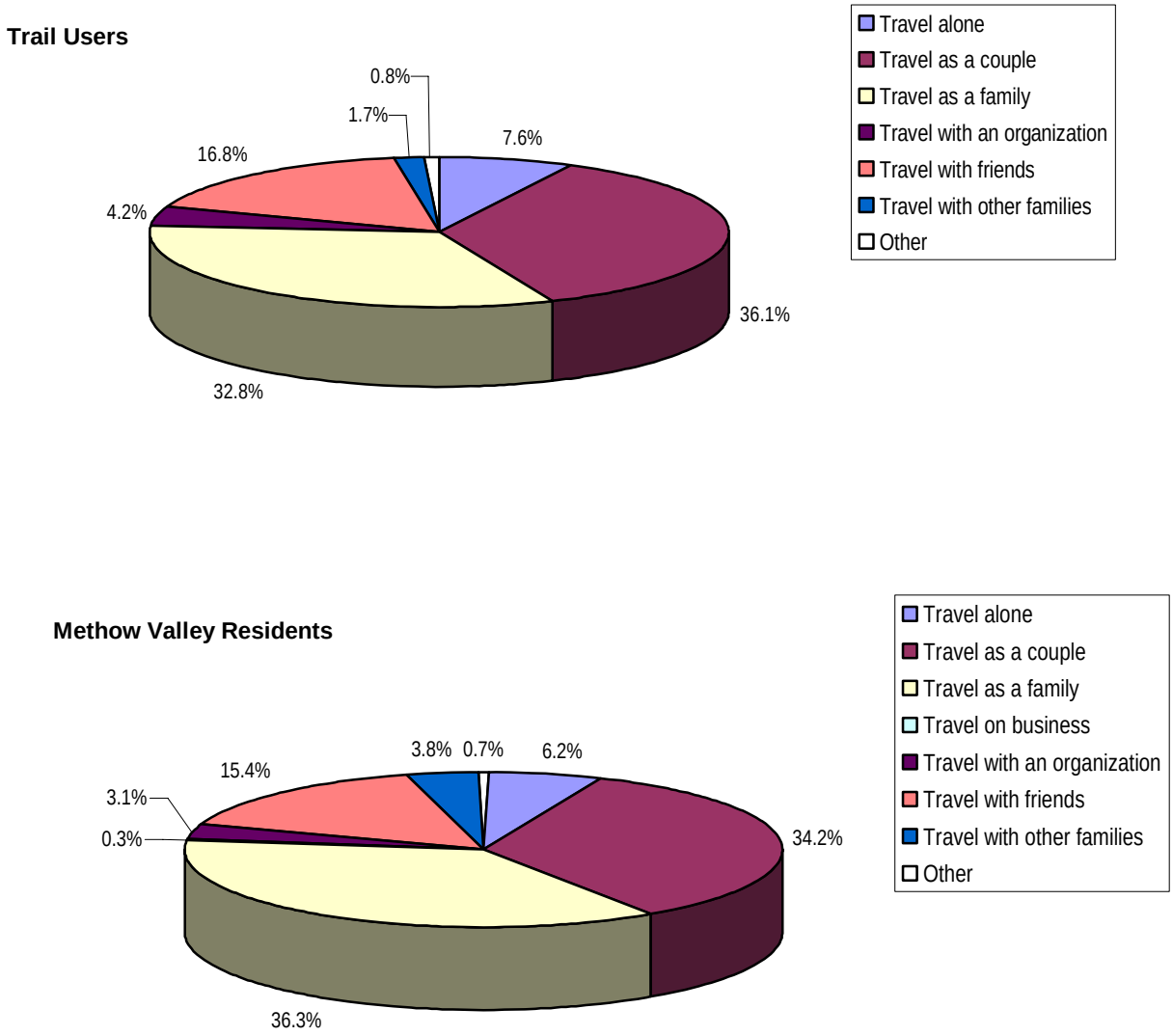
Through respondent answers to question 12, we learned additional information about respondents' typical travel to the Methow Valley; principally whether respondents travel to the area for business or pleasure, and general traveling party characteristics. This information helps explain unique features of the sample population that affects factors as the length of trip and the nature of activities, and expenditures made while in the area. Table 33 presents distribution statistics on travel party types for each respondent group, while Figure 9 provides graphic representation.

Table 33. Distribution of respondent travel parties

MVSTA Trail Users	No. of Respondents	% of Respondents
Travel alone	9	7.6%
Travel as a couple	43	36.1%
Travel as a family	39	32.8%
Travel on business	0	0.0%
Travel with an organization	5	4.2%
Travel with friends	20	16.8%
Travel with other families	2	1.7%
Other	1	0.8%
MV Residents	**No. of Respondents**	**% of Respondents**
Travel alone	18	6.2%
Travel as a couple	100	34.2%
Travel as a family	106	36.3%
Travel on business	1	0.3%
Travel with an organization	9	3.1%
Travel with friends	45	15.4%
Travel with other families	11	3.8%
Other	2	0.7%

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Figure 9. Breakdown of Typical Travel Parties (as reported by survey respondents March 2005)



Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Information provided by respondents to question 13 presents critical data on the range of goods and services purchased or expected to be purchased on a typical visit to the Methow Valley. Additionally, the data allows us to make some inferences about interests and needs of non-local visitors. In aggregating the data, we are able to conduct necessary estimates required in conducting various aspects of the economic impact analysis. Results are set forth in Table 34.

Table 34. Respondent reported expenditures during typical Methow Valley visit.

Item/Category of Goods & Services	Respondent Group	No. Reporting	Individual Purchase	Group/Family Purchase	Total $ per average visit	Avg. $ spent/ Respondent Visit
Accommodations/Lodging	MVSTA Trail Users	67	$ 1,070	$ 30,838	$ 31,908	$ 476
	MV Residents	135	$ 1,790	$ 56,202	$ 57,992	$ 430
Groceries/Beverages/Snacks	MVSTA Trail Users	84	$ 690	$ 7,960	$ 8,650	$ 103
	MV Residents	180	$ 880	$ 15,394	$ 16,274	$ 90
Food – Restaurant meals/Fast-foods/Bar	MVSTA Trail Users	84	$ 510	$ 9,201	$ 9,711	$ 116
	MV Residents	181	$ 1,020	$ 20,776	$ 21,796	$ 120
Purchase of Recreational Equipment/Supplies (e.g., skiing, bicycling, hiking, camping, fishing, etc.)	MVSTA Trail Users	69	$ 355	$ 4,787	$ 5,142	$ 75
	MV Residents	110	$ 1,645	$ 9,997	$ 11,642	$ 106
Rental of Sports Equipment (e.g., skis, boats, bikes, etc.)	MVSTA Trail Users	36	$ 65	$ 2,083	$ 2,148	$ 60
	MV Residents	76	$ 168	$ 4,235	$ 4,403	$ 58
Fuel (gas, oil, other)	MVSTA Trail Users	67	$ 196	$ 2,755	$ 2,951	$ 44
	MV Residents	142	$ 637	$ 6,081	$ 6,718	$ 47
Gifts/ Souvenirs (e.g., arts, crafts, regional specialties, etc.)	MVSTA Trail Users	39	$ 120	$ 2,085	$ 2,205	$ 57
	MV Residents	102	$ 500	$ 7,280	$ 7,780	$ 76
Medical/Dental/Other Professional services	MVSTA Trail Users	9	$ 270	$ 165	$ 435	$ 48
	MV Residents	16	$ 390	$ 3,355	$ 3,745	$ 234
Auto repair	MVSTA Trail Users	7	$ 500	$ 230	$ 730	$ 104
	MV Residents	19	$ 500	$ 2,125	$ 2,625	$ 138
Entertainment (e.g. videos, concerts, cinema/theatre, events, etc.)	MVSTA Trail Users	26	$ 85	$ 496	$ 581	$ 22
	MV Residents	53	$ 928	$ 902	$ 1,830	$ 35
Other (please indicate)	MVSTA Trail Users	11	$ 150	$ 832	$ 982	$ 89
	MV Residents	27	$ -	$ 1,682	$ 1,682	$ 62
Total respondent reported expenditures	MVSTA Trail Users	44	$ 3,861	$ 60,600	$ 65,443	$ 1,475
	MV Residents	92	$ 8,458	$ 126,347	$ 134,805	$ 1,462
Total reported combined for average MV visit			$ 12,319	$ 186,947	$ 199,266	$ 1,469

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Resource Dimensions' analysis indicates that no significant difference exists between the two respondent groups and their reported patterns of expenditure. This finding may be influenced, in part, by the proportion of respondents that apparently have second homes in the Methow Valley and spending habits that likely exhibit hybrid characteristics.

Analysis of reporting respondents, approximately 136, indicates a typical per party per trip expenditure of $1,469. Extrapolating, we find an estimated direct annual contribution to the local and regional economy of approximately $4.5 million by visiting trail users. This estimate, however, does not include travel time and related expense factors typically included in other forms of analysis (e.g., travel cost methods). Therefore, this value, while approximate, is a conservative indicator.

Included within "Other" expenditures are those reported by respondents for MVSTA trail passes, a total of approximately $600 (trail users) and nearly $1,300 for residents. Other items named included visits to the spa, veterinarian, and miscellaneous hardware store items.

In questions 14 through 19 focus shifts to learning more about the level of importance ascribed to the network of recreational trails in the Methow Valley by the sample population. This includes assessment of areas as, time of year/month respondents' visit and use trails, types of activities they participate in on while in the region, and if there is a direct relationship between existence of trails and potential interest in purchasing real estate.

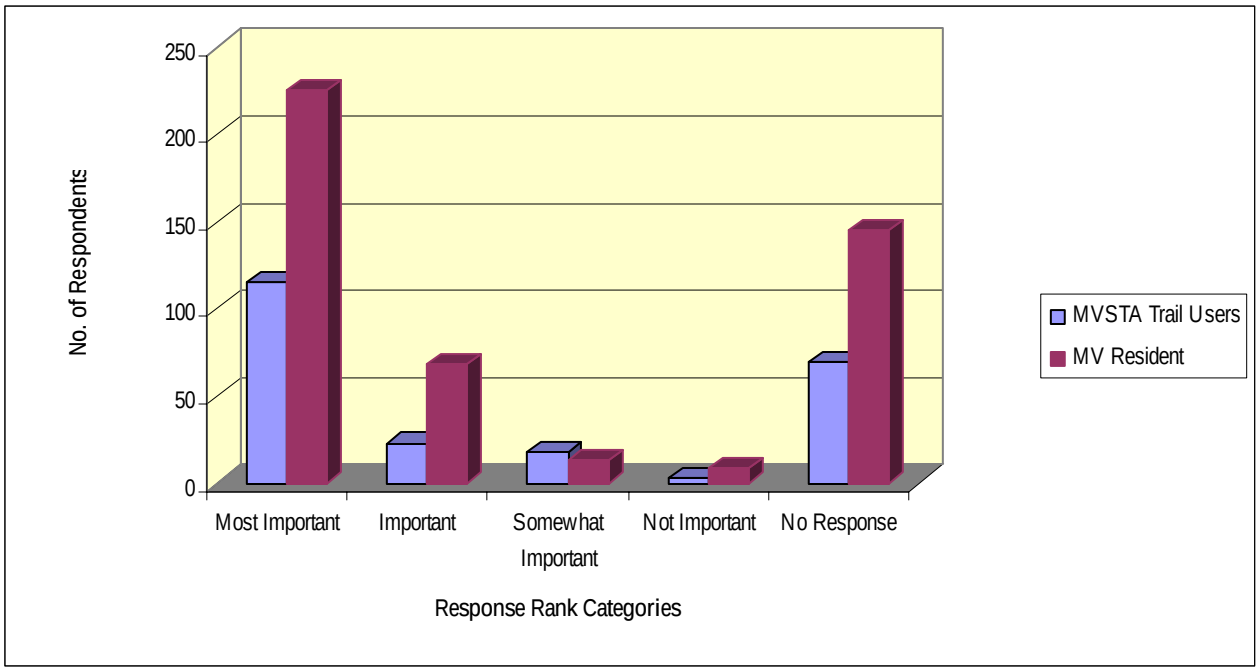
Approximately 49% and 52% of all resident and trail user respondents answered question 14 respectively. Of those providing an answer, about 71.6% of resident respondents and 74% of trail user respondents indicated that the network of ski/bike/hiking trails was the most important factor to their average visit to the Methow Valley, with another 14.6% and 21.6% indicating it was an important factor (Table 35). Figure 10 shows views by trail users and residents on the level of importance of the trail network to Methow Valley visit.

Table 35. Breakdown of respondent rankings by group on the "Importance" of trails network to visit

Respondent Group	Most Important	% of Total	Important	% of Total	Somewhat Important	% of Total	Not Important	% of Total	No Response	Total Valid
MVSTA Trail Users	115	74.19%	23	14.84%	18	11.61%	3	1.94%	69	155
MV Resident	225	71.66%	68	21.66%	13	4.14%	9	2.87%	145	314
Total(s)	340	72.49%	91	19.40%	31	6.61%	12	2.56%	214	469

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Figure 10. Respondent ranking for importance of trail network to Methow Valley visit



Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Question 15a and 15b are posed to explore the nature of the relationship between MVSTA trails network and any influence it has over peoples purchasing decisions. In this particular scenario, real estate purchasing decisions. Approximately 62% of all valid trail user and resident respondent populations answered this question; of this population, about 79% of all trail users and 83% of all residents had considered purchasing real estate in the Methow Valley (Table 36).

Table 36. Breakdown of reporting respondents that have considered buying real estate in the Methow Valley

Respondent Group	Yes	% of Total	No	% of Total	No Response	Total Valid
MVSTA Trail Users	103	79.23%	27	20.77%	34	130
MV Resident	234	83.27%	47	16.73%	179	281
Total(s)	337	82.00%	74	18.00%	213	411

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Is there a relationship between those who have considered purchasing real estate and the values they hold with regard to the importance of the network of ski/bike/hiking trails of the Methow Valley?

As can be seen in Table 37, for the total set of respondents that said "Yes" they had considered purchasing real estate in the Methow Valley, there is a strong positive relationship between their interest and the network of recreational trails in the valley. We found that an average of about 65% of all respondents stating "Yes" to question 15a indicated in 15b that the trails were "most important" in their deliberations over purchasing real estate in the valley. Another 27.6% on average indicated that the trails were at least "important" to them in their considerations. To test this, Resource Dimensions ran Spearman's rank correlation coefficient test on the on

relationship. Spearman's coefficient is $r = 0.92387$, which indicates a very strong correlation. This finding has importance to both near and long term planning for the valley and surrounding region.

Table 37. Respondent importance ranking of trail network to consideration of real estate purchase

Respondent Group	Most Important	% of Total	Important	% of Total	Somewhat Important	% of Total	Not Important	% of Total	Total Valid
MVSTA Trail Users	72	69.90%	23	22.33%	6	5.83%	4	3.88%	103
MV Resident	147	62.82%	70	29.91%	9	3.85%	8	3.42%	234
Total(s)	219	64.99%	93	27.60%	15	4.45%	12	3.56%	337

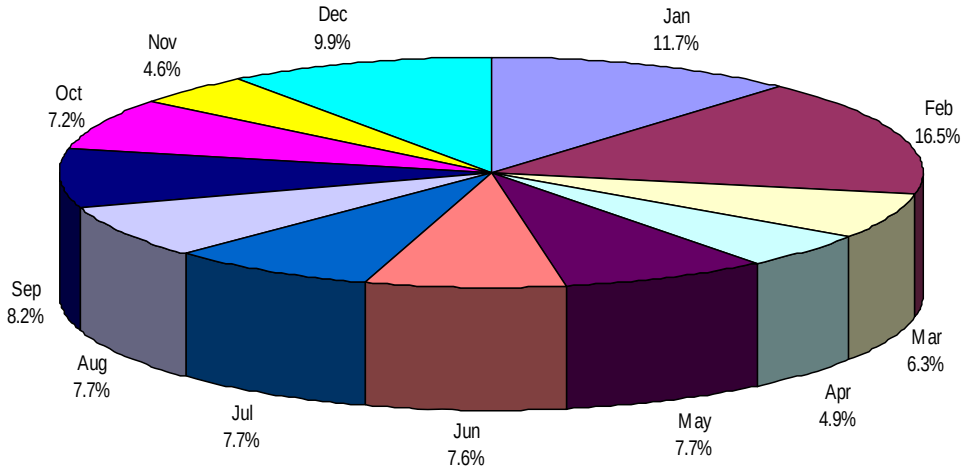
Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Question 16 asks respondents to identify those months (in 2004) during which they visited the Methow Valley and used the trails. As with other questions in this section of the survey, this question aimed to get a better understanding of trail use and visitation periods for this particular group of respondents. As no similar survey has been conducted for summer season visitors it is difficult to imply the full complement for all visitors to the Methow Valley, however, we are able to draw some general conclusions.

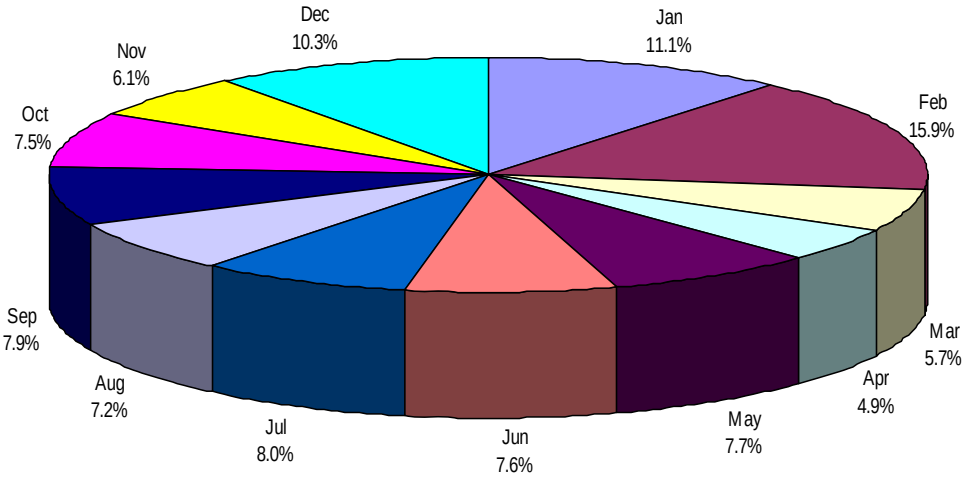
As can be seen in Figure 11 the pattern of visits combined with trail use is relatively similar across both respondent groups with one exception for residents' reports for the month of November. We expect that resident use may remain slightly higher in November for this group given more consistent proximity. Reflected in Figure 12 are the general trend lines for each respondent group.

Figure 11. Months respondents visited and used Methow Valley trails (2004)

MVSTA Trail Users

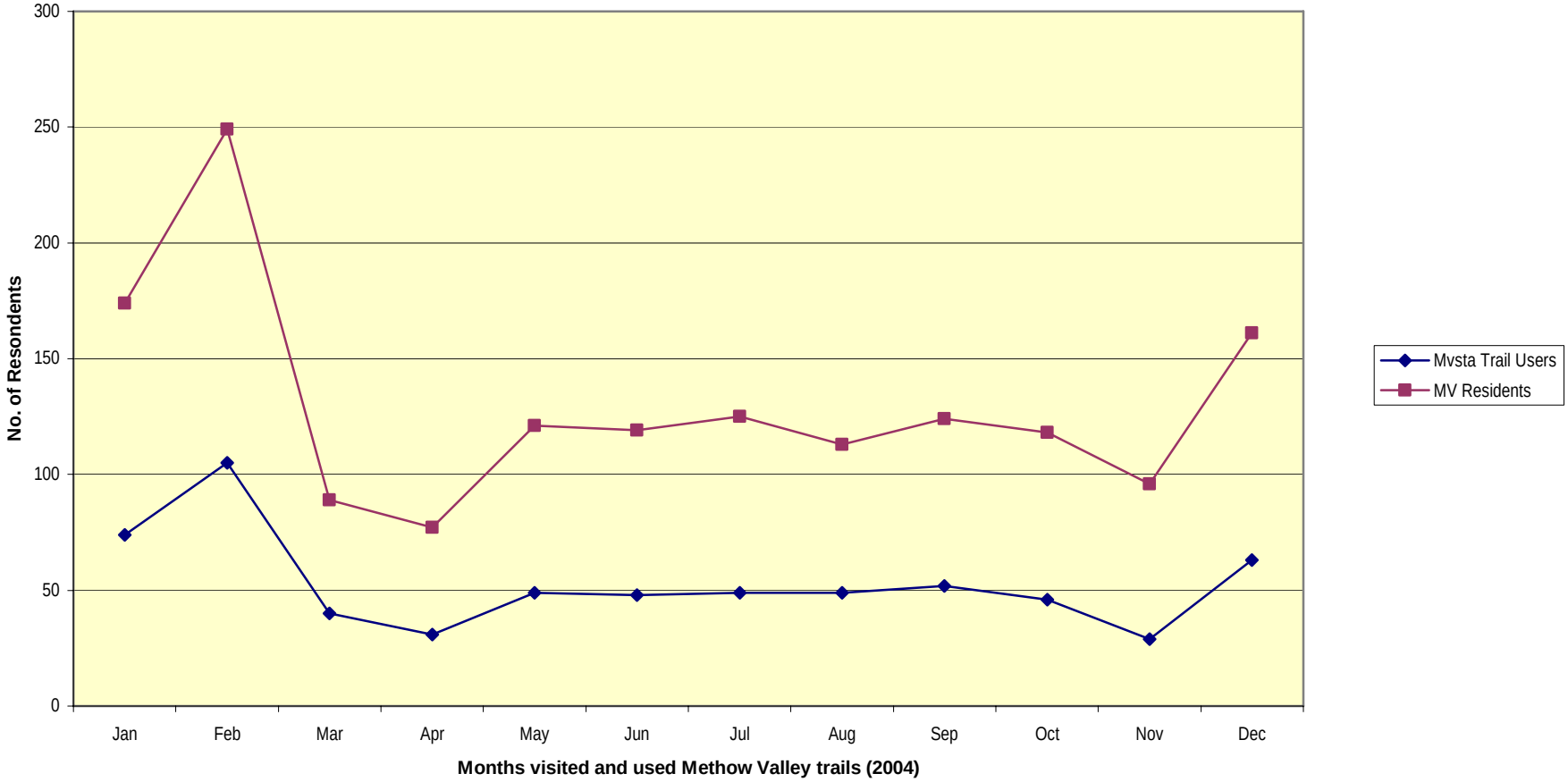


MV Residents



Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Figure 12. Plot of trail user and resident respondents for months visited and used trails in 2004



Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Question 17 asked respondents "What types of activities do you/your family typically participate in on Methow Valley trails?" Table 38 sets forth respondent response counts for various activities in which they or their family members participate in on area trails, while Figure 13 gives graphic representation of percent breakdown for activities participation by each respondent group.

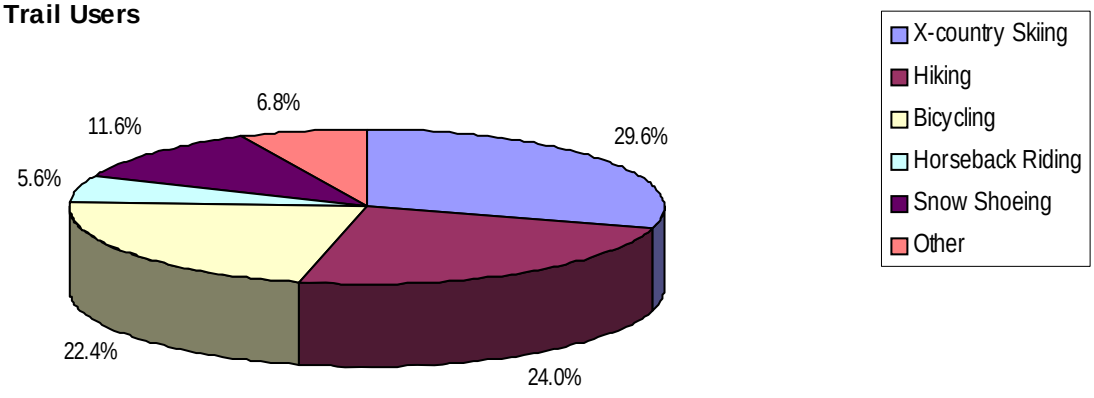
Table 38. Activities respondents and family members participate in on Methow Valley trails

Respondent Group	X-country Skiing	Hiking	Bicycling	Horseback Riding	Snow Shoeing	Other
MVSTA Trail Users	165	134	125	31	65	38
MV Residents	321	264	265	56	136	80
Total(s)	486	398	390	87	201	118

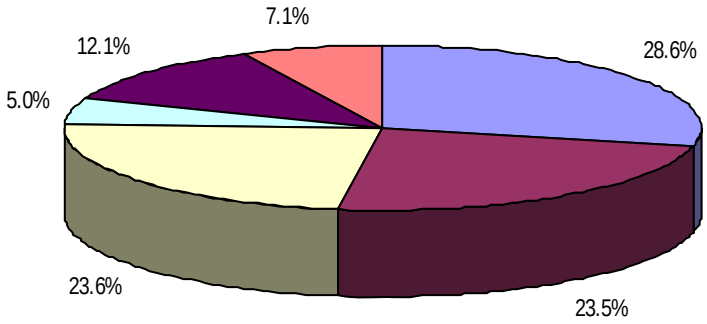
Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Figure 13. Breakdown of activities on Methow Valley Trails (by respondent groups)

MVSTA Trail Users



MV Residents



Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

The greatest percentage of respondents for both groups participates in X-country skiing, with something between 69.8% (residents) and 74.7% (trail user) of all reporting respondents taking part in this recreational activity. Hiking and bicycling activities follow with average participation rates across respondent groups of about 58.3% for hiking and 54.7% for biking. Showshoeing for both respondent groups is at or near reported participation rates of about 29.5% followed by horseback riding with an average participation rate of about 12.8%.

For those reporting participation in "Other" activities not pre-listed, respondents from both groups most frequently identified, in frequency order, activities listed in Table 39.

Table 39. Frequency ranked respondent participation in "Other" activities on Methow Valley trails

- Running
- Swimming
- Fishing (fly fishing in particular)
- Dog trails
- Rock climbing
- Backcountry hiking
- Camping
- Canoeing/kayaking and rafting
- Nature observation
- Birding
- Relaxing, enjoying life
- Hunting
- Dog sledding, skijoring
- Tele-marking
- Hockey/ice skating
- Fire wooding

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

A main point here before moving on is to point out that while X-country skiing has retained its position as the most frequent recreation activity among winter 2005 survey respondents, other activities as bicycling, canoeing/kayaking, and nature based activities are projected to grow in popularity for the foreseeable future. Balancing the needs of all trail user groups may prove up some challenges. However, there are also opportunities that will coincide with continued expansion of participation in more and varied activities by Methow area residents and non-local trail users alike.

In questions 18a and 18b respondents are asked if they have ever participated in any organized special events on Methow Valley trails; and if not, if they believe they might in the future. The purpose of this question is to determine interests and participation of respondents, as representatives of the larger population, in outdoor recreation activities (Table 40).

Table 40. Level of stated participation in organized special events on Methow Valley trails

Respondent Group	Yes	% of Total	No	% of Total	No Response	% of Total	Total Valid
MVSTA Trail Users	79	35.75%	108	48.87%	35	15.84%	221
MV Resident	154	33.48%	262	56.96%	44	9.57%	460
Total(s)	233	34.21%	370	54.33%	79	11.60%	681

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

In 18b, respondents that answered "No" to 18a were asked if they thought they might participate in future Methow Valley trails events; Table 41 reflects their responses. Interpretation beyond this is somewhat difficult without further questions being put to respondents.

Table 41. Respondents' Stated likelihood of future participation in Methow Valley trail events

Respondent Group	Yes	% of Total	No	% of Total	Not Likely	% of Total	Don't Know	% of Total	Total Valid
MVSTA Trail Users	26	25.00%	26	25.00%	40	38.46%	12	11.54%	104
MV Resident	58	25.00%	43	18.53%	87	37.50%	44	18.97%	232
Total(s)	84	25.00%	69	20.54%	127	37.80%	56	16.67%	336

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

In the last question to this section, respondents are asked if they have ever purchased, or plan to purchase a Methow Valley Sports Trails Association trail pass. Table 42 presents breakdown of respondents by stated past purchase or likelihood to purchase an MVSTA trail pass into the future.

Table 42. Respondents having purchased or planning future purchase of an MVSTA trail pass

Respondent Group	Yes	% of Total	No	% of Total	No Reposnse	% of Total	Total Valid
MVSTA Trail Users	152	68.78%	22	9.95%	47	21.27%	221
MV Residents	294	63.91%	71	15.43%	95	20.65%	460
Total(s)	446	65.49%	93	13.66%	142	20.85%	681

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

In Part IV of the survey (questions 20 through 26) questions pertain more specifically to the land resources, including open space and related land use and resource protection in the Methow Valley.

The first question of this section asks respondents to rate how important they feel it is to preserve the natural beauty and open space in the Methow Valley. In assessing the responses given by the two respondent groups, Resource Dimensions finds that both populations have extremely strong feelings with regard to protection of the natural resource and open space attributes of the Methow Valley (Table 43).

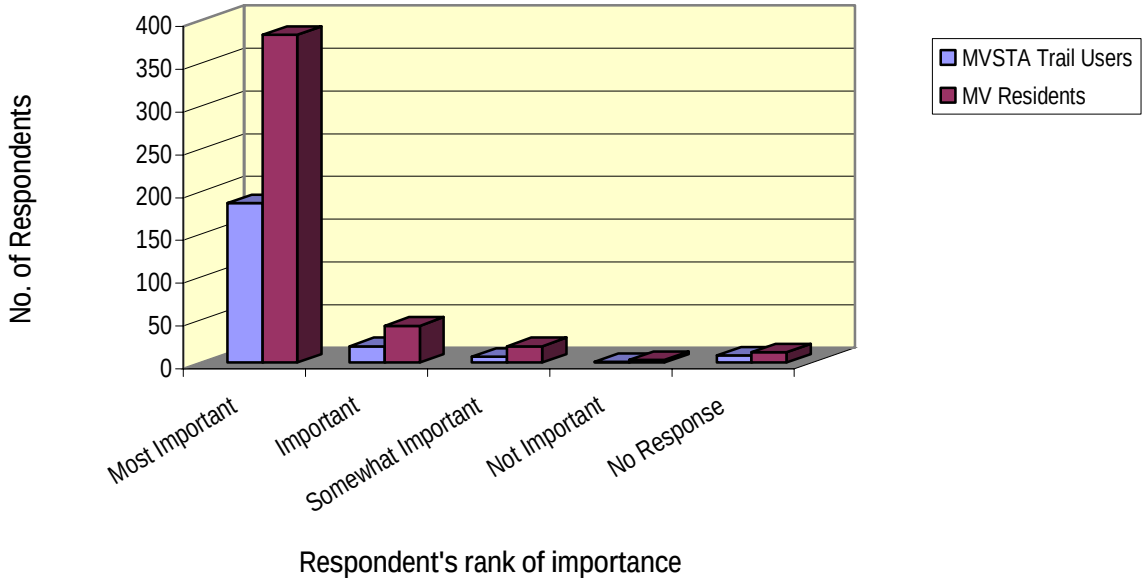
Table 43. Respondent views on importance of preserving the Methow Valley's natural beauty and open space

Respondent Group	Most Important	% of Total	Important	% of Total	Somewhat Important	% of Total	Not Important	% of Total	No Response	Total Valid
MVSTA Trail Users	186	84.2%	19	8.6%	7	3.2%	1	0.5%	8	221
MV Residents	383	83.3%	43	9.3%	19	4.1%	3	0.7%	12	460
Total(s)	569	83.6%	62	9.1%	26	3.8%	4	0.6%	20	681

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

To help illustrate the magnitude of respondents' feelings on the issue, Figure 14 provides graphic representation of results from respondent answers given in question 20.

Figure 14. Importance of preserving the Methow Valley's natural beauty and open space



Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

In Table 44 respondent rankings are given in reply to question 21, which asks respondents to identify and rank key attributes from a list of open space and natural beauty characteristics found in the Methow Valley. As shown, both respondent groups had similar views towards many of the identified characteristics. However, there are a few areas where resident respondents and trail user respondents diverged that are worthy of mention here. Looking across the whole of responses received by both groups, trail user respondents consistently ranked (by frequency count) clean air and water as the most important open space/natural beauty characteristic of the Methow Valley. Whereas resident respondents identified scenic views in the first position followed by, wildlife habitat, and then clean air and water as the top three most important elements of natural beauty and open space in the Methow Valley (Table 44).

Table 44. Respondent ranking of importance of natural beauty and open space of the Methow Valley

Feature/Characteristic	Respondent Group	1	Cumulative Rank Total	2	Cumulative Rank Total	3	Cumulative Rank Total	4	Cumulative Rank Total	Total Valid	Cumulative Total	Cumulative Rank
Scenic views	MVSTA Trail User	56	170	35	113	25	89	22	60	138	432	3
	MV Resident	114		78		64		38		294		
Wildlife habitat	MVSTA Trail User	45	143	60	208	37	101	72	104	214	556	2
	MV Resident	98		148		64		32		342		
Clean air and water	MVSTA Trail User	88	193	78	152	41	130	120	180	327	655	1
	MV Resident	105		74		89		60		328		
Accessible public lands	MVSTA Trail User	28	55	24	59	30	87	27	83	109	284	5
	MV Resident	27		35		57		56		175		
Few houses	MVSTA Trail User	8	30	9	27	16	51	39	60	13	109	9
	MV Resident	22		18		35		21		96		
Solitude	MVSTA Trail User	3	9	7	17	19	56	52	84	81	166	7
	MV Resident	6		10		37		32		85		
Farmland	MVSTA Trail User	9	26	15	45	18	61	19	59	61	191	6
	MV Resident	17		30		43		40		130		
Peaceful/Quiet	MVSTA Trail User	23	57	15	54	22	61	38	133	98	305	4
	MV Resident	34		39		39		95		207		
Dark skies	MVSTA Trail User	10	28	9	22	8	24	24	61	51	135	8
	MV Resident	18		13		16		37		84		
Other	MVSTA Trail User	3	9	2	10	1	2	1	2	7	23	10
	MV Resident	6		8		1		1		16		

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Following on, question 22 seeks to learn what people feel should be done or what measures should be taken to preserve the characteristics they identified as important in the previous question. Table 45 provides details of results as reported by the two respondent groups surveyed.

Table 45. Respondents' views on measures that should be taken to preserve unique natural and scenic characteristics of the Methow Valley

Suggested measure	Respondent Group	Yes	% totoal	Cummulative Rank (by %)*	No	% totoal	Cummulative Rank (by %)*	Don't know	No Response	Total Valid
None	MVSTA Trail Users	1	0.5%	0.3%	133	60.2%	61.2%	1	86	221
	MV Residents	1	0.2%		284	61.7%		8	167	460
Government purchase of land	MVSTA Trail Users	126	57.0%	56.5%	44	19.9%	19.4%	0	51	221
	MV Residents	259	56.3%		88	19.1%		6	107	460
Payment to private landowners for land protection	MVSTA Trail Users	124	56.1%	55.1%	32	14.5%	11.6%	0	65	221
	MV Residents	251	54.6%		47	10.2%		8	154	460
Local non-profit group purchasing land	MVSTA Trail Users	169	76.5%	77.2%	13	5.9%	4.6%	1	38	221
	MV Residents	357	77.6%		18	3.9%		8	77	460
Regulatory control of land	MVSTA Trail Users	155	70.1%	68.3%	25	11.3%	10.6%	1	40	221
	MV Residents	310	67.4%		47	10.2%		8	95	460
Voluntary land protection	MVSTA Trail Users	185	83.7%	82.8%	10	4.5%	2.6%	1	25	221
	MV Residents	379	82.4%		8	1.7%		8	65	460
Acquisition of conservation easements	MVSTA Trail Users	179	81.0%	80.8%	8	3.6%	3.1%	3	31	221
	MV Residents	371	80.7%		13	2.8%		10	66	460
Environmental education	MVSTA Trail Users	182	82.4%	80.0%	2	0.9%	0.6%	1	36	221
	MV Residents	363	78.9%		2	0.4%		8	87	460
Other	MVSTA Trail User	5	2.3%	2.8%	0	0.0%	0.0%	0	216	221
	MV Residents	14	3.0%		0	0.0%		0	446	460

* Note: Cumulative Rank % represents total number of respondents in category selecting a particular response divided by the total number of valid survey responses received. Thus, the two columns of cumulative rank responses (by %) do not total 100%.

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

As seen in Table 45, the majority of respondents believe that some measure or combination of measures should be taken to preserve the unique natural beauty and scenic characteristics of the Methow Valley. The most favored alternatives in order of frequency rank and percent of total valid responses received are: 1) voluntary land protection; 2) acquisition of conservation easements; 3) environmental education; and 4) local non-profit group purchasing land. The one "None" (take no action) response for each respondent group is likely a "protest bid."

Protest behavior is the refusal by a respondent to reveal the true value for some reason. The protest may be expressions of mistrust in institutions, i.e. a disbelief in the scenario presented for delivery of the good in question, dissension regarding the proposed means of bringing about the change (e.g. payment vehicle, proposed policy intervention, etc.), an ethical objection to the idea of placing values on environmental goods in a market context (Spash & Hanley 1995; Spash 2000), beliefs that paying for environmental quality is the responsibility of government rather than individual citizens, etc. (Gustanski 1999; Jorgensen & Syme 2000).

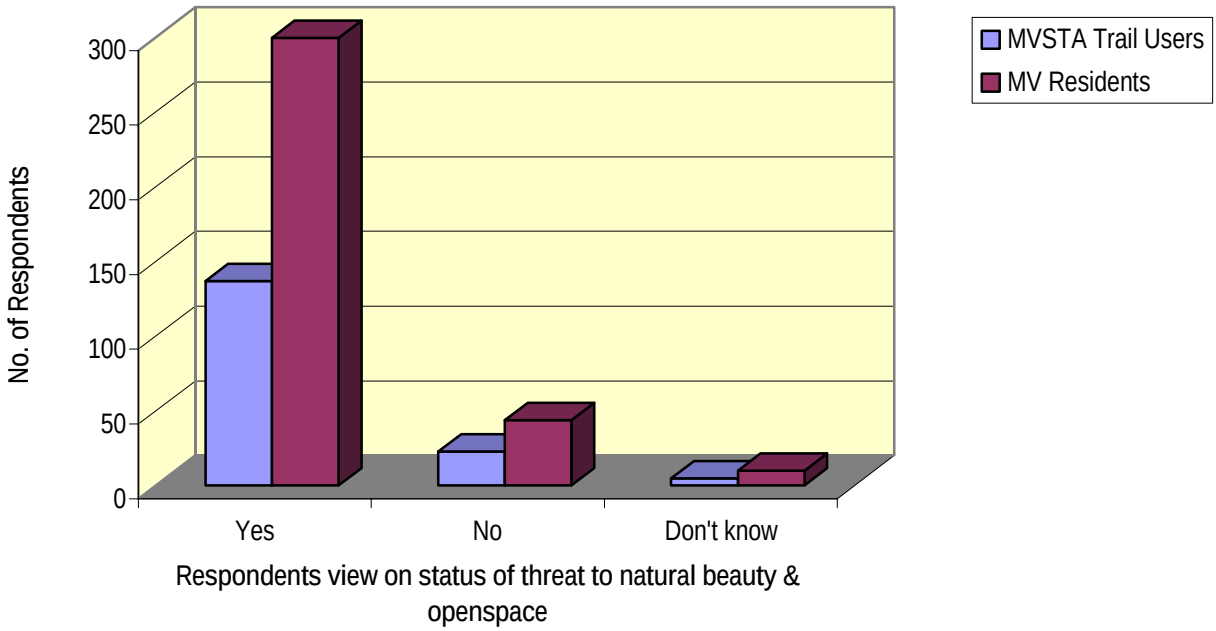
Question 23a asked respondents "Do you believe that the natural beauty and open space of the Valley area threatened?" from which they circled either Yes, No or Don't know. An overwhelming majority, 84.7% of residents, and 83% of trail users believe that the natural beauty and open space of the Methow Valley are threatened (Table 45). Figure 15 provides graphic presentation on views for both respondent groups.

Table 45. Respondents' beliefs about whether the natural beauty and open space are threatened

Respondent Group	Yes	% of Total	No	% of Total	Don't know	% of Total	No Response	Total Valid
MVSTA Trail Users	137	83.0%	23	13.9%	5	3.0%	48	165
MV Residents	300	84.7%	44	12.4%	10	2.8%	105	354
Total(s)	437	84.2%	67	12.9%	15	2.9%	153	519

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Figure 15. Respondents' views on threat to natural beauty and open space of the Methow Valley



Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

In 23b, respondents answering "Yes" to 24a were asked to write in their own words the most pressing threat they see in the Methow Valley. Using Ethnograph® to isolate commonalities and determine frequencies relative to answers provided, Resource Dimensions identified and grouped responses under the following labels, in rank order, as being the most pressing threats reported by the two respondent groups[8] (Table 47).

[8] The Ethnograph v5.0: A Program for the Analysis of Text Based Data, (1998) John V. Seidel

Table 47. Frequency ranked respondent views on most pressing threats facing the Methow Valley

Methow Valley Residents:

- Greed / excessive push on selling real estate for home sites
- Development and overbuilding of homes (large and small)
- Poor planning / lack of planning
- Subdivision and loss of farm/ranchland
- Population growth
- Building on ridge-tops and ridgelines
- Building in riparian areas
- Too many large second/part-time vacation/trophy homes
- Lighting

Trail Users:

- Influx of people from the city and desire to share in the valley's beauty
- Development, overbuilding, residential sprawl
- Building on ridge-tops and ridgelines
- Building in riparian areas
- Too many large second/part-time vacation/trophy homes
- Subdivision and loss of farm/ranchland
- Poor planning/unplanned development

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Question 24 asked respondents to identify and prioritize, by rank, three (3) general geographic areas of the Methow Valley for continued protection from a list that included Carlton, Mazama, Methow, Twisp, and Winthrop. Respondents were also provided an opportunity to write in their own answer for areas important to them, but not on the list. Respondents identified Mazama as the area of first priority, followed by Winthrop and Twisp. Table 48 reflects respondent rankings.[9]

[9] The distribution of randomly selected mail survey addresses within the Valley was conducted by approximate percentage of the community's population against that of the larger Methow Valley study region. One reason for this approach was to manage, to the extent possible, potential respondent location bias to ensure that no one geography was more likely to have been identified by respondents due to inequity in distribution volume.

Table 48. Areas of the Methow Valley priority ranked by survey respondents for continued protection

Area	Respondent Group	1	Cumulative Rank Total	2	Cumulative Rank Total	3	Cumulative Rank Total	Total Valid	Cumulative Total Valid	Cumulative Rank
Methow	MVSTA Trail Users	18	58	10	25	13	43	124	209	4
	MV Residents	40		15		30		85		
Twisp	MVSTA Trail Users	18	59	27	78	79	258	261	532	3
	MV Residents	41		51		179		271		
Winthrop	MVSTA Trail Users	37	106	84	127	30	93	384	559	2
	MV Residents	69		43		63		175		
Carlton	MVSTA Trail Users	3	9	13	44	15	38	84	144	
	MV Residents	6		31		23		60		
Mazama	MVSTA Trail Users	102	326	38	118	19	52	603	940	1
	MV Residents	224		80		33		337		
Other	MVSTA Trail Users	13	39	8	25	0	15	85	143	5
	MV Residents	26		17		15		58		

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Several other areas of the Methow Valley were identified by respondents for preservation efforts under the "Other" response option provided. In approximate rank order by frequency (reading down by column), are:

- Upper Chewuch area
- Early Winters area
- Roadless areas
- Wetlands, river corridors, riparian areas
- Loup corridor
- Upper Twisp River
- Mazama and to the west
- Big Valley Ranch area
- Chewuch and Patterson Mountain areas
- Steppe lands
- Pipestone Canyon
- Hwy 20 corridor

In question 25 respondents were asked to rank various types or classifications of lands in the Methow Valley that they felt should have priority for continued protection. Table 49 reflects respondent's priority rankings for land protection efforts.

Table 49. Respondent's priority rankings for Methow Valley land resource types

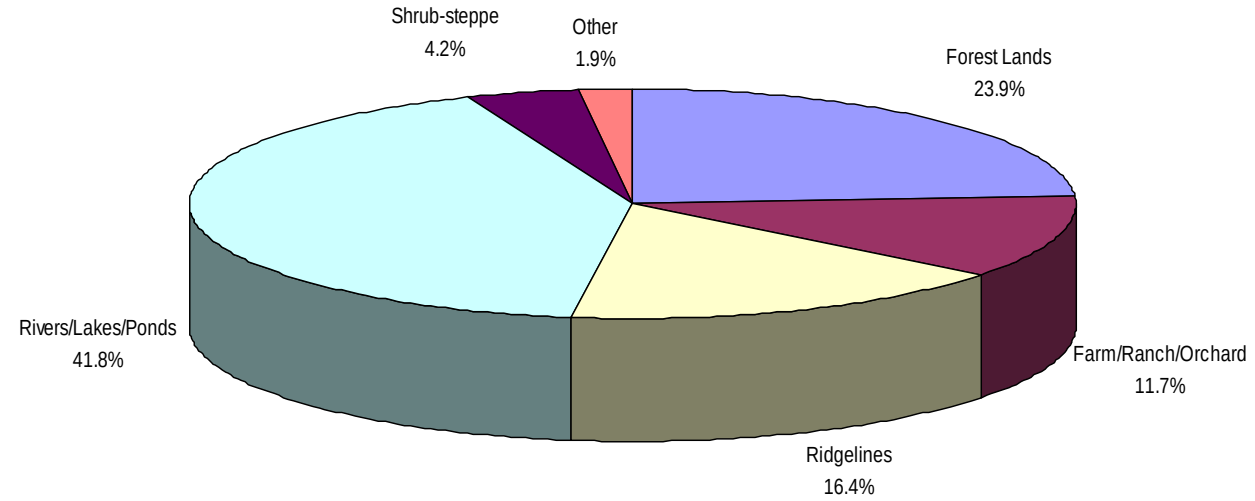
Land Type/Resource	Respondent Group	1	Cumulative Rank Total	2	Cumulative Rank Total	3	Cumulative Rank Total	4	Cumulative Rank Total	5	Cumulative Rank Total	Total Valid	Cumulative Total Valid	Cumulative Rank
Forest Lands	MVSTA Trail Users	51	156	46	154	42	123	38	124	19	70	196	627	2
	MV Residents	105		108		81		86		51		431		
Farm/Ranch/Orchard	MVSTA Trail Users	25	79	29	92	37	116	50	156	48	171	189	614	4
	MV Residents	54		63		79		106		123		425		
Ridgelines	MVSTA Trail Users	35	121	47	141	49	163	36	113	23	78	190	616	3
	MV Residents	86		94		114		77		55		426		
Rivers/Lakes/Ponds	MVSTA Trail Users	89	268	56	184	39	125	15	50	4	12	203	639	1
	MV Residents	179		128		86		35		8		436		
Shrub-steppe	MVSTA Trail Users	9	30	22	62	34	111	44	161	75	241	184	605	5
	MV Residents	21		40		77		117		166		421		
Other	MVSTA Trail Users	4	15	4	15	0	0	0	0	0	0	8	30	6
	MV Residents	11		11		0		0		0		22		

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

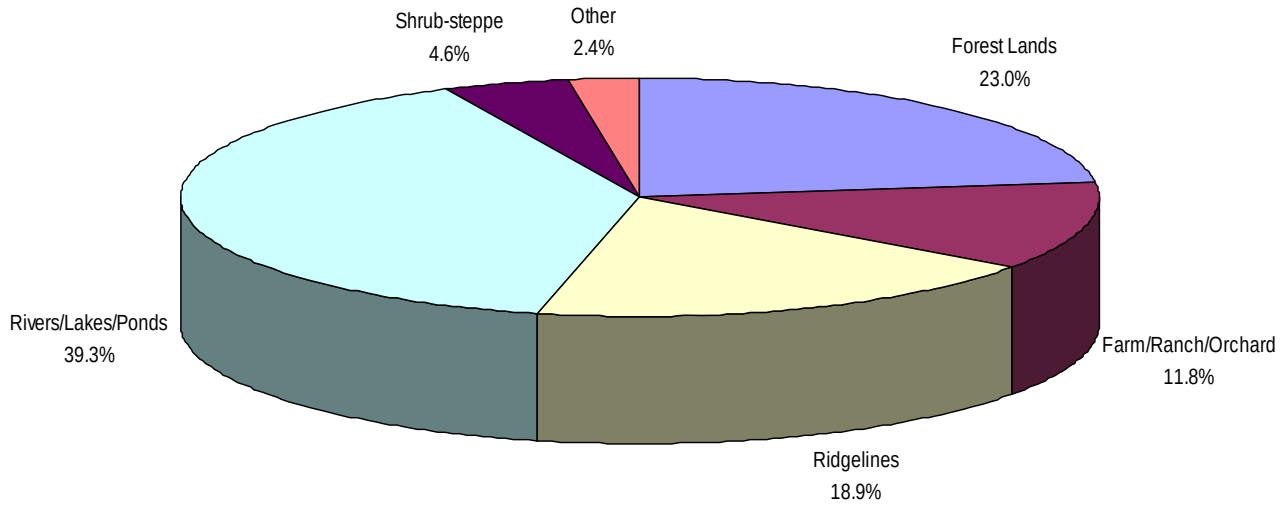
As can be seen in Table 49, residents and trail users generally shared similar views as to order of importance (as indicated by ranking) of various land resource types in the Methow Valley. In a few instances, however, residents have stronger and more varied preferences for land protection efforts. For example, with regard to development along ridgelines, shrub-steppe, and agricultural lands (farms/ranches/orchards) resident respondents displayed a overall preference for protecting these attributes, than did trail users. On the other hand, those land resources ranked more highly by users include forestlands, rivers, lakes, and ponds. Figure 16 reflects ranking distributions for each land resource type by the two respondent groups.

Figure 16. Respondent ranking distributions for Methow Valley land resource types

MVSTA Trail Users



Methow Valley Residents



Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

In the final question to this section of the survey (Question 26), respondents were asked to identify the particular characteristic that was most important to their decision to live in or visit the Methow Valley. To assure the range of characteristics or reasons for moving to the area were not limited; respondents could also provide their own write-in answer. According to resident and

trail user respondents participating in the winter 2005 survey, the most influential characteristic for both those moving to and visiting the Methow Valley was the proximity to recreational trails, followed by the area natural beauty, and rural character. As can be seen within the results presented in Table 50, overall, if respondents merely ranked the principle characteristic that brought them to the area there would be agreement between the non-local users and resident populations. However, while on the surface this is true, looking more closely we see that there is much greater equity in the distribution of factors or characteristics for resident respondents compared to trail user respondents. For example, over fifty-percent of all trail visitor respondents stated that their primary reason for visiting was due to the proximity of recreational opportunities. Although this was also the first rank response for resident respondents, the margin at just under 30%, was followed closely by natural beauty, also at nearly 30%.

Table 50. Primary characteristics influencing respondents to move to or visit the Methow Valley

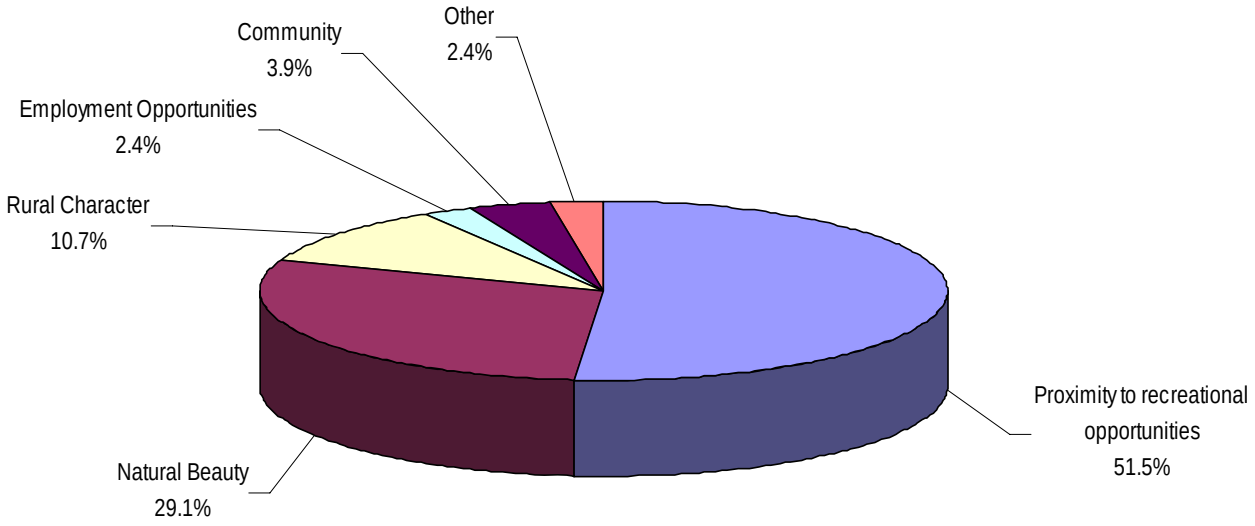
Characteristics	Respondent Group	Total by Group	% of Total	Cumulative Total	Cumulative Rank
Proximity to recreational opportunities	MVSTA Trail Users	106	51.46%	242	1
	MV Residents	136	29.69%		
Natural Beauty	MVSTA Trail Users	60	29.13%	195	2
	MV Residents	135	29.48%		
Rural Character	MVSTA Trail Users	22	10.68%	108	3
	MV Residents	86	18.78%		
Employment Opportunities	MVSTA Trail Users	5	2.43%	48	5
	MV Residents	43	9.39%		
Community	MVSTA Trail Users	8	3.88%	64	4
	MV Residents	56	12.23%		
Other	MVSTA Trail Users	5	2.43%	7	6
	MV Residents	2	0.44%		
Total Respondents	MVSTA Trail Users	206			
	MV Residents	458			

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

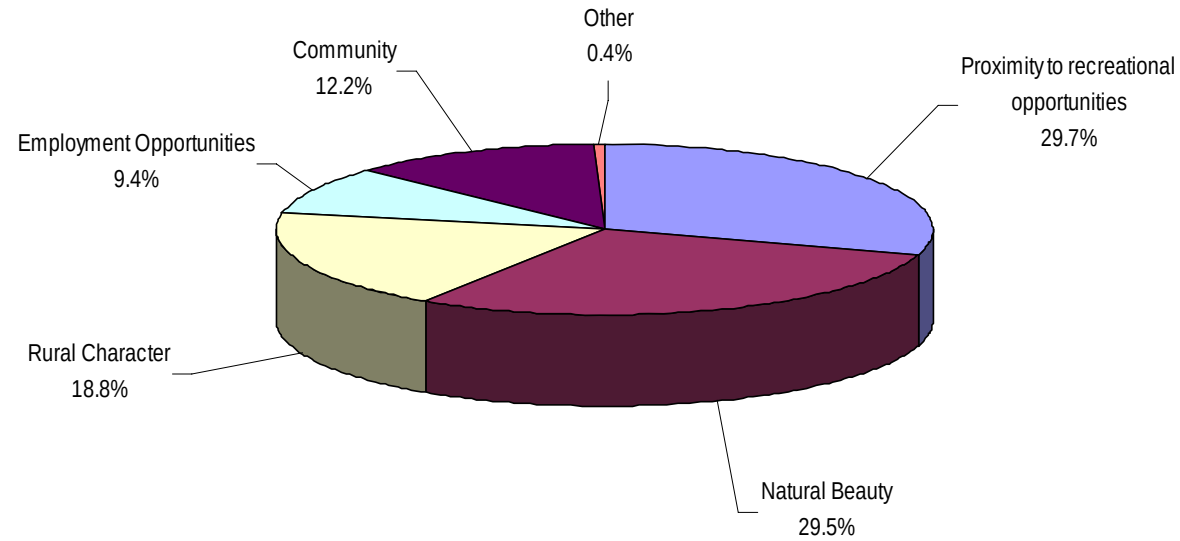
Figure 17 provides graphic representation of respondents' primary stated reasons or characteristic influencing decisions to move or visit the Methow Valley.

Figure 17. Breakdown of characteristics influencing respondents to move to or visit the Methow Valley

Trail Users



Methow Valley Residents



Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

4.4 Willingness-to-Pay

In an effort to establish actual willingness-to-pay (WTP) we constructed the survey using several mechanisms to aid in developing a better understanding of just how much particular attributes of outdoor recreation facilities and trails are worth to both residents and trail users. Given the sampling period and target distribution, our analysis speaks specifically to non-local winter trail visitors/users; as stated earlier in this report, the terms trail "user" or "visitor" refers to all users whether local, non-local or out-of-area visitors.

In question 6a, for example, respondents were asked, "If a trust fund was established for maintenance and development of future outdoor recreation facilities and trails for the Methow Valley would you be in support of such a fund? Those respondents that indicated "Yes," a resounding 73.9%, were then asked in question 6b how much they would be willing to contribute to such a fund on an annual basis. By asking respondents in an open-ended format "how much are you willing to pay?" and providing a range of alternatives ranging from $1 to more than $50 we were able to produce a continuous bid variable, which was then analyzed using a least squares approach. 10

Table 51 provides the breakdown of results obtained from the resident and trail user respondents.

Table 51. Stated willingness to support trust fund for outdoor recreation & trails in the Methow Valley

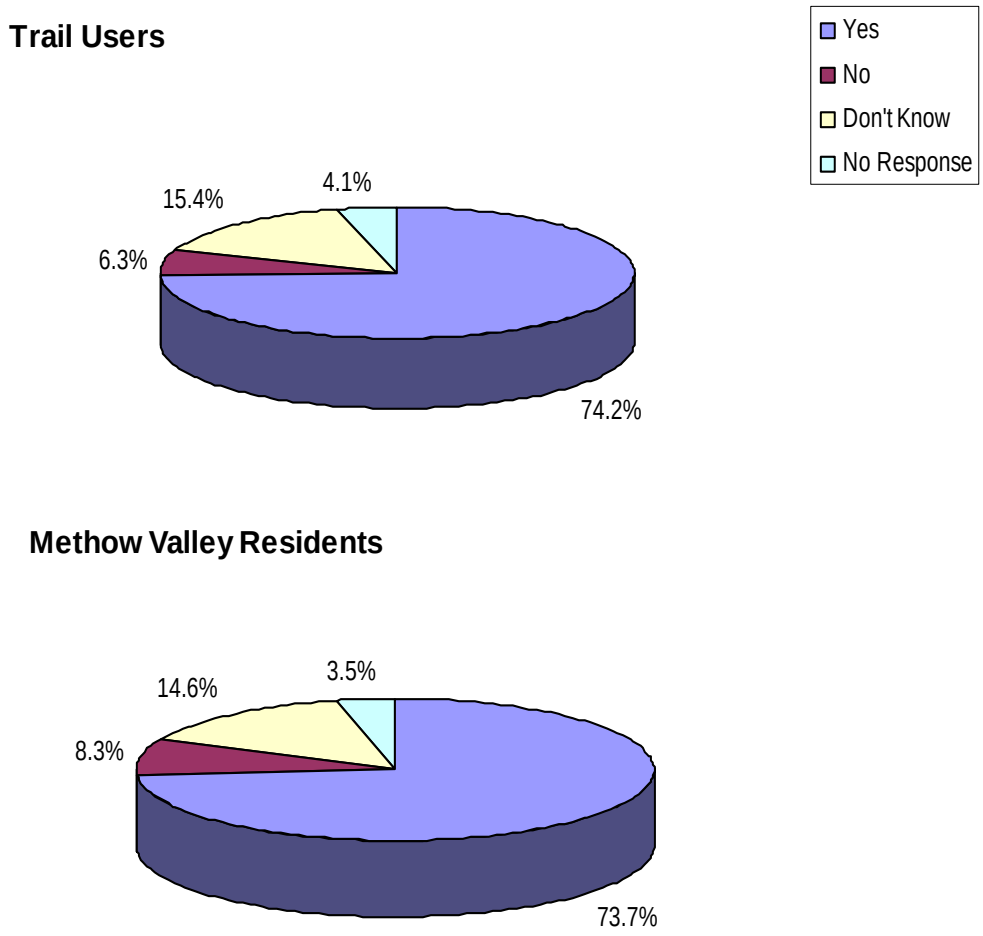
Respondent Group	Yes	% of Total	No	% of Total	Don't Know	% of Total	No Response	Total Valid
MVSTA Trail Users	164	74.21%	14	6.33%	34	15.38%	9	221
MV Residents	339	73.70%	38	8.26%	67	14.57%	16	460
Total(s)	503	73.86%	52	7.64%	101	14.83%	25	681

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Figure 18 reflects level of support for a trust fund established for the purposes of developing and maintaining outdoor recreation facilities in the Methow Valley.

[10] In conducting calculations to establish measures of welfare change we have used a simple mean approach; in doing so no outliers have been removed.

Figure 18. Support for trust fund for outdoor recreation and trails in the Methow Valley.



Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Respondents indicating support for a fund established to maintain and develop future outdoor recreation facilities and trails in the Methow Valley were then asked in question 6b to state the level at which they were willing to contribute (willingness to pay); results can be seen in Table 52.

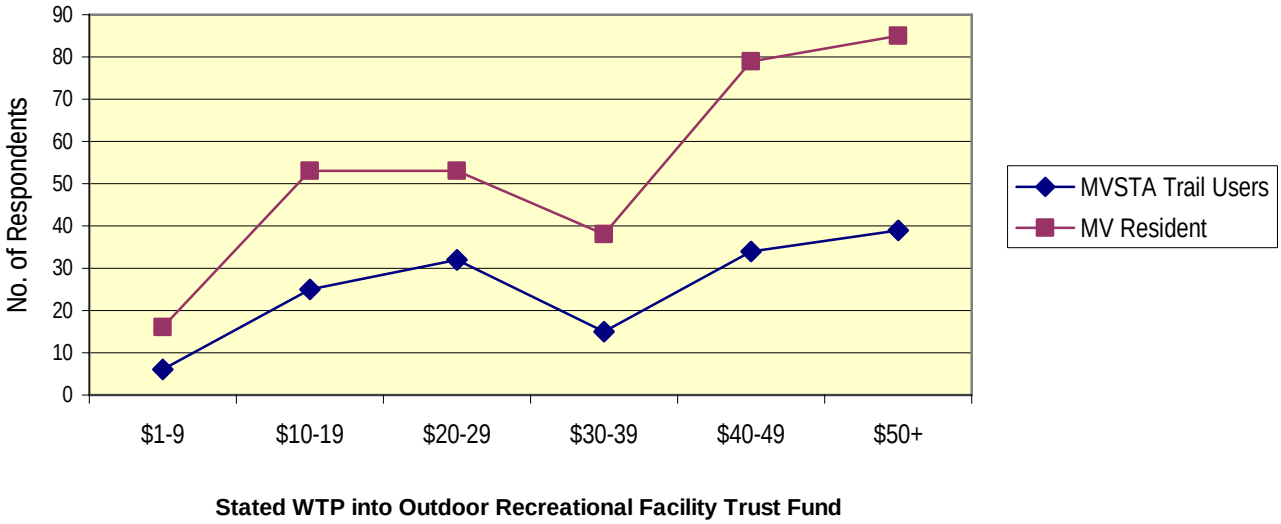
Table 52. Respondents stated WTP for outdoor recreational facilities via trust fund mechanism

Respondent Group	$1-9	$10-19	$20-29	$30-39	$40-49	$50+	No Response	Total Valid
MVSTA Trail Users	6	25	32	15	34	39	70	221
MV Resident	16	53	53	38	79	85	136	460
Total(s)	22	78	85	53	113	124	206	681

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Interestingly, we see a general upward trend in stated WTP in both individual respondent groups and cumulative response rates; indicating that the upper end of WTP for both groups is something higher than $50 (Figure 19).

Figure 19. Respondents stated WTP into outdoor recreational facility trust fund



Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

To validate both trail user and resident responses we investigated respondents WTP bids by estimating a bid function:

$$WTP_{ij} = f(Q_{ij},E_j,Y_i,S_i,X_i)$$

Where:

Q_{ij}	=	visits by individuals to site j
WTP_{ij}	=	individual i's willingness to pay for asset j
E_j	=	characteristics of site j
Y_i	=	income of individual i
S_i	=	relevant socio-economic characteristics of individual i
X_i	=	other explanatory variables

Using the data collected through the survey process we find an average WTP measure of $29.74 per person. The average separation between trail users and Methow Valley residents and trail users is about $0.58, with trail users stating a slightly higher utility at an average WTP measure of $30.03 per person to a resident WTP of $29.45 per person. The estimates are well within the bounds of similar studies. A chi-square test rejected the null-hypothesis that there was no relationship between stated annual contribution levels and the proportion of "Yes" responses at a significance level of α=0.05.

Extrapolating the average WTP measure to the Methow Valley resident population base and adjusting for an estimated 27.7% of the population as persons under the age of 18 as reported by the U.S. Bureau of the Census, 2000, we determine an approximate local WTP of about $64,500. Using the same approach based on (trail specific) visitor day estimates generated and adjusting by the state average of 25.7% of the population as persons under 18, we estimate the individual visitor WTP at $1.2 million annually. As the question was posed at the individual level, this estimate is realistic. Adjusting by the state average persons per household variable of 2.53, results in a non-local household level WTP of $473,818 annually.

In question 7a, respondents were asked if they would support an increase in property taxes to provide additional recreational facilities. The results shown in Table 53 are much more convoluted than the above scenario in which we used a trust fund mechanism. Generally, just over one-third of the respondents indicated "Yes" they would support an increase in property taxes to provide additional recreational facilities in the Methow Valley. Similarly, nearly one-third indicated "No" they would not support such a tax. Approximately one-quarter of the respondents were not sure if they would support a property tax increase, and just over 9% of both respondent groups provided no answer.

Table 53. Stated willingness to accept property tax increase for recreation facilities in the Methow Valley

Respondent Group	Yes	% of Total	No	% of Total	Don't Know	% of Total	No Response	Total Valid
MVSTA Trail Users	82	37.10%	65	29.41%	53	23.98%	21	221
MV Residents	167	36.30%	144	31.30%	107	23.26%	42	460
Total(s)	249	36.56%	209	30.69%	160	23.49%	63	681

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

In question 7b, respondents stating a willingness to support a tax for recreation and trails in the Methow Valley were asked in an open-ended format "how much additional money would you be willing to pay annually in property taxes to provide additional recreational facilities?" As in question six, respondents were provided a range of payment alternatives between $1 to more than $50. From the responses provided we produced a continuous bid variable, which was analyzed using a least squares approach (Table 54). As in question six calculations of welfare change were conducted using a simple mean. Outliers were not removed to preserve integrity of the analysis.

Table 54. Respondents stated WTP additional property taxes for recreational facilities

Respondent Group	$1-9	$10-19	$20-29	$30-39	$40-49	$50+	No Response	Total Valid
MVSTA Trail Users	5	8	14	6	18	27	143	221
MV Residents	10	15	28	14	37	55	301	460
Total(s)	15	23	42	20	55	82	444	681

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

As with respondents stated WTP into a trust fund for outdoor recreation and trails we see a general upward trend in stated WTP additional taxes to provide additional recreational facilities in the Methow Valley, however there is considerably more fluctuation for individual respondent

groups. As before, we see an increase through the provided range indicating that the upper bounds of WTP for both groups is something higher than $50 (Figure 20).

Figure 20. Respondents stated WTP for recreational facilities through property tax mechanism

Source: Resource Dimensions, 2005 MVSTA Resident/Trail User Survey

Applying least squares analysis we find an unadjusted average WTP measure of $36.99 and an adjusted average WTP measure of $29.61 per person to support recreational facilities in the Methow Valley; paid via property taxes. The average separation of the unadjusted WTP between Methow Valley residents and trail users is about $0.41, with residents stating a slightly higher utility at an average WTP measure of $37.19 per person to a trail user WTP of $36.78 per person. Adjusting for the number of undecided respondents pushes the per person average WTP for residents to $27.98 and $31.24 for trail users. Both estimates are well within the bounds of similar studies; we elected to side with the conservative estimate in generating estimated WTP values for the larger population. A chi-square test rejected the null-hypothesis that there was no relationship between stated annual contribution levels and the proportion of "Yes" responses at a significance level of α=0.05.

To estimate the average adjusted WTP for the Methow Valley resident population we again adjust for the percentage of the population under the age of 18 and calculate an estimated local WTP of $64,224. Applying the same method to the trail specific visitor day estimate and adjusting by the state average (25.7%) for percent age of population under 18, we estimate the individual visitor WTP at $1.19 million annually. As the question was posed at the individual level, this estimate is realistic. Adjusting by the state average persons per household variable of 2.53, results in a non-local household level WTP of $471,746 annually.

This page intentionally left blank

Section 5: Survey Findings: Methow Valley Businesses

5.1 Introduction

Much of the information presented in this section was compiled by analyzing responses to a survey of Methow Valley businesses conducted in March 2005. One purpose of the analysis was to assess any changes in business activity or patterns that may have occurred in the six years since the 1998 study. Therefore, Resource Dimensions used a survey method similar to that used in the earlier study. As the primary investigation tool for this part of the analysis, the scope of questions presented was expanded to aid in developing a more comprehensive understanding of local economic drivers and their relationships across the economy.

Distribution of the business survey, as discussed in Section 3, was to a list of approximately 180 area businesses identified by Resource Dimensions. As of 2000, the U.S. Census some 284 business operated in the Methow Valley; representing distribution to roughly 63.4% of all businesses within the region. Project staff personally delivered about half of the surveys; the remaining surveys were mailed through the USPS. Of the 180 surveys distributed, 137 valid surveys were returned, a 76.1% response rate.

The purpose of the business survey was to provide a format for area businesses to impart invaluable information and express their views on the relationships between the trails network and related recreation, the natural landscape and various dimensions of the valley's economy. Allowing the exchange of such information through a confidential and anonymous process as a survey helps to ensure that higher rates of response are received and that responses are more candid and sincere.

The business survey contained questions of three main types (Appendix B). The first seeks to obtain general business demographic and characteristics information on issues as location, size, business activities, business structure, and length of time in business, etc. The second centers on discovering relationships between various business activities identified by respondents and the level of importance ascribed to the trail and various natural resource attributes of the Methow Valley. The third seeks to understand the distribution of annual gross revenues across seasons and attribution to visitors, both generally and those specifically using the network of trails.

In addition to the survey, Resource Dimensions reviewed employment and income data and the research team interviewed twenty-seven representatives from government agencies, local community and economic development leaders, business owners/managers, and business community leaders. The interviews served two primary purposes — to provide important insights for survey development and distribution channels and to ground-truth our findings. Additionally, interviews allowed for a better understanding of the roles of the region's economic development entities, the challenges and opportunities within the economy, and general trends for Methow Valley's small businesses.

The following sections describe our analysis and findings on the views and economic positions of Methow Valley businesses participating in the March 2005 survey.

5.2 Regional Business Demographics & Characteristics

The information presented in sections to follow is largely derived from the 2005 Methow Valley business survey administered in March 2005. As appropriate and where possible Resource Dimensions compares findings of the 2005 survey against those of the 1998 business survey or comparable data obtained from other resources on the region.

The first question of the survey seeks to establish an approximate breakdown of area businesses by respondent's location. Given area demographics (see Table 8 in Section 2.2) and the extent of built environment and infrastructure across the towns of the Methow Valley (Carlton, Mazama, Methow, Twisp, and Winthrop), the distribution shown in Table 55 reflects with fair accuracy the dispersal of the region's business activity.

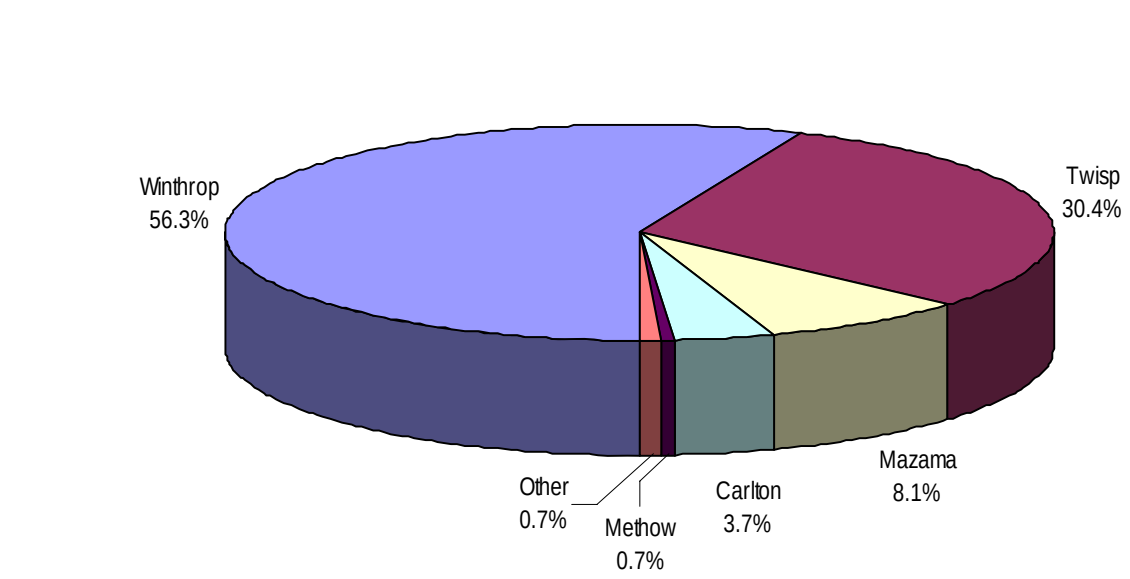
Table 55. Respondent businesses by location

Business Location in Methow Valley	
Winthrop	76
% of Total	56.30%
Twisp	41
% of Total	30.37%
Mazama	11
% of Total	8.15%
Carlton	5
% of Total	3.70%
Methow	1
% of Total	0.74%
Other	1
% of Total	0.74%
TOTAL business respondents	135

Source: Resource Dimensions, 2005 MVSTA Business Survey

In Figure 21, the breakdown of business respondents is graphically depicted to emphasize the significant difference between business activity across the Methow Valley communities.

Figure 21. Proportional share of Methow Valley business respondents by area



Source: Resource Dimensions, 2005 MVSTA Business Survey

In question two, respondents were asked to identify the business type or classification that most accurately described their business. Respondent's were allowed to identify up to six primary business activities from a list of 18 classifications as well as the opportunity to provide a write-in answer; four classifications was the maximum used by respondents as reported in Table 56. As shown in Table 56 and graphically depicted in Figure 22, by far the greatest percentage of reporting businesses fall under that commonly referred to as the service sector.

The only respondent businesses falling outside the service sector includes those "construction and related trades" at 6.4% and agricultural and manufacturing industry respondents located within the composite 12.2% "other" classification. The "service sector" is generally defined by Bureau of Labor Statistics as encompassing all workers not involved in agriculture, mining, construction, and manufacturing (goods production). Included are a diverse range of activities such as legal and healthcare services, motion pictures, auto repair, technology, transportation, real estate, public utilities, wholesale and retail trade, communications, and finance industries, as well as its largest component called the "services industry," and government. As is true with the representative sample of Methow Valley businesses, nationwide the service sector is by far the largest component of the U.S. economy, making up an estimated 71% of all U.S. employment (BLS, 2001). The U.S. Department of Commerce estimates that nationally, four out of every five private sector non-farm jobs are in the economy's service sector (OSI 1998). Service industries are both the biggest sector of our national and state economies, and the fastest-growing sector of the Methow Valley's economy.

Table 54. Report of respondent businesses by primary business activity type/classifications

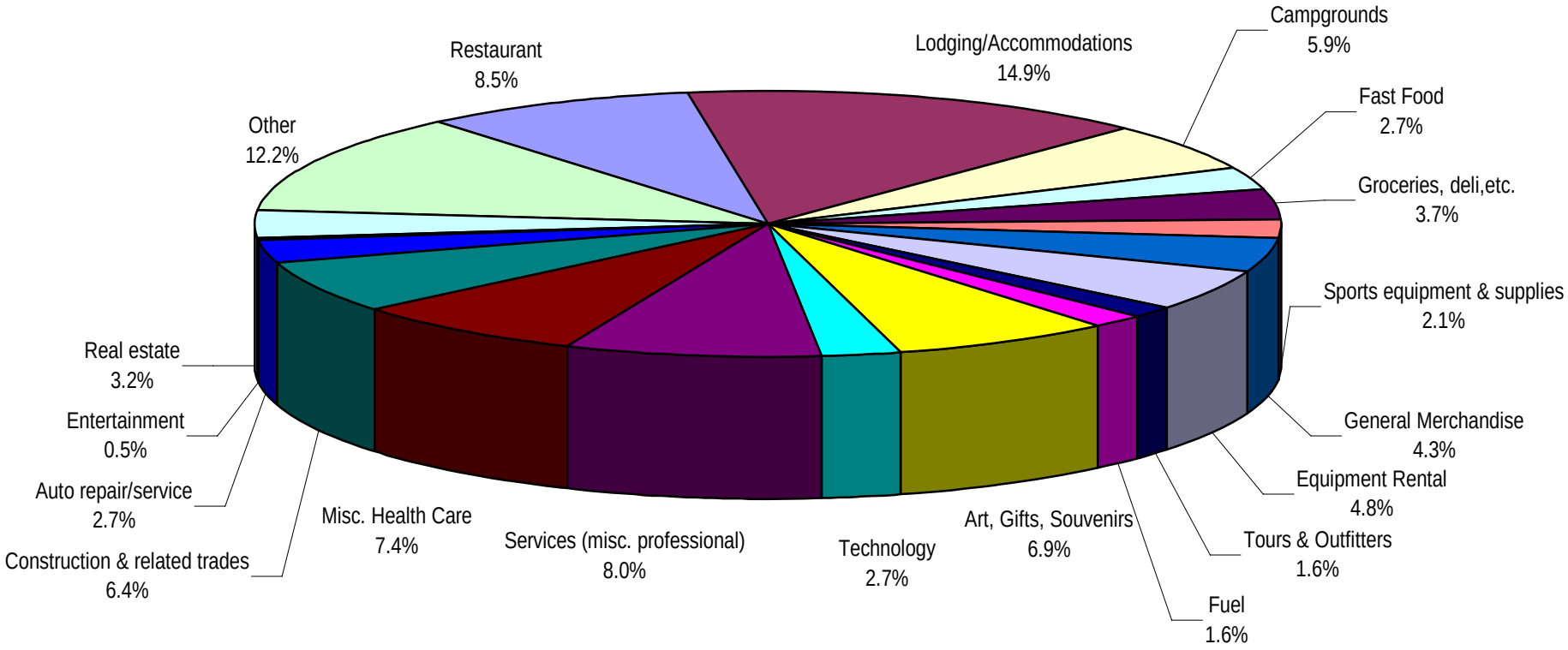
Business Type/Classification	# of Businesses Reporting by Primary Activities				Total Reporting Businesses by Activity
	1°	2°	3°	4°	
Restaurant	16				16
Lodging/Accommodations	20	8			28
Campgrounds	5	6			11
Fast Food	3	2			5
Groceries, deli, etc.	3	2	2		7
Sports equipment & supplies	3	1			4
General Merchandise	4	2	2		8
Equipment Rental	6		2	1	9
Tours & Outfitters	2	1			3
Fuel	1	2			3
Art, Gifts, Souvenirs	10		2	1	13
Technology	5				5
Services (misc. professional)	15				15
Misc. Health Care	13			1	14
Construction & related trades	11	1			12
Auto repair/service	3	1	1		5
Entertainment	1				1
Real estate	4		2		6
Other	12	6	3	2	23
Total reporting	137	32	14	5	188

Note*:* count of # of businesses reporting business activity by type (1°= primary activity; 2°= secondary activity; 3°= tertiary activity; 4°= quaternary activity)

Source: Resource Dimensions, 2005 MVSTA Business Survey

Figure 22. Breakdown of business survey respondents by activity type

Business Type/Classification



Source: Resource Dimensions, 2005 MVSTA Business Survey

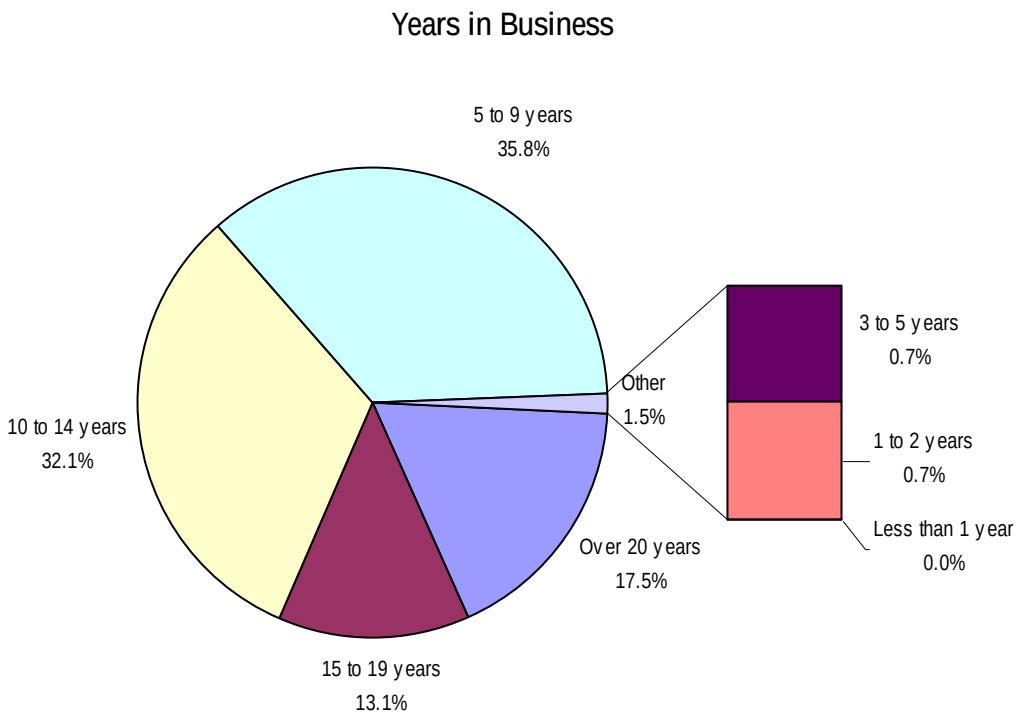
Question three asked respondents how long they have been in business in the Methow Valley. Table 57 reports findings for March 2005 respondent businesses and is presented graphically in Figure 23. The average length of time in business is about 8.28 years, with a standard deviation of 2.64. This compares to an approximate average of 6.8 years as reported by 53 area businesses from the 1998 survey.

Table 57. Length of time in business in the Methow Valley

Year(s) in Business	No. Business Respondents	% of Total Rspondents
Less than 1 year	0	0.0%
1 to 2 years	1	0.7%
3 to 5 years	1	0.7%
5 to 9 years	49	35.8%
10 to 14 years	44	32.1%
15 to 19 years	18	13.1%
Over 20 years	24	17.5%
Total	137	

Source: Resource Dimensions, 2005 MVSTA Business Survey

Figure 23. Length of time in business in the Methow Valley



Source: Resource Dimensions, 2005 MVSTA Business Survey

In question four, respondents were asked to identify the status of their business organization from the list provided, and/or to provide their own if not indicated on the survey format. Table 58 presents responses received from area business respondents. While economic development and growth are due to a number of elements, two of the more important elements to a region are its resource base and the comparative advantage of those assets. Regions prosper depending on the nature of their endowments; the advantages in price, quality, or availability of resources; and the ability to transform these inputs into products or services in demand. As has been a growing trend across Washington and the nation for communities of similar composition, we see substantial growth of small business/sole proprietorships.

The demographic shifts occurring within the region noted earlier in this report can contribute to local development efforts through increases in human capital. Human capital is a term used to quantify a person or community's productivity level, and is measured by one's level of skill, education, and work experience. As illustrated in Table 8 found in Section 2.2 of the report, overall, residents of the Methow Valley in general have high education levels and significant work experience (given that many are older), therefore it is reasonable to assume that the area has a high and growing amount of human capital. Another indication of the valley's human capital is the high number of small businesses and sole proprietors. Human capital is important when discussing a region's economy and related economic impacts given the dimensions of entrepreneurial activities, and therefore, jobs within a geographic area.

Table 58. Business organization status

Business Organization	# of Businesses Reporting	% of Businesses Reporting
Sole Proprietorship	60	43.8%
General Partnership	5	3.6%
Limited Partnership	2	1.5%
Non-Profit	5	3.6%
Limited Liability Partnership (LLP) or Company (LLC)	28	20.4%
Corporation	36	26.3%
Other	1	0.7%
Total reporting	137	

Source: Resource Dimensions, 2005 MVSTA Business Survey

Questions 5 and 6 center on employment, asking respondents to provide both fulltime equivalent employees (FTE) and part-time equivalent employees (PTE) employed in each of the four seasons (summer, winter, spring, and fall). Summer is peak season for both full-time and part-time employment in the Methow Valley; which is understandable given the nature of the region and its growing reliance on tourism; of which a growing percentage is nature-based recreation.

About 62% of the businesses have 1-3 full time employees, and 22.6 percent of the sample has 4-10 employees. Sole proprietors made up about 44% of the sample (Table 58). As the purpose of this assessment was to determine the impacts of the Methow Valley trails and other natural land resources within the region, no data as to average hourly wage, area employer's provision of health insurance to employees, or other related data was collected through the survey. Key, however, is that the Methow Valley's small businesses make up an important source of jobs and income in the region.

Against the 1998 MVSTA business survey, there is a general pattern of employment growth for both part-time and full-time workers across seasons. (Table 59). The annual average number of FTEs per employer has changed minimally between the two survey periods; however, 2005 survey results indicate greater growth within the part-time employment sector. Survey respondents report an annualized average total of 1027 jobs, equating to 653 FTE and 374 PTE jobs, for an estimated minimum payroll of $15.4 million annually. Generally, the trend of summer being the most labor intensive period, as indicated by increases to both FTE and PTE workers at Methow Valley businesses for the season, holds across both survey periods.

Table 59. Number of FTEs and PTEs reported by season

Season	FTEs Seasonal Average	% of Total Annual FTEs	Avg. FTEs per Employer 2005	Avg. FTEs per Employer 1998	PTEs Seasonal Average	% of Total Annual PTEs	Avg. PTEs per Employer 2005	Avg. PTEs per Employer 1998
Winter	596	22.8%	4.3	4.0	324	21.7%	4.7	2.8
Spring	588	22.5%	4.3	3.8	332.5	22.2%	3.5	2.6
Summer	791	30.3%	5.7	5.5	490	32.8%	3.2	4.3
Fall	635	24.3%	4.6	4.6	348.5	23.3%	4.6	3.0
Annual avg.	653		4.7	4.5	373.75		4.0	3.2

Source: Resource Dimensions, 2005 MVSTA Business Survey

While the above does not represent a full accounting of all jobs and employment in the Methow Valley, it does provide a solid core sample, which allows for the development of some well-reasoned estimates relative to economic impacts for the region.

5.3 Dependence on Resource-based Tourism

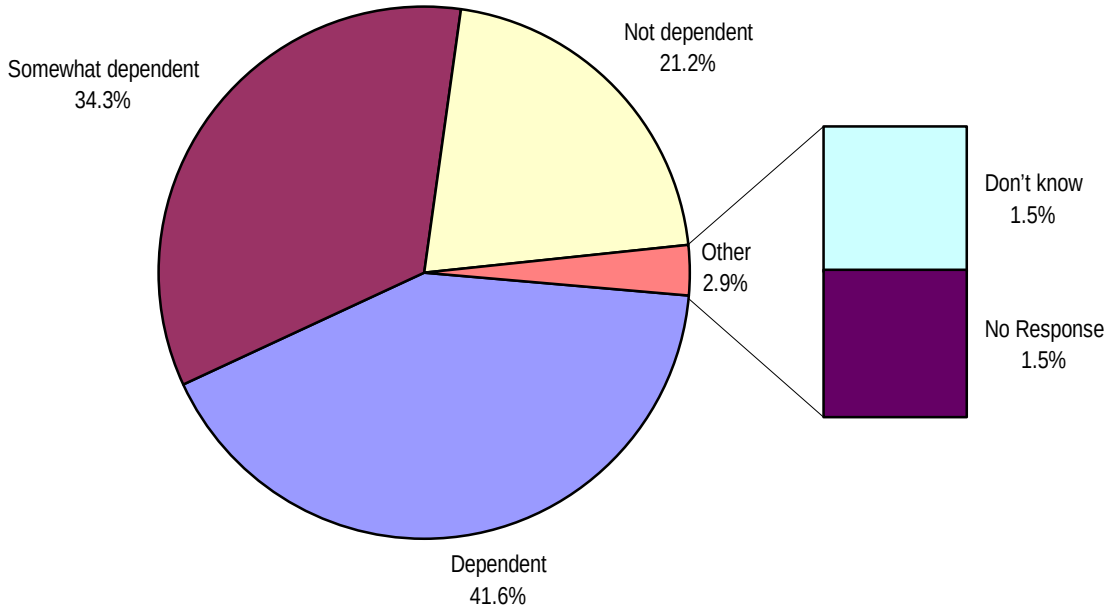
In question seven, Methow Valley businesses participating in the survey were asked about the extent to which their businesses peak season or seasons are dependent on tourists. As seen in Table 58, over 41% of reporting businesses indicated that their peak business season(s) were "dependent on tourists", while another 34% indicated their peak seasons were "some what dependent" on tourists; thus, representing nearly 75% of all Methow Valley respondent businesses. Similarly, the 1998 survey asked respondents to identify the level of "importance" by various user and visitor groups, wherein between three choices (very important, somewhat important and not important) some 77% and 51% indicated that recreational visitors and non-recreational visitors were "very important" to generating business revenues. Figure 24 provides graphic presentation for information provided in Table 60.

Table 60. Dependence of Methow Valley businesses on tourists

Dependent on Tourists	# of Businesses Reporting	% of Businesses Reporting
Dependent	57	41.6%
Somewhat dependent	47	34.3%
Not dependent	29	21.2%
Don't know	2	1.5%
No Response	2	1.5%
Total	137	

Source: Resource Dimensions, 2005 MVSTA Business Survey

Figure 24. Methow Valley business survey respondents' reported dependency on tourists



Source: Resource Dimensions, 2005 MVSTA Business Survey

Related, question eight asked respondents to state, on a four-point scale, whether over the course of time in business in the Methow Valley they viewed the number of people coming to the area to take advantage of recreational trails and the valley's natural beauty had generally increased significantly, increased somewhat, did not increase, or declined. Over 50% of all

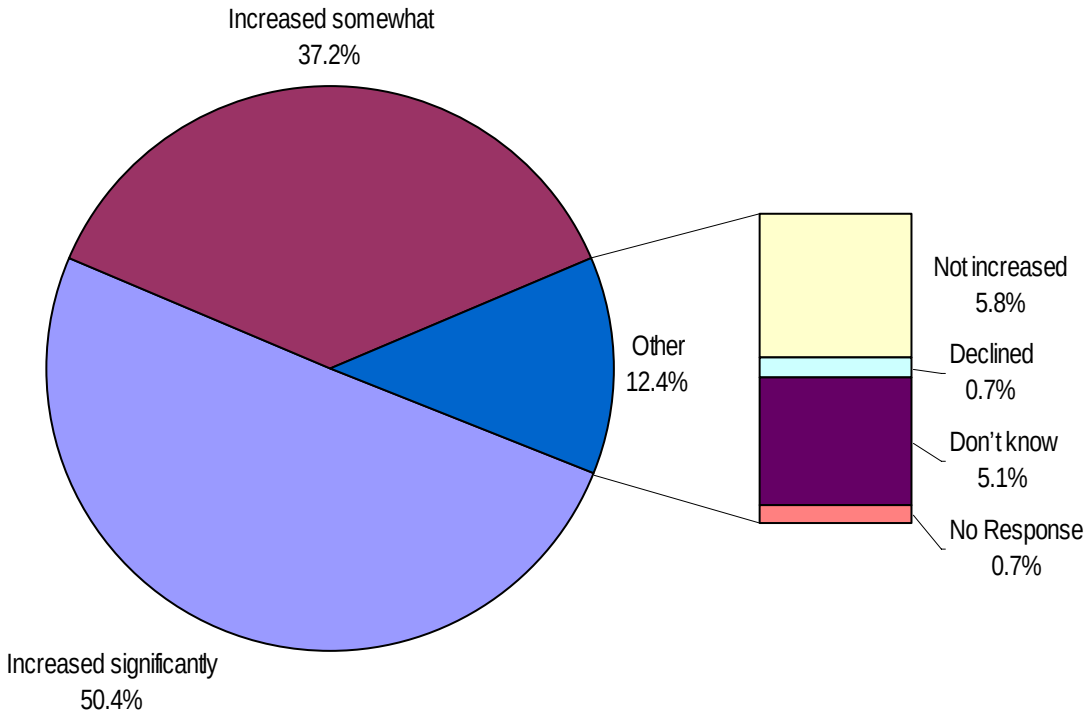
respondents indicated that trail and resource-based visitors had increased significantly, and another 37% indicated that it had increased somewhat (Table 61). As seen in Figure 25, this represents nearly 88% of all respondents believe that there has been growth of recreational trail-based tourism over the course of time they have been in business in the Methow Valley.

Table 61. Respondent views on growth in trail users and resource-based tourism over business life

Methow Valley recreational trail users and resource-based tourism over period in business has:	# of Businesses reporting	% of Businesses reporting
Increased significantly	69	50.4%
Increased somewhat	51	37.2%
Not increased	8	5.8%
Declined	1	0.7%
Don't know	7	5.1%
No Response	1	0.7%
Total	137	

Source: Resource Dimensions, 2005 MVSTA Business Survey

Figure 25. Breakdown of respondent views on growth of trail users and resource-based tourism over business history in the Methow Valley



Source: Resource Dimensions, 2005 MVSTA Business Survey

Question five, posed in the 1998 business survey conducted by MVSTA, asked respondents a similar question. Respondents were asked to describe using a four-point scale (no change, large increase, moderate increase, fewer) the average change in visitors coming to the area to take advantage of the recreational opportunities on trails in the Methow Valley over their years in business. The principal difference between the two survey reporting periods indicates that there has been a general shift in respondent's perceptions regarding the increase of area visitors, as the 1998 report cites only 23% stating a large increase, while the 2005 respondents indicating significant increase represent over 50% of the sample. However, when combining both large and moderate increase responses from the 1995 study, we find a total of about 84% of the total sample felt there had been some increase – this compares relatively well to the 87.6% identifying some measure of increase for the 2005 study.

5.4 Attitudes, Values & Perceptions

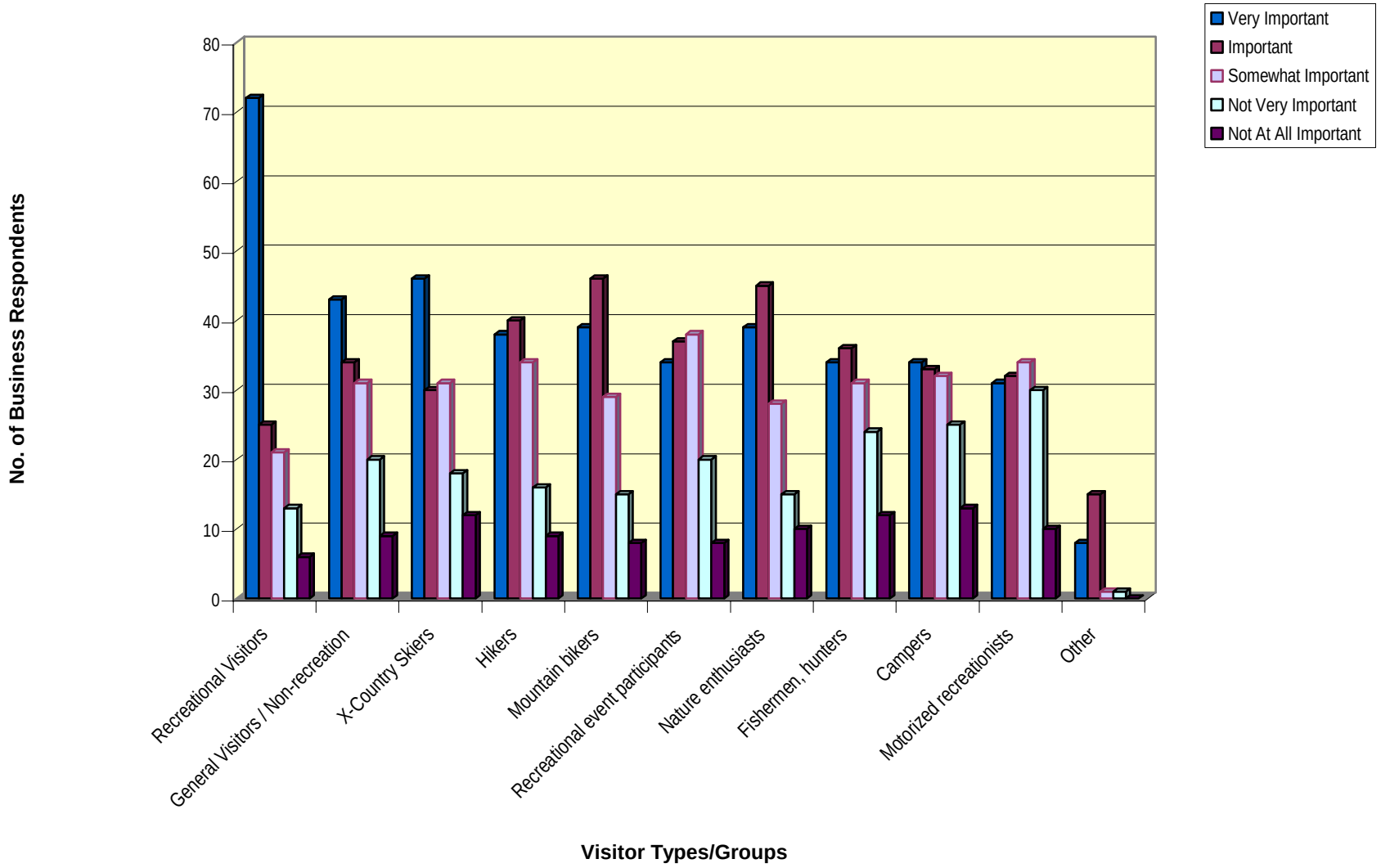
In question nine, respondent businesses were asked to review a list of categories of revenue generating activities and to identify how important each is in terms of generating revenues (sales) for their particular business. Table 62 reflects the aggregate of respondent business responses, while Figure 26 illustrates the relative distribution graphically.

Table 62. Respondent views on importance of particular revenue groups to revenue generation

Visitor Types/Groups	Very Important	Important	Somewhat Important	Not Very Important	Not At All Important	Total Respondents
Recreational Visitors	72	25	21	13	6	137
General Visitors / Non-recreation	43	34	31	20	9	137
X-Country Skiers	46	30	31	18	12	137
Hikers	38	40	34	16	9	137
Mountain bikers	39	46	29	15	8	137
Recreational event participants	34	37	38	20	8	137
Nature enthusiasts	39	45	28	15	10	137
Fishermen, hunters	34	36	31	24	12	137
Campers	34	33	32	25	13	137
Motorized recreationists	31	32	34	30	10	137
Other	8	15	1	1	0	25

Source: Resource Dimensions, 2005 MVSTA Business Survey

Figure 26. Relative comparison of "importance" of visitor or user groups to Methow Area businesses revenue generation



Source: Resource Dimensions, 2005 MVSTA Business Survey

Table 63 reports only for the categories "very important," "important," and "somewhat important." As can be seen, the percentage of those respondent businesses identifying various revenue generating groups at some importance level was highest for recreational visitors (general), mountain bikers, nature enthusiasts and hikers, at 86.1%, 83.2%, and 81.8% respectively. Importantly, however, for all revenue groups identified respondents reported aggregated importance levels of 70% and higher.

Table 63. Breakdown of Methow Valley business respondents by revenues generator groups

Revenue Groups	Very Important	%	Important	%	Somewhat Important	%	Total Responses	% of Respondents
Recreational Visitors	72	52.6%	25	18.2%	21	15.3%	118	86.1%
General Visitors / Non-recreational	43	31.4%	34	24.8%	31	22.6%	108	78.8%
X-Country Skiers	46	33.6%	30	21.9%	31	22.6%	107	78.1%
Hikers	38	27.7%	40	29.2%	34	24.8%	112	81.8%
Mountain bikers	39	28.5%	46	33.6%	29	21.2%	114	83.2%
Participants in recreational events	34	24.8%	37	27.0%	38	27.7%	109	79.6%
Nature enthusiasts	39	28.5%	45	32.8%	28	20.4%	112	81.8%
Fishermen, hunters	34	24.8%	36	26.3%	31	22.6%	101	73.7%
Campers	34	24.8%	33	24.1%	32	23.4%	99	72.3%
Motorized recreationists	31	22.6%	32	23.4%	34	24.8%	97	70.8%
Other (see list below)	8	32.0%	15	60.0%	0	0.0%	23	92.0%

Source: Resource Dimensions, 2005 MVSTA Business Survey

In the 1998 study, a similar assessment was conducted, although fewer classifications were presented for assessment. Table 64 presents 1998 results for comparison purposes. As can be seen, there appears to be both shifts and a general expansion over the six years between surveys in the range and nature of importance allocated to various visitor and/or user groups. For example, overall the 2005 results reflect an increase in the perceived relative importance of mountain bikers and participants in recreational events.

Table 64. Results from 1998 study – Importance of revenue groups to income generation for respondents

	Very Important	%	Somehwat Important	%	Not Important	%	Total Responses
Recreational Visitors	41	77.4%	11	20.8%	1	1.9%	53
Non-recreational visitors	27	50.9%	18	34.0%	8	15.1%	53
Mountain Bicylists	26	49.1%	22	41.5%	5	9.4%	53
Hikers	24	46.2%	23	44.2%	5	9.6%	52
X-Country Skiers	32	60.4%	18	34.0%	3	5.7%	53
Recreational Event Participants	25	47.2%	21	39.6%	7	13.2%	53
All non-mortarized trail users	28	52.8%	23	43.4%	2	3.8%	53

Source: Resource Dimensions, 2005 MVSTA Business Survey

In question ten, respondents were asked to estimate the percentage of their average annual gross revenues, over the course of time in business in the Methow Valley, coming from ALL visitors. As seen in Table 65, the estimated proportion of annual gross revenues from ALL visitors indicates an economy largely dependent on revenues from outside its resident population.

Table 65. Breakdown of Methow Valley business respondents' percentage of annual revenues from ALL visitors

Percentage of annual gross revenues estimated from ALL visitors	# of respondents	% of respondents
0-20%	40	29.20%
21-49%	23	16.79%
50-75%	19	13.87%
76-90%	15	10.95%
91-100%	40	29.20%
Total Respondents	137	

Source: Resource Dimensions, 2005 MVSTA Business Survey

Question 11 then asked respondents to estimate the percentage of average annual gross revenues (by season) that comes from just those visitors coming to use the Methow Valley's network of trails for non-motorized recreation. The type of recreationists we mentioned for the benefit of respondents assessment process included: hikers, bicyclists, skiers, and those who attend special recreational events.

Table 66 reflects respondents estimated breakdown of annual gross revenues attributed specifically to Methow Valley visitors coming to the Methow Valley to participating in non-motorized recreational activities. Also presented is the estimated average percentage of seasonal gross revenue. As reported in the 1998 study, the winter continues to be the season in which the greatest average percentage of revenues for area businesses (44.1%) are generated by trail users to the region, followed by summer with an average of 41.5% – up by approximately 8.5% over the 1998 study. As noted earlier, area businesses report the summer season as being the most labor intensive period, indicating an increase in both FTE and PTE employees (Table 59). Without the benefit of actual business records and data on the difference in the types of positions being filled by workers across the seasons it is not possible to identify the complete range of attributes responsible for this apparent inconsistency . It is likely, however, that a good deal of the disparity can be explained by differences in the nature of summer versus winter activities in the region and the types of seasonal workers employed to fill particular needs of local businesses.

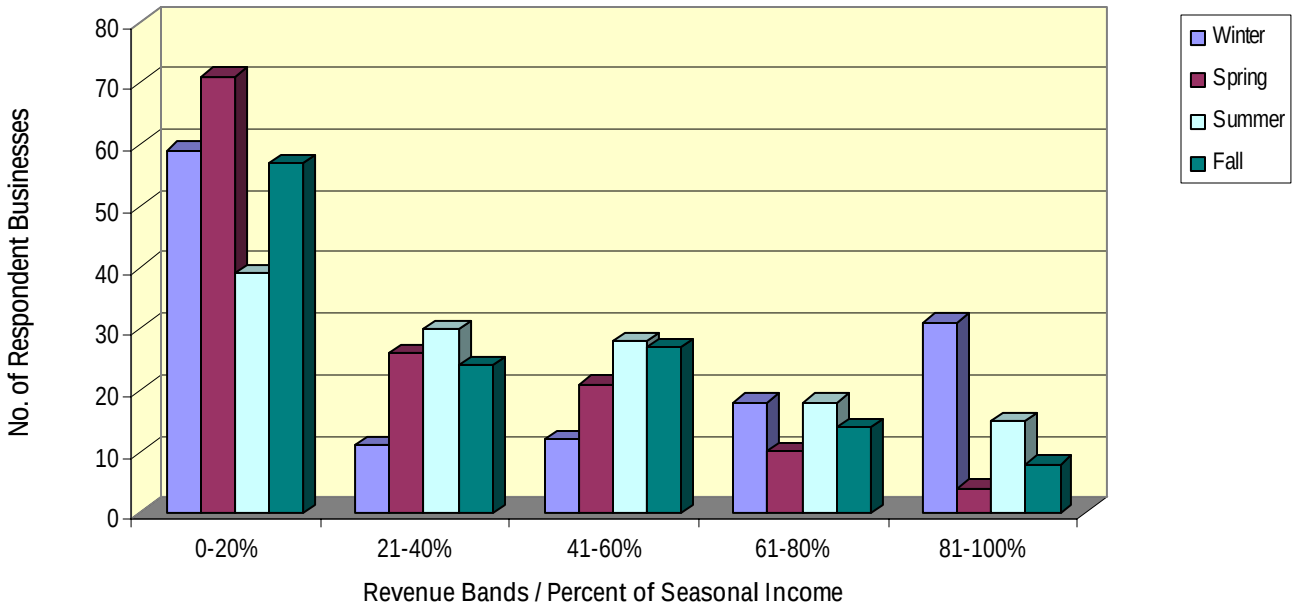
Table 66. Estimated breakdown of annual gross revenues attributed to Methow Valley trail visitors by season

Season	# Reporting Businesses in Revenue Band	Avg. % of Season Gross Revenue	Total # Businesses Reporting
Winter		44.1%	131
0-20%	59		
21-40%	11		
41-60%	12		
61-80%	18		
81-100%	31		
Spring		28.3%	131
0-20%	71		
21-40%	26		
41-60%	21		
61-80%	10		
81-100%	4		
Summer		41.5%	130
0-20%	39		
21-40%	30		
41-60%	28		
61-80%	18		
81-100%	15		
Fall		35.0%	130
0-20%	57		
21-40%	24		
41-60%	27		
61-80%	14		
81-100%	8		

Source: Resource Dimensions, 2005 MVSTA Business Survey

Figure 27 shows the distribution of data by revenue bands from Table 64 by season.

Figure 27. Percent of gross revenues attributed to trail users by Methow Valley businesses by season



Source: Resource Dimensions, 2005 MVSTA Business Survey

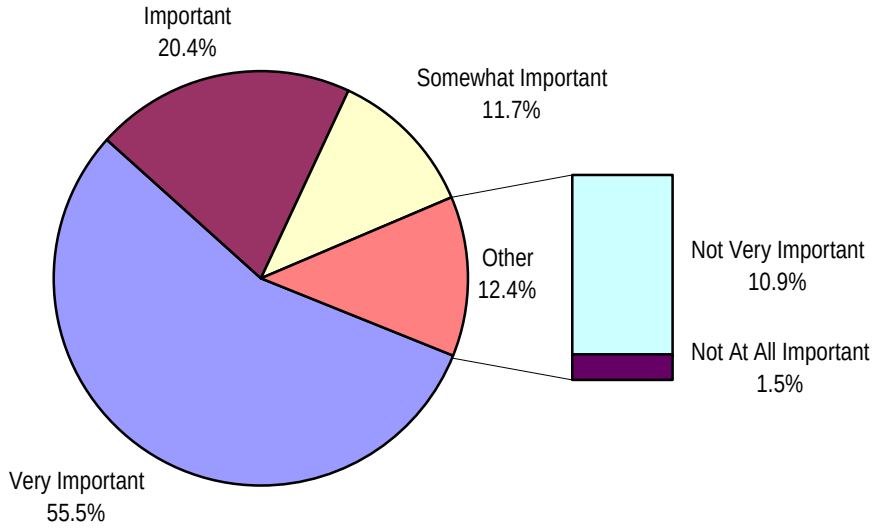
In the final question to the business survey, respondents are asked to identify, on a five-point scale (1=extremely important to 5=not at all important), the extent to which they believe the natural beauty, wildlife, and open space of the Methow Valley are important to their business' success. Over 86% of all respondents believe there is at least some relationship between these factors and the success of their businesses success, with over 75% reporting that the areas natural beauty, wildlife, and open space are either "very important" or "important" to the success of their business. Overall, less than 2% of all respondents stated that these factors were not at all important (Table 67). Figure 28 provides graphic representation of the data.

Table 67. Perceived importance of natural beauty, wildlife and open space to business success

Importance of natural beauty, wildlife, and open space to business success	Business Respondents	% of Total Respondents
Very Important	76	55.47%
Important	28	20.44%
Somewhat Important	16	11.68%
Not Very Important	15	10.95%
Not At All Important	2	1.46%
Total	137	

Source: Resource Dimensions, 2005 MVSTA Business Survey

Figure 28. Breakdown of business survey respondents' views on relative importance to business success



Source: Resource Dimensions, 2005 MVSTA Business Survey

This page intentionally left blank.

Section 6: Economic Impact Analysis

6.1 Why Economic Impact Analysis?

The purpose of the study was to evaluate the economic impact of the MVSTA trail system on the Methow Valley and communities within the region. Analysis of local and/or regional economic impacts relative to resource-based activities within a particular region requires an assessment of expenditures within the region; specifically those expenditures by users of the resource-based activity or those drawn to the region by certain characteristics of the areas natural resource set. For example, many visitors to national parks such as Mt. Rainer are 'day trippers' – that is visitors who typically come for visual experiences, short nature-based walking opportunities, wildlife viewing, photography, picnics, and the like. By virtue of the fact that these visitors they have commuted to that particular park from wherever it is that they live, whether relatively local or an hour or more away, we expect certain local and regional expenditures to occur; whether related specifically to their "use" of the resource (direct) — or not (indirect). Additionally, we estimate the influence of these expenditures on specific sectors of the local and regional economy (e.g., business, employment, tax base, etc.).

Objectives of the economic impact analysis include:

- Estimating the level of local and regional spending by visiting MVSTA trail users;
- Estimation of the average daily expenditure per individual
- Estimating the dollar value of sales in specific business sectors that can be attributed to MVSTA trail uses and/or those whose visit to the Methow Valley can be attributed to its lands and other natural resources
- Estimating the total tax revenues related to expenditures by MVSTA trail users
- Estimating the annual impact on local and regional employment; and
- Evaluation of trail-user related expenditures and the impact on the local and regional economy and future economic development prospects.

Given the population base and relatively small number of business establishments in the study region, the availability of data for specific business categories was limited. While this does not invalidate study findings, it does constrain moving the analysis to the next level with regard to identification of particular business sector impacts.

As noted in Section 4, estimates for trail users are based on responses received from the survey completed by recent winter visitors to the Methow Valley. Survey distribution methods used included, mail, distribution through area hotels, on-line availability from mid-February through mid-March 2005, and on-site trail distribution February 18-21, 2005. In addition to expenditure information, the survey sought other study-relevant information such as number of Methow Valley visits annually, average trip length, distance traveled, activity participation, lodging and dining characteristics, and other related data.

6.2 What is Economic Impact Analysis?

Across the country, there has been an increasing emphasis on the need to estimate the magnitude of economic impacts associated with a variety of policies, programs, and projects. This is usually motivated by a desire to compare economic effects of potential alternatives to support decisions for program and policy implementation, planning design, or investments in conservation or development. In most cases, the focus is on estimating how different alternatives will affect the local or regional economies in the area where impacts are to occur. Various methods have been used to measure such impacts, ranging from qualitative surveys to detailed market studies, economic input/output (I/O) models, and comprehensive economic simulation models.

Land use or related natural resource use typically generate two types of economic impacts: short- and long-term. Short-term impacts are those incurred upfront during initial implementation. Long-term economic impacts occur after adjustments have been made to the gain or loss in economic activity caused by the changes. Long-term impacts are associated with permanent changes to levels of wealth to the region under consideration.

A dollar spent on trail development, construction, maintenance or by users of the trail, circulates and recirculates within the economy, multiplying the effects of the original expenditures on overall economic activity. This process is referred to as the **economic multiplier effect**. It operates at several levels:

- Initial trail user and operator expenditures on goods and services, wages, materials and other trail-related expenditures are typically referred to as direct costs of operation and their effects are referred to as **direct** effects.
- Consequent purchases made by suppliers of materials and services to sustain the direct expenditures are called the **indirect** effects.
- **Induced** effects occur when workers in the sectors stimulated by initial and indirect expenditures spend their additional incomes on consumer goods and services.

Some key terms and definitions are provided below to assist in interpreting the results of the economic impact analysis:

- **Initial or direct expenditure** figures indicate the amount of expenditures in terms of trail user expenditures, and trail operation expenditures used for the analysis.
- **Value added** (Gross Domestic Product or Regional Income) figures represent the total value of the production of goods and services in the economy resulting from direct expenditures under analysis (valued at market prices).
- **Employment** figures represent the total employment (full time equivalent jobs) generated by the initial expenditure, measured in person years.
- **Taxes** included in the I-O model are a number of taxes, each of which is directly linked with the level of government receiving it.

There is a general, but unacceptable tendency on the part of many economists to either avoid discussion or inclusion of local and resident trail user expenditures altogether, or to suspend

recognition of the fact that expenditures by local and resident trail users may be substitutions for other expenditures. Therefore, both in Section 4 and in devising the input data for the IMPLAN model used later in this Section, Resource Dimensions has sought to distinguish between local and non-local expenditures, to the extent possible (MIG, Inc. 2004). This aids in evaluating the level of expenditure made by non-locals, an indication of "new money" in the local economy, and those made by residents relative to trail use and related resource recreation activities, which may or may not be new money or purchases in the local economy, but should none-the-less be included. The study uses a total economic impacts analysis approach; thus, both local and non-local user expenditure impacts are included.

The following describes the results for the regional economic impact modeling where this type of analysis could be applied to show the range of impacts to the local and regional economies as they relate to MVSTA trails and other resource attributes of the Methow Valley. Where quantitative analysis was not straightforward, qualitative discussion of impacts is provided.

6.3 Economic Impact Methodology

The economic impact analysis involved the following activities:

- Review of research on the economic impacts of linear parks, trails, and protected lands
- Personal interviews with local chamber of commerce, business owners, real estate agents, DNR land managers and others involved in land use and planning issues in the region to obtain insights and perspectives representing a range of viewpoints
- Analyzing data obtained from county and local planning commissions, and other relevant records
- Development of disaggregated I/O models
- Estimating direct, indirect, and induced economic impacts

An existing I/O model was used to provide applicable multipliers and coefficients to changes in local business activity to show total impacts. We will first describe the I/O modeling approach and then explain how the outputs can be useful in comparing alternatives.

6.3.1 Input/Output Models

Economic I/O models are used to estimate the impact of business activity changes or to calculate the contributions of an industry to a regional economy. The basic premise of the I/O framework is that each industry sells its output to other industries and final consumers and in turn purchases goods and services from other industries and primary factors of production. Therefore, the economic performance of each industry can be determined by changes in both final demand and the specific inter-industry relationships. I/O tables assist in calculating overall changes in the flow of money in the local and regional economy, including direct, indirect, and induced effects. In this case, the effects are those associated with income and expenditures related to active and passive recreation on MVSTA trails and other lands of the Methow Valley. The outputs are shown as estimates of changes in employment, personal income, business output, and gross regional product (value added). Due to the nature of interactions between recreation elements, caution has been exercised to avoid double-counting potential benefits.

The approach used by Resource Dimensions, joins that of an I/O survey model, which involved obtaining data on the sectorial distribution of local sales for each sector, together with that of the IMPLAN, an input-output economic modeling system developed for the U.S. Forest Service, which uses secondary data to construct estimates of local economic activity. IMPLAN can be to used construct zip code, county or multi-county I/O models for any region in the U.S.[11] The regional models are derived from technical coefficients of a national I/O model and localized estimates of total gross outputs by sectors. IMPLAN adjusts the national level data to fit the economic composition and estimated trade balance of a chosen region. I/O models have been constructed for the State of Washington and each of its counties.

The model based on Year 2003 economic activity data for the state was customized by the five zip code areas to derive spending response coefficients for the Methow Valley. The affected expenditures and net revenues were used to reflect "representative" spending. This is called the "disaggregated" approach, because as budget line items change, overall economic impacts will change. Calculations derived from this data were then input into IMPLAN. The IMPLAN model included appropriate multipliers at the county level to provide accurate data for total direct, indirect, and induced spending inputs (MIG, Inc. 2004).

The final step in the analysis was to apply all tabulations from the I/O model to the MVSTA 2003-operating budget. In summary, expenditures to maintain and operate MVSTA and the trail network for 2003 totaled approximately $502,000. Attributable economic benefits to the state and region are represented in three forms (goods sold, tax revenue and jobs created/supported). The estimated benefits generated include, but are not limited to:

- Nearly $4.5 million dollars annually in direct expenditures
- over $4.1 million dollars of indirect secondary expenditures made annually
- $ 278,721 in state, local, hotel/motel and state-shared transient lodging taxes annually
- $ 4,089,072 in direct local wages/compensation equivalent to about 129 full-time equivalence jobs (49 FTEs and 159 PTEs and/or seasonal)
- $ 2,743,860 in indirect local wages/compensation equivalent to an about 124 additional jobs for the employees of suppliers of basic/primary sector industries

6.3.1.1 Imports and Exports

One way of measuring the contribution of a particular economic activity is to look at the amount of goods and services it sells and buys outside the local economy. A local economy has exports and imports similar to state or national exports and imports. For example, calves produced and sold in Southeast Washington and shipped to Iowa are an export that benefits the local economy. The "birder" from Seattle brings money to the Southeast Washington economy.

[11.] The IMPLAN (IMpact analysis for PLANning) system was developed by the University of Minnesota for the United States Department of Agriculture (USDA) Forest Service in cooperation with other federal agencies to assist the U.S. Forest Service in land and resource management planning. IMPLAN is a computerized database and modeling system that is used for constructing regional economic accounts and input/output tables. In 1993, its founders incorporated as Minnesota IMPLAN Group, Inc. (MIG) and have expanded and improved the original system. Software and data sets are available through the Minnesota IMPLAN Group, Inc. (MIG), Stillwater, MN.

Recreational activities are called exports when they bring in "outside" money. Exports from the local economy stimulate local economic activity.

However, the money brought into a local economy does not all stay in the local economy. This is particularly true for the smaller regional economies that are not economically self-sufficient. Many goods and services consumed in the local economy must be brought in from the outside. They are the imports to the local economy. The money that flows out of the local economy to pay for these imports is referred to as "leakage."

In larger, more industrial diverse economies, there are fewer "leakages" of economic activity due to purchases from outside the region. As a result, the multiplier effects are larger. In smaller, less diverse economies where more goods and services are purchased outside the region, regional impacts are smaller. For this reason, state impacts will almost always be larger than impacts for regions within the state.

6.3.1.2 Basic Sectors

Since imports take money out of the economy, it is important for smaller economies to have some exporting sectors. In I/O jargon, these are called "basic sectors." The dollars brought in by basic or exporting sectors begin the multiplier process. The basic sectors stimulate a local economy by originating the multiplier effect. When people talk about a change in the economic base of an area, they are referring to a change in the basic business sectors.

Sectors other than basic sectors generally do not generate "new dollars," but rather operate on the circulation of dollars already present in the economy. Therefore, non-basic sectors do not initiate a multiplier effect themselves, but instead contribute to the multiplier effect of basic sectors by preventing leakage. For communities in rural Washington, the basic sectors are often resource-based. Table 68 cites some examples of basic and non-basic sectors (no order of importance is assigned).

Table 68. Examples of Basic and Non-Basic Sectors

Basic Sectors	Non-basic Sectors
Ranching	Medical services
Logging and timber processing	Movie theaters
Tourism and recreation	Grocery stores
Transfer payments	Banking services

Source: Resource Dimensions, 2005

Transfer payments include such things as social security payments, retirement payments, and non-local government salaries. Activities such as fishing for example, being a form of resource-based recreation, would be considered a basic sector industry for that portion of expenditures made by anglers whose residence is other than in the area they are fishing.

6.3.1.3 Calculating Multipliers and Coefficients

a. Output (Sales) Multipliers

How is the effect of a dollar of export sales multiplied in a local economy? Suppose an industry increases export sales by $1,000. If the economy has an output multiplier of 2.49, total business sales through the county are expected to increase by a total of $2,490 as a result of the $1,000

increase in exports and the $1,490 in local sales generated by these exports. (The 2.49 is used as an example only. The actual output multiplier may be different.)

Figure 29 demonstrates how local re-spending of the export payment by businesses and households creates this multiplier effect. The process begins when a dollar enters the local economy, in this case as the result of an export sale (column A). The dollar will be re-spent by the exporting firm in order to purchase inputs (goods, services, labor, taxes, profits, etc.) to meet the increased export demand (column B). Local businesses and households will receive $0.60 of the dollar, and $0.40 will leak out in the form of non-local purchases. Thus, in addition to the initial dollar, business re-spending has generated an additional $0.60 of business activity within the economy. Of the $0.60 that is locally received, $0.38 will be re-spent within the county, and the rest ($0.22) will leak out (column C). This process continues until the amount remaining in the local economy is negligible (columns D, E, F). Thus, greater leakage at any round of re-spending leads to a smaller multiplier.

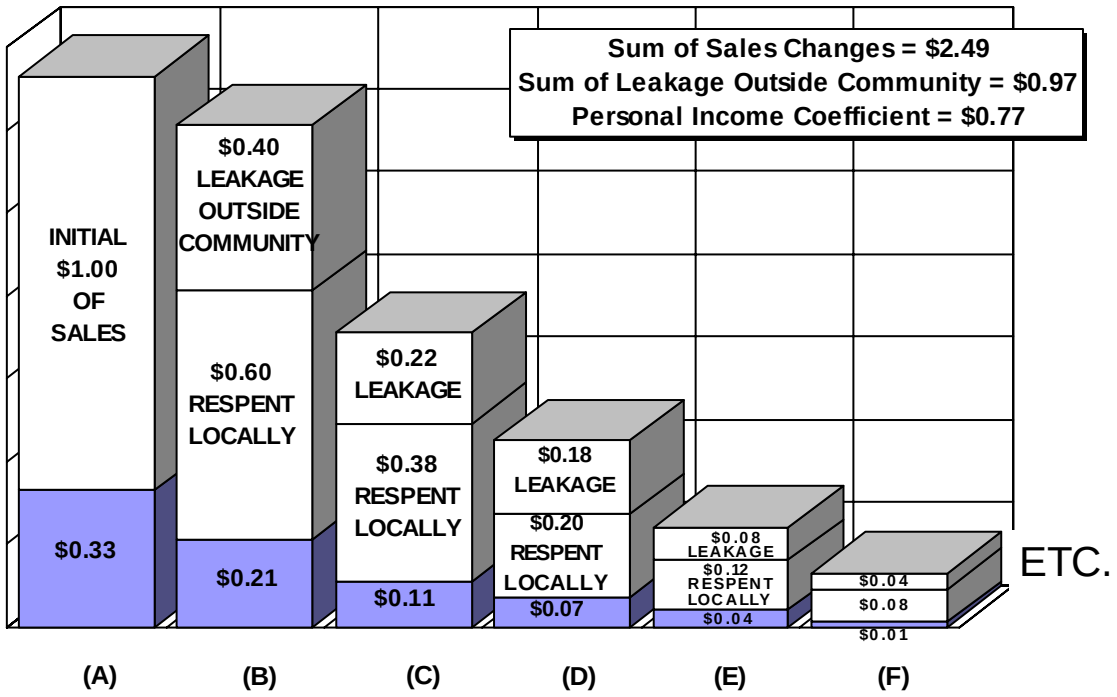
In order to determine the total value, the initial dollar is added to the sum of the local re-spending. In this example, the multiplier equals 2.49 ($1.00 initial change + $0.60 + $0.38 +$0.20 + $0.12 + $0.08 and so on until it approaches $2.49). Thus, $2.49 of local business activity will be generated for each dollar that enters the local economy. The same process can be used to explain a decrease in export sales.

The output (sales) multiplier calculates how much money is "stirred up" in the economy, but it does not mean that someone in the local area is making a wage or profit from this money. The differences between output multipliers and income coefficients are often confused, leading to misuse. People, especially decision-makers, need to know and understand what type of multiplier or coefficient is being used in the assessment of the economics of proposed policy decisions.

b. Personal Income Coefficients

A more useful measurement of the contribution of a sector's activity is the amount of local personal income that is directly and indirectly generated from an increase in sales. The distribution of the amount of local personal income generated is the shaded part of the output (sales) multiplier.

Figure 29.
Output (Sales) Multiplier and Personal Income Coefficient



Note: The shaded portion of the output (sales) that goes to households in terms of wages, salaries, and profits is called personal income.

Source: Resource Dimensions, 2005

The "personal income coefficient" measures the income generated as a result of a change in sales. In the first round of export sales, $0.33 of local personal income is generated. The other $0.67 in the initial round goes to purchase supplies and services from other industries. These industries also create wages, salaries, and profits. As these sales work through the economy, a total of $0.78 of personal income is generated from every $1 of increase in sales.

The size of the personal income coefficient is largely determined by the amount of personal income generated by the first round. In an industry that is very labor intensive, the output (sales) multiplier may not be very large while the income coefficient is above average. On the other hand, if the industry goes through several transactions but is not very labor intensive throughout the process, the output (sales) multipliers may be large and the income coefficient small.

6.3.2 Usefulness of Economic Impact Information

Economic impact analysis is important to the case at hand, in that any actual estimate of impact requires one to calculate the changes in a given county or region resulting from an increase or decrease in economic activity induced by the activity or range of activities being evaluated.

Economic impact analysis can serve at least two useful purposes. First and foremost, it can help local governments plan for the "infrastructure" of roads, schools, hospitals, housing, and parks that will be needed to accommodate the additional or decreased number of workers and their families. Second, policymakers may desire to stimulate selected regional economies at the

expense of other areas. For example, expanding job opportunities in rural areas and increasing the tax base in rural economies may be a distributional goal. Even though this rural gain may be offset by a loss of the same economic activity in an urban area, policy makers may wish to stimulate rural economies to maintain their viability.

Jobs and payroll in the industry directly affected (recreation, outfitters, equipment, etc.) will not reflect the total contribution of the industry to the local economy. The extent that an industry purchases goods and services from local suppliers and businesses will determine the total. For example, the amount that tourist-related businesses, etc. depend on wages they receive as profits to carry on their businesses are *direct impacts*. Purchases made by these businesses create wages and profits for the employees of suppliers of these basic industries. These are *indirect impacts*. As workers and owners receive wages, salaries, and profits from these expenditures, they spend money for a variety of goods and services in the general economy. The resulting consumer sector income amounts are the *induced impacts*. The direct, indirect, and induced impacts sum to the *total impacts*.

The total impacts measured by personal income can be translated to employment counts by assuming an average annual amount of wages, salaries, and proprietary income received at the county or regional level for a job. Not all jobs, particularly in rural communities are full-time annual positions. To compare employment between sectors the total personal income generated or lost can be divided by a full-time equivalent (FTE) amount to estimate the job measure.

6.4 Economic Impacts in Context

MVSTA trails and the more than one-million acres of lands throughout the region that supports the 200 kilometer trail network is clearly recognized by residents and visitors alike as an asset for the region as supported by the study's survey findings reported in Sections 4 and 5.

MVSTA trails have diverse attendance segments that have had significant impacts on the growth of tourism in the region over the past several decades in addition to providing a passive recreation resource (cross-country skiing, hiking/walking, biking) used extensively by local residents.[12] Consequently, over the past decade or so, there has been both growth and diversification of establishments to capture tourism dollars throughout the Valley.

With regard to user expenditures detailed earlier in Section 4 of this report, trail users (local, non-local, resident) who had purchased goods and services within the Methow Valley on their visit spent an average of $244 per person per day in 2004.[13] This compares to a statewide spending estimate of an average of $265 annually per person per day on trip-related expenses, inclusive of travel related expenditures (WDFW 2000).

---

[12] *Passive recreation* typically refers to low-impact recreation such as hiking, nature study areas, wildlife viewing, scenic vistas and areas of natural beauty. On the other hand, *active recreation* generally includes activities with higher impact including organized sports, mountain biking, equestrian riding, campgrounds, boat launch facilities, etc.

[13] Non-local trail user visitors to the Methow Valley stay about 4 days and spend $361 locally per day on average, while local trail users/residents average 11.5 days per visit, with daily expenditures of $127. Given the limitations of the study, these figures exclude travel time to/from the Methow Valley and other pre/post destination related expenditures.

In addition, expenditures by trail users result in so-called multiplier effects. That is, indirect impacts that occur as firms purchase materials from local suppliers who in turn, employ workers and purchase materials. Induced impacts typically occur when wages paid to workers in supporting industries are spent on locally produced goods and services.

The magnitude of indirect and induced impacts depends on many factors, including:

- Where workers live and spend their income;
- Where supplies, material and equipment needed for miscellaneous projects is purchased; and
- The extent to which organizational support, trail development and maintenance, and related land preservation projects are funded by out-of-region sources.

When local funds are used, residents and businesses will have that much less income to spend on other goods and services in the regional economy, thus representing a shift in the local economy's product mix rather than net new economic activity. At the local and regional level, MVSTA trail and related resource-based recreation activities, and the Methow Conservancy's conservation efforts result in net positive economic benefits, which increase to the extent that out-of-area funding is received.

6.5 Direct Economic Impacts

Direct impacts generated by the IMPLAN model are those economic impacts that occur as a consequence of outdoor recreation services and related tourism services provided by the natural environment that supports the trail network. These impacts principally represent expenditures by MVSTA, the Methow Conservancy and other firms or organizations that carry out related activities and governmental agencies that provide a range of related support services.

6.5.1 Employment Impacts

The total direct employment impacts result in about 49 FTEs and 159 PTEs, equivalent a to 128.5 FTEs (Table 69), which generates an estimated $4,089,072 personal income impact for the region. As the goods and services provided by natural systems are different in character to those of a proposed development or transportation project, for example, employment impacts typically remain fairly stable. Additionally, the types of labor required for a significant proportion of both full-time and part-time jobs include a more specialized workforce than is typical of many economic generators.

The model computed $7,374,259 in total annual earnings (employee compensation) and $12,392,755 in total contribution to the local economy (value-added), supported by about 276 jobs. See Table 69 for a summary of estimated employment impacts.

Table 69. Summary of Estimated Employment Impacts

	Direct	Indirect	Induced	Total
Employment	128.5	123.5	24.37	276.37
Earnings/Compensation	$4,089,072	$2,743,860	$541,327	$7,374,259
Value Added	$7,367,375	$4,102,347	$923,033	$12,392,755

NOTE: Estimates are based on IMPLAN model outputs.
Source: Resource Dimensions estimates, MVSTA 2005 Study

6.5.2 Tax Impacts

Washington state, Okanogan County and the communities of the Methow Valley experience increases in sales tax revenue as a result of expenditures made by trail users and others involved in resource-based recreation in the Methow Valley. Business and Occupation (B&O) taxes are collected by the state on gross receipts of firms/businesses involved in enterprises relate to travel, tourism and recreation-based activities.[14]

Okanogan County and the communities of the Methow Valley also experience increases in local sales tax revenues due to taxes collected on the sale of goods and services generated by a range of purchases that may be attributed in whole or in part to trail user (non-local, local and/or resident) and other resource-centered recreationists spending. As shown in Section 4, a large proportion of these expenditures are on lodging, food, and various services. These expenditures and resulting increases in sales tax revenues include those related to professionals providing a range of specialized services centered on the development and maintenance of trails, protection and rehabilitation of land and natural resources, land use and environmental planning services (e.g., legal, real estate, scientific, resource management, maintenance, planning, etc.). It is expected that these services are predominantly supplied by a combination of local, regional, and statewide specialists. Estimating from totals generated by IMPLAN and other methods, we estimate an annual average B&O tax contribution of $120,795 is directly or indirectly attributable to trails and related nature/resource-based business activity in the Methow.

Okanogan County is the recipient of transient lodging tax receipts and additional local option taxes collected from lodgings in the unincorporated areas of the Methow Valley. Twisp and Winthrop receive tax distributions collected from lodgings within their jurisdictions. Distributions to the city of Winthrop, as shown in Table 71, represented on average 29.1% of the County's total hotel/motel tax collected between 1999 and 2003.

Table 71. Distributions of State-Shared Hotel/Motel Taxes (2% rate)

County/Jurisdiction	1999		2000		2001		2002		2003	
	$	%	$	%	$	%	$	%	$	%
County	154,000		163,000		164,000		157,000		160,000	
Winthrop	42,000	27.3%	49,000	30.1%	47,000	28.7%	45,000	28.7%	49,000	30.6%

Source: OTED 2001; OTED 2003)

Conservatively estimating the total transient lodging tax revenues attributable to trail users for the period we find an annual average of $45,380 for the Methow Valley (incorporated and unincorporated areas).

Additional local option tax distributions to Okanogan County and the cities of Twisp and Winthrop are shown in Table 72. On average for the period, the city of Winthrop represented 47.3% and Twisp an average of 2.5% of the county's total local option taxes collected from all municipalities between 1999 and 2003.

[14] Business and Occupation Tax (B&O) is based on gross receipts. Virtually all businesses are subject to B&O tax, including corporations, partnerships, sole proprietors, and nonprofit corporations. The only major exempt activities are farming and the sale or rental of real estate (Washington State Dept. of Revenue. 2004).

Table 71. Distributions of Additional Local Hotel/Motel Taxes (1% to 5% rate)

	1999		2000		2001		2002		2003		Rate
County/Jurisdiction	$	%	$	%	$	%	$	%	$	%	
Twisp	n/d	-	n/d	-	5,000	3.2%	2,000	1.3%	5,000	3.1%	2%
Winthrop	65,000	41.1%	72,000	42.9%	71,000	45.5%	67,000	41.9%	75,000	47.2%	3%
County	158,000		168,000		156,000		160,000		159,000		2%

Note: n/d – no data available for period
Source: Resource Dimensions estimates, MVSTA 2005 Study; OTED 2001; OTED 2003.

Again, we apply conservative estimates to determine an annual average of $60,229 of additional local hotel/motel tax distributions attributable to trail users in the Methow Valley (incorporated and unincorporated areas) for the period.

In addition, an estimated $159,321 in state taxes (excluding lodging tax revenues) is collected from various activities related to the use of MVSTA trails and related resource-based tourism activities in the Methow Valley.

6.5.3 Property Values

As witnessed throughout this report and its allied analyses, different methods are available to derive the value of non-marketed goods, such as environmental and recreational amenities. To analyze the relationship between local property values and proximity to various protected land resources, trails, forestlands, and other resource-based amenity areas in the Methow Valley, Resource Dimensions developed and employed a hedonic model to assist in understanding the economic impacts of unique resource-based amenities on the marginal implicit prices of housing in the Methow Valley. Generally, we measure the marginal increase in property values that result from unit increases in particular property characteristics, holding all else constant.

While outside the scope of this project, it should be noted that the concept of willingness-to-pay for environmental resources and natural amenities, discussed here and elsewhere in the report, opens the way for conducting a benefit-cost analysis for public policy evaluation. Such analysis would provide decision-makers with actual benefit estimates in monetary terms for alternative options that could then be contrasted with the corresponding costs associated to obtain the possible net benefits. The surplus of value (net benefits), is the basis of increased property values. As shown in the following analysis, where there are attributes associated with a high quality of life, such as scenic vistas, attractive landscapes, recreational opportunities, open space, etc, the WTP for ownership of the such properties in the Methow Valley is higher.

The basic model is based on the hedonic price function and a set of assumptions. They are:

- the study area can be treated as a single market for housing services.
- consumers have full information on the housing alternatives available and are able to freely select their optimal choice of housing commodity
- the market for housing (property) is in equilibrium.

Generally, the utility function of an individual who occupies house *i* can be written as:

$u = u (X, S_i, N_i, Q_i)$

Under the assumptions, the price of a house (property) can be described as a function of the structural (S), neighborhood (N), and environmental/amenity (Q) attributes of the property location. The general equation is:

P*i* = P*i* (S*i*, N*i*, Q*i*)

Where:

P*i* = the price of the *i*th property location (community/neighborhood).
S*i* = a vector of the *i*th property's structural attributes.
N*i* = a vector of the *i*th property's neighborhood attributes.
Q*i* = a vector of the *i*th property's environmental/amenity attributes.

The hedonic model developed is represented by a dependent variable (sales price of properties 1999-2003) and a set of independent variables intended to reflect factors that influence the variability in the sales price of property. Independent variables in a hedonic pricing model are commonly organized into structural, neighborhood, and environmental/amenity variables. Data for the analysis were obtained from the Okanogan County Tax Assessor's office and Terra Scan, Inc. through its Tax Sifter Parcel Search service for Okanogan County. The *Parcel Search* is a database containing comprehensive assessor information for properties. In addition to providing data on a range of structural characteristics, this database also provides data on sales prices of properties based on transfer tax information. Because the data are derived directly from county assessor information, which represents a comprehensive and updated record of the characteristics and sales of all properties within a particular jurisdiction, it is considered the best available information for use in this study. Resource Dimensions considered and tested a wide range of potential independent variables for inclusion in the model.[15]

The results reflect the best-fitting model for explaining the relationship between local property values and proximity to various protected land resources, trails, forestlands, and other resource-based amenity areas in the Methow Valley is linear in its functional form (with selective independent variables in non-linear form). The dependent variable is sales price adjusted to 2004 dollars using the CPI index. The independent variables fall into three main categories: structural, neighborhood/economic, and environment/amenity variables. Breakdown of the model variable categories are found in Appendix D.

The selection of a preferred model for this study was based on criteria that gauge the robustness of regression-based models. These criteria include adjusted *R*-square, which measures the overall "fit" of the model, and *p*-values, which measure the confidence level at which the coefficient estimate can be interpreted. The adjusted *R*-square for the preferred model indicates that about 82% of the variability in adjusted sales price is explained by the explanatory variables and the constant value.

The final two variables in the model, which are key variables of interest for the study and represent the amenity-based characteristics of properties in the Methow Valley, are distance to

[15] Estimation of the hedonic property-pricing model is conceptually straightforward. A dependent variable representing the value of a property is regressed on all of the characteristics (independent variables) that have the potential to influence its value. However, identifying the appropriate independent variables to include in the final model involves extensive testing of various model specifications that are characterized by multiple definitions and combinations of variables and functional forms.

protected land resources, trails, forestlands, and other amenity lands, and the nature of amenity (e.g. view, waterfront, recreation, public land access, buffer to park and/or forest lands, etc.). As expected, there is a negative and statistically significant relationship between distance to trail lands and other amenity lands and property values; in other words, as the distance between a property and MVSTA trail lands or other amenity lands increases, the lower the property value will be, holding all else constant. Conversely, properties that are located nearer such lands are valued higher, on average, than those properties located further away.

The hedonic price function is derived by maximizing an individual's utility function u (X, S*i*, N*i*, Q*i*), subject to income constraints given by M - P*i* - X = 0, where M is income of the individual and the price of the composite commodity, X, is scaled to $1. It is assumed that preferences are weakly separable for housing and its characteristics, which allows the demand for these characteristics to be independent from the prices of other goods. Then, the first-order condition for the choice of the *j*th environmental amenity (q*j*) is:

$$\partial u / \partial q_j \; \partial P_i$$
$$\partial u / \partial X \; \partial q_j$$

The partial derivative, $\partial P_i / \partial q_j$, is the marginal implicit price of the characteristic *qj*. The marginal implicit price for any characteristic is the additional amount that must be paid for an additional unit of that characteristic, holding all else equal.

This first stage analysis reveals a significantly positive marginal willingness-to-pay, on average, 11.52% or $18,237 more for properties located between 0 (on property) and 0.5 miles from particular environmental/amenity characteristics, than properties without these characteristics. For properties located between 0.5 and 1.0 miles the marginal average willingness-to-pay drops to 7.39%, or about $11,703 more, for properties near particular amenity characteristics, than for properties located further from such amenity lands.

Changes in sale price for real estate near MVSTA trails and other amenity lands of the Methow Valley are shown in Table 72, dollar estimates are based on an estimated mean sales price of $158,360 for sales over the period January 1999 through December 2003.

Table 72. Estimated change in real sale price by distance from miscellaneous amenity lands

Amenity type	Distance from property	Estimated change in real sale price (%)	Estimated change in real sale price ($)	Amenity type	Distance from property	Estimated change in real sale price (%)	Estimated change in real sale price ($)
Greenway/Buffer**				National Park/Forest*			
	on-site/adjacent to .25 mile	11.07%	$17,528		on-site/adjacent to .25 mile	17.98%	$28,468
	.26 to .5 mile	8.12%	$12,860		.26 to .5 mile	13.25%	$20,988
	.6 to 1 mile	3.01%	$4,767		.6 to 1 mile	6.57%	$10,401
	1.1 mile to 2.0 miles	0.84%	$1,330		1.1 mile to 2.0 miles	2.56%	$4,060
	2.1 mile to 3 miles	0.09%	$144		2.1 mile to 3 miles	0.87%	$1,370
Lake/River/Stream*				Recreation area*			
	on-site/adjacent to .25 mile	13.50%	$21,373		on-site/adjacent to .25 mile	12.03%	$19,058
	.26 to .5 mile	8.93%	$14,142		.26 to .5 mile	14.07%	$22,278
	.6 to 1 mile	3.71%	$5,875		.6 to 1 mile	6.69%	$10,587
	1.1 mile to 2.0 miles	0.67%	$1,061		1.1 mile to 2.0 miles	3.68%	$5,828
	2.1 mile to 3 miles	0.34%	$538		2.1 mile to 3 miles	1.04%	$1,648
Open space*				Viewshed/Scenic Vista*			
	on-site/adjacent to .25 mile	12.35%	$19,557		on-site/adjacent to .25 mile	21.57%	$34,156
	.26 to .5 mile	9.03%	$14,306		.26 to .5 mile	13.98%	$22,136
	.6 to 1 mile	3.10%	$4,909		.6 to 1 mile	6.05%	$9,574
	1.1 mile to 2.0 miles	0.54%	$850		1.1 mile to 2.0 miles	1.60%	$2,532
	2.1 mile to 3 miles	0.07%	$106		2.1 mile to 3 miles	0.28%	$451
Trail*				Agricultural lands/Range**			
	on-site/adjacent to .25 mile	9.86%	$15,609		on-site/adjacent to .25 mile	6.05%	$9,576
	.26 to .5 mile	8.98%	$14,216		.26 to .5 mile	7.17%	$11,351
	.6 to 1 mile	4.96%	$7,849		.6 to 1 mile	3.39%	$5,361
	1.1 mile to 2.0 miles	1.05%	$1,655		1.1 mile to 2.0 miles	1.08%	$1,710
	2.1 mile to 3 miles	0.21%	$326		2.1 mile to 3 miles	0.04%	$64
Local/Community Park**				Wildlife/Habitat/Natural Area*			
	on-site/adjacent to .25 mile	8.69%	$13,754		on-site/adjacent to .25 mile	14.97%	$23,703
	.26 to .5 mile	9.70%	$15,363		.26 to .5 mile	9.04%	$14,317
	.6 to 1 mile	4.69%	$7,426		.6 to 1 mile	3.39%	$5,361
	1.1 mile to 2.0 miles	1.05%	$1,656		1.1 mile to 2.0 miles	1.08%	$1,710
	2.1 mile to 3 miles	0.35%	$549		2.1 mile to 3 miles	0.04%	$64

Note: * and ** denote significance at the 1% and 5% levels.

Source: Resource Dimensions, 2005 MVSTA study

Table 73 reflects the computed average increase in real sales price, by distance, for real estate/homes near various amenity lands in the Methow Valley (e.g., protected lands, parks, trails, open space, forest, viewsheds, greenways, etc.) for the period 1999 – 2003.

Table 73. Average estimated change in sale price 1999-2003 by distance from Methow Valley amenity lands

Average (all amenity lands)		
Distance from property	Estimated change in real sale price (%)	Estimated change in real sale price ($)
on-site/adjacent to .25 mile	12.81%	$20,278
.26 to .5 mile	10.23%	$16,196
.6 to 1 mile	4.55%	$7,211
1.1 mile to 2.0 miles	1.41%	$2,239
2.1 mile to 3 miles	0.33%	$526

Source: Resource Dimensions, 2005 MVSTA study

The composite relative average increase in sales price for properties between 0 (on property) and 0.5 miles from trails and other amenity lands is $18,237 or 11.52% of the mean property value; using the average lot size of 0.938 acres for properties sold within the same period, the average per acre increase estimated for the sample is $17,106. The direct economic impact is higher tax revenues produced from sales of real estate with, or located proximate to lands with particular environmental amenities.

In 2001 a Resource Dimensions study applied a hedonic pricing model that differentiated among parks, cemeteries, golf courses, natural areas, and the like in an urban area in Oregon. The findings of that study reported a comparable increase in value, an average of $11,000 per home, based on proximity to a "natural area." " a 2005 equivalence of about $12,094. Confidence in our findings is further bolstered by findings of several similar studies conducted in recent years using hedonic-pricing models to estimate land values based on the proximity of property to natural resources and related resource-based activities (Pincetl, et al, 2003; Espey and Owusu-Edusei, 2001; Rameker 2000; Spahr and Sunderman, 1998).

Although our hedonic-price study here is confined by the scope of the project, Resource Dimensions' general findings indicate that real estate prices for the Methow Valley can be explained by the type and level of environmental amenities. Sales transactions over the period indicate buyers had a higher willingness to pay for lands with scenic and recreational attributes, open space, wildlife habitats, and other resource-based amenities.

The positive consequence associated with enhancement value linked to amenity land values is that these values, have and will continue to, generate higher revenues from taxes paid on the sale of real estate. However, the demand for amenities such as outdoor recreation, scenery, and open space is expected to grow as population migration to less urban areas continues. These pressures will continue to increase the competition for various amenity lands. Thus, amenity-rich lands are likely to be at risk for conversion from agricultural, natural, and open space functions to residential use.

The implication here requires communities of the Methow Valley to both be aware and to take particular actions to ensure future development within their jurisdiction is designed to maximize the positive impacts associated with growth and while minimizing the negative.

6.6 Indirect Economic Impacts

Another important aspect of economic impact is the successive economic activity it generates. These are typically referred to as secondary or indirect impacts. These indirect benefits are usually described using multipliers, but multipliers can be misunderstood and misused. Therefore, where possible measures have been converted to dollars or other more universal metrics, such as jobs measured in FTEs.

Indirect economic impacts include the purchases of goods and services made by direct sector businesses. IMPLAN model outputs show that the service sector has the highest economic impact, with an average of 33.2 jobs. Other sectors with significant indirect impacts are found in the professional services, construction, retail trade, transportation, and communications and utilities sectors, generating total economic impacts of 29.1, 27.8, 17.3, 10.9, and 6.8 jobs respectively. All sectors combined, an estimated 124 additional jobs are created throughout the Methow Valley for the employees of suppliers of primary sector industries.

The total economic activity (direct, indirect, and induced) and income generated by trail users have a greater influence on the local economy than the size of the initial expenditures. Over the past several decades, Washington's Methow Valley has shifted from a predominantly extractive economy dominated by agriculture and timber industries to one fueled by recreation-based activities and tourism. This shift has resulted in changes in the types of businesses within region to support the generation of successive economic activity. Not only are the direct businesses important, but so are their suppliers. Businesses that are able to buy and hire locally increase secondary benefits, while those that buy and hire outside of the community decrease the magnitude of secondary benefits.

Indirect economic impacts also include those stemming from the benefits provided by the diverse range of goods and services generated by the natural environment (known as ecological services or ecosystem services). Such goods and services include those as wildlife viewing, improved environmental quality, open space, wildlife habitat, educational opportunities, quality of life, hunting and fishing, and other passive resource-based recreation activities.

Below we briefly explore some of the main indirect non-market values relative to trail lands and amenities provided by the lands and natural resources of Washington's Methow Valley.

6.6.1 Amenity Values

6.6.1.1 An Operational understanding of amenity values

Amenity values typically means those natural and physical characteristics and attributes of an area that contribute to people's enjoyment and appreciation, of an area and includes elements such as natural, cultural and recreational resources which add to an area's appeal and aesthetic coherence. For example, a species or scenic vista has amenity value if its existence improves our lives in some nonmaterial way, e.g., when we experience joy at sighting a hummingbird or if we enjoy walks in the forest more when we sight a lady-slipper. Expressing amenity values remains

somewhat elusive. When dealing with amenity values in the context of assessing their value relative to particular land use and resource management objectives, it is important to establish precisely what we mean when we refer to an area's amenity values.

The concept of amenity value is inherently tied to what economists call "non-use values" as well as indirect use values associated with natural resources. The premise being that people place monetary values on natural resources that are independent of their present use of those resources; for example some people may gain utility simply from knowing that the Boundary Waters Canoe Area (BWCA) is preserved even though they may never expect to visit. Similarly, people may be willing to pay to ensure the survival of salmon, humpback whales, Lynx, and Marbled Murelets even though they may never expect to see one on them. Lying behind this thesis is the assumption that there is a meaningful way to define use so that values arising from use can be distinguished or separated from those that are independent of use. When discussing socioeconomic impacts, it is important to go beyond simply delineating the more or less tangible changes and link these to human values.

In the economics literature, natural resource values that are free of people's present use of the resource have been variously termed intrinsic, existence, and nonuse values. These values arise from a diversity of motivations, including, stewardship responsibility, desire to preserve for potential future use, and a desire to bequeath certain environmental attributes and resources to future generations. John V. Krutilla can be credited with some of the earliest thinking on the concept of amenity values and introducing it into mainstream economics (Krutilla 1967). In his classic article, "Conservation Reconsidered," he argued that individuals do not have to be active consumers of a resource, whose willingness-to-pay (WTP) can be captured by a price-discriminating monopoly owner, in order to derive value from the continuing existence of unique, irreplaceable environmental resources." Since Krutilla's 1967 work much has been done in the field of ecological, environmental, and resource economics to understand these values that "…are a significant part of the real income of many individuals," (Krutilla 1967, p. 779)

Today, it is widely accepted that these nonuse values in aggregate can be very large. For example, in Washington state it is estimated that over $1.7 billion is spent annually in passive-use recreation for wildlife watching activities, primarily in rural areas (WDFW 2000). As reported earlier in Sections 4 and 5, this is money spent locally on food, lodging, recreation equipment, transportation and a range of other goods and services. Statewide passive nature-based recreation in the form of wildlife watching activities support more than 21,000 jobs, making it second only to Boeing, and 5.2 times larger than Microsoft's employment in Washington (WDFW 2000). Annually, such activities yield $426.9 million in job income and generate $56.9 million in state and $67.4 million in federal tax revenues. With this in mind, we believe ignoring such non-use values in the context of environmental, natural resource and land use planning policy considerations may lead decision-makers to serious errors and to the misallocation of resources. Therefore, while an exhaustive valuation effort is beyond the scope of the study, we have worked to derive composite estimates for some of these 'non-use' values within the framework of the indirect benefits analysis as found within subsequent sub-sections.

6.6.2 Active and Passive Recreational Use Values

The total economic output from passive resource-based recreation in Washington state (e.g. wildlife viewing, hiking, photography, biking, etc.) was estimated at $1.78 billion, and ranks the eighth highest in the nation (WDFW 2001).

The use MVSTA trail lands for various recreation activities involves a diverse set of active and passive recreation activities, including cross-country skiing, mountain biking and horseback riding. Developing a dollar-value estimate is not possible under the scope of the study despite general records kept for ski passes sold annually. However, several studies have been conducted on willingness to pay for recreation and related benefits. In 1996, Deloitte & Touche LLP estimated the non-market dollar value of active use pertaining to lands held by the DNR using surveys to apply contingent valuation and travel cost-benefit methods. Annual active non-market benefits and non-use values were estimated to equal $6.60 per household per thousand acres, or roughly $13,200 per acre.

Open space use within a particular setting, focus on benefits of that setting, and include social and ecological services. Various studies provide some indication of the potential value of the availability of these lands for aesthetic, passive-use and active recreation. Rameker (2000) reports a model developed in Colorado that tested for the influence of 36 attributes of open space. The model indicates that an open-space parcel with access to or including a water body increases the value per acre by nearly 70 %; carbon sequestration potential more than doubles the value per acre, while capacity as a working farm/ranch adds nearly $11,000 to the average price per acre.

Applying a benefits-transfer approach, these results suggest a range from $11,000 to $13,000 per acre is a reasonable dollar amount to apply in developing a conservative estimate for the recreation activities that occur on MVSTA trails and related lands of the Methow Valley.

Erring on the conservative side, Resource Dimensions uses an estimate of $11,000 per acre in developing an aggregate estimate of non-market active/passive use benefit of about $11-million per year for the area's 1-million acre network of lands that support MVSTA trails and related open space.[16]

6.6.3 Environmental and Economic Health

Table 74 identifies a range of environmental amenity values associated with various land resources found within the Methow Valley, inclusive of those identified by survey respondents (see Section 4).

Table 74. Typical amenity values associated with MVSTA trails and land resources of the Methow Valley .

- Environmental and ecological (e.g. open space, wildlife, biodiversity, health, etc.)
- Aesthetic (e.g. beauty, scenery, landscape, etc.)
- Recreational access and opportunities
- Educational and scientific (e.g. research, training, nature experience, K-12 opportunities)
- Historical and cultural
- Spiritual (e.g., reflection, spiritual enrichment, cognitive development)

[16] Non-market benefits have value as indicated by measures of consumer surplus applied through travel-cost models and other methods, however, their accounting is applied here only in terms of active recreation use values. Active and passive use non-market valuation studies require significant time and resources, and are outside the scope of this project.

In addition, there are implicitly associated indirect values that contribute to the regions overall economy (e.g., amenity migration or in-migration, increased tourism and related spending, community diversification, etc.). Environmental amenities have long been a factor of rural population change. However, where natural resources once attracted people seeking fertile lands, timber and minerals, they now attract people in search of a pleasant environment in which to recreate and live; to which the population growth experienced over the past decade within the communities of the Methow Valley attest.

The trails and lands of the Methow Valley offer a variety of amenity values to residents and visitors alike. Washington State Department of Natural Resources (DNR) and U.S. Forest Service (USFS) lands compose much of the visual landscape within the region. The outstanding scenic values associated with the open space and natural lands are central to the region's character and are a major factor in attracting new residents to the area (see Section 4).

The value local residents and MVSTA trail users place on the areas lands for these amenity values cannot be readily evaluated or quantified given the scope of this study, however, as seen in the survey results (Section 4), 92.2% of all survey respondents value the openness and naturalness offered by the valley's large areas of undeveloped lands. Over 86% of local businesses responding to the 2005 survey indicated there is a strong relationship between their success and the areas natural beauty, wildlife, and open space (Section 5). In addition, as seen in Section 6.5.3 above, there is a strong positive relationship between real property values and proximity to various amenity lands (Tables 72 and 73).

As further evidence, we note a number of local realtors using the proximity to both area trails and other natural and/or protected lands of the Methow Valley advertising properties for sale. Below are clips from actual advertisements for various properties for sale in early 2005:

> *"Open benches, beautiful pine forest and dramatic mountain setting. Located near complex of Mazama's Recreational Trails and just across from the 900 acre Dept of Fish and Wildlife Lands. Spectacular valley views from building site."*
>
> *"Quality mountain home overlooking the Methow River. Awe inspiring views, majestic pine trees and easy trail access makes this a perfect getaway…"*
>
> *"Dynamic landscape encompasses view of the Dept of Fish and Wildlife. 900 acre Big Valley Ranch and is located near Mazamas complex of Recreational Trails. Benches, pine forests, and dramatic mountain setting. Easy access in winter…"*
>
> *"Excellent location! This wooded 6.34 acre Planned Unit Development is adjacent to the Methow Valley Sports Trails Association trails and …"*
>
> *"Site your home on this 20 acre parcel and enjoy incredible views in many directions. Adjacent State land near the golf course. Conservation easement for property preservation."*

Real estate agents interviewed for this study attest that immediacy and access to MVSTA trails and other protected lands is desired by many land buyers. The primary attributes sought by interested buyers, as identified by interviewees, are scenic, undeveloped, or recreational qualities. Several agents also suggested that that the maintenance or enhancement of these land qualities would increase the positive impact to local residents and the Valley's economy.

6.6.4 Quality of Life Factors

Another indirect value associated with the benefits provided by the Valley's unique land and natural resource set is collective in nature and often generically referred to as "quality of life."

In a sense, quality of life factors provide area residents a "second paycheck." This paycheck provides a quality of life above and beyond what is earned and spent: access to beautiful natural areas, stable and safe communities, outdoor recreation opportunities, and proximity to wildlife. At the end of a day, during lunch hour, or on the weekend, residents of the Methow can collect one of the most sought after employee benefits an economy can deliver, the opportunity to claim the Valley's trails, forests, waters, and wildlife as a backyard bonus. This bonus retains qualified labor essential for business growth and it attracts talented workers every day. A major reason people move to the Methow (Section 4) is the opportunity to enjoy the abundant opportunities provided by its lands and natural resources. These "second paycheck" values, though difficult to measure, are essential to the area's economic well being.

The migration of new residents attracted by the region's "quality of life" can have both positive and negative social and economic effects. Balancing the Valley's growth for a sustainable future will be among the challenges of the next decade.

6.7 Estimated Willingness-to-Pay

As determined in Section 4, an average estimated willingness-to-pay estimate is developed using two different mechanisms to assist in providing necessary funding for maintenance and development of new outdoor recreation facilities in the Methow Valley. The trust fund mechanism received far greater respondent support (average of 73.9% versus 36.5%) from both resident and trail user populations.

Trust Fund Mechanism

Using respondent data Resource Dimensions estimates an average aggregated WTP measure of $538,318 to support both development and maintenance of outdoor recreation facilities and trails in the Methow Valley.

Property Tax Mechanism

Although the property tax mechanism was not as well received, the average estimate for those respondents stating willingness-to-pay additional taxes for maintenance and development of new outdoor recreation facilities in the Methow Valley was relatively similar to the stated average WTP into a trust fund established for the same purpose. Resource Dimensions estimates an average aggregated WTP via increased property taxes of $535,970 to support both development and maintenance of outdoor recreation facilities and trails in the Methow Valley.

For complete discussion, see Section 4.4.

6.8 Cumulative Economic Impacts

Cumulative or induced impacts, in general, are those that have an impact on the local, regional, or larger economy and environment resulting from the incremental impacts of actions or activities related to the use of an area's resources when added to other past, present, and reasonably foreseeable future actions. Taken individually induced cumulative impacts of certain activities may be undetectable, but taken together they lead to measurable changes within the economy of local communities and the surrounding region. Given the nature of the related economic contributions, care must be taken to prevent potential double counting.

Induced economic impacts generated by the IMPLAN model represent increases in regional final demand (value-added) of $12,392,755. These increases, however, do not represent total economic impact. The multiplier effect was found to be 1.68% and comprises the local value of money as it circulates through the local economy as workers directly or indirectly associated with the 200 kilometer trail network, and/or the use, planning, and management of the lands throughout the region that supports the trail and other resource-based recreation buy goods and services in the local economy.

While a conservative figure, as the estimation of the whole of all ecosystem services and related economic impacts for the Methow Valley associated with the network of trails and protected land resources are beyond the scope of this study, we estimate the net cumulative economic impacts provided annually to be at least $29.9 million. Presentation in Table 75 is narrowed to those total impacts of regional or local significance within the context of potential cumulative economic impacts on the Methow Valley related to those goods and services provided by the trail system and supporting lands, and those who use them.

Table 75. Cumulative estimated economic impacts of Methow Valley trails and land resources

Estimated Economic Benefits (annualized)	
Commodity/Market	Total estimated impact ($)
Increase in regional final demand (value added)	$12,392,755
Provide/Create Jobs (# of jobs)	
Direct (129)	$4,089,072
Indirect (124)	$2,743,860
Induced (23)	$541,327
Fiscal/Tax impacts	
State tax receipts (travel induced spending)	$159,321
Local, Hotel/Motel, and Transient Lodging	$105,609
Business & Occupation	$120,795
Amenity Value	
Active and Passive recreation related (non-market)	$11,000,000
Environment/Resource health & stewardship Improvements to land (protection, preservation, rehabilitation, maintenance, etc.)	
Total estimated gross benefit *(direct & indirect)*	$31,152,739
Total estimated costs	$1,237,397
Total estimated net cumulative benefit *(indirect & direct)*	$29,915,342

Note: Costs estimated reflect those of current management and expenditures related to improvements and potential opportunity costs (use of capital for other, more productive uses).

Source: Resource Dimensions estimates, MVSTA 2005 Study

References

Abelson, P. W. "Property Prices and the Value of Amenities." *Journal of Environmental Economics and Management 6*, 11-28 (1979).

Alward, G. S. 1986. In The President's Commission on American Outdoors, A Literature Review. "Values and Benefits", pp. 47-57. Washington, DC: U.S. Government Printing Office.

Backman, S. J. and K F. Backman. 1993. "The Role of Park and Recreation Services in Retiree Relocation Decisions." In Trends: Justifying Recreation and Parks to Decision Makers. v. 30, no. 4.

Beyers, W. and Nelson, P. (2000) Contemporary development forces in the no metropolitan west: New insights from rapidly growing communities. *Journal of Rural Studies* 16:459–74.

BLS, 2001. U.S. Department of Labor, Bureau of Labor Statistics, *Quarterly Census of Employment and Wages*. BLS time series data Available at: http://www.bls.gov/data/home.htm

CRP, 1990. Comprehensive Recreation Plan for the Methow Valley Review district, An Addendum to the Okanogan county Trails Plan. June, 1990. Okanogan County, WA.

ESDc, September 2002. Okanogan County Profile, Labor Market and Economic Analysis Branch, Washington State Employment Security Department.

Espey, M. and Owusu-Edusei, K., 2001. Parks and Property Values in Greenville, South Carolina. Center for Applied Real Estate Education and Research at the University of South Carolina.

Fausold, C. J. and R. J. Lillieholm. 1996. "The Economic Value of Open Space: A Review and Synthesis." Lincoln Institute of Land Policy Research Paper.

Fink, A. and Kosekoff, J. 1998. *How to Conduct Surveys: a step-by-step guide,* 2nd edition. Sage Publications: Thousand Oaks, CA.

Gustanski, J.A., Squires, R.H., and Edwards-Jones, G., 2000. The Ethics-Economics-Policy Paradigm: foundations for an Integrated Conservation Decision-Support Model (ICDS), Urban Ecosystems, Special Issue on Environmental Decision Making, Vol.3(4), 255-283 Spring 2000.

Gustanski, J.A. 2000. Integrating Social and Economic Information with Ecosystem Services in the Evaluation of Conservation Lands, *Land Conservation Summit 2000*. University of Minnesota.

_____ 2001a. Open Space: A Sound Investment the Economic Argument for Open Space Preservation. Association of NJ Environmental Commissions.

_____ 2001b. Greenways & Trails…bringing economic benefits to New York. Parks and Conservation Association and The Business Council of New York State.

_____ 2003. Valuing the Benefits of Protected Lands & Ecosystem Services, working paper.

_____ 1999. "What Does America think?…Public Attitudes Toward Land Use & Conservation." International Association of Impact Assessment Conference, Strathclyde University, UK.

Harris, C., McLaughlin, W. and Becker, D. 2000. Rural Communities in the Inland Northwest: An Assessment of Small Rural Communities in the Interior and Upper Columbia River Basins. USDA Forest Service and USDI Bureau of Land Management. General Technical Report PWW-GTR-477

IAC, 2003. Estimates of Future Participation in Outdoor Recreation in Washington State. Interagency Committee for Outdoor Recreation, Salmon Recovery Funding Board, State of Washington.

Jorgensen, B.S., Syme, G.J. 2000. Protest responses and willingness to pay: attitude toward paying for stormwater pollution abatement, *Ecological Economics*, 33, 251-265.

Krutilla, J.V. 1967. Conservation Reconsidered. *American Economic Review,* 57 (September 1967).

Krutilla, J.V., and Fisher, A.C., (1975)."The Economics of Natural Environments - Studies in the Valuation of Commodity and Amenity Resources"., Resources for the Future, Inc., Washington.

Lawton, K., 1986. The Economic Impact of Bike Trails: A Case Study of the Sugar River Trail.. New Glarus, WI: Sugar River State Trail Corp.

Methow Valley Plan, An Addendum to Okanogan County's Comprehensive Plan (April, 1976)

MIG, Inc., 2004. *IMPLAN Input Output Model Data Sets for Okanogan County.* Minnesota IMPLAN Group Inc. Stillwater, Minnesota.

Mitchell, R.C. and Carson, R.T., 1989. *Using Surveys to Value Public Goods: The Contingent Valuation Method.* Washington, D.C.: Resources for the Future, 1989.

MVP, 1976. Methow Valley Plan, Addendum to Okanogan County's Comprehensive Plan (April 1976)

NASS 2002, U.S. Department of Agriculture, 2002 Census of Agriculture, Zip Code Tabulations At: http://www.nass.usda.gov/census (accessed 02/05/05)

Nelson, C., Gustanski, JA, and Lynch, J. 2001. Rail-Trails and Special Events: Community and Economic Benefits. Paper presented at the 2001 Northeast Recreation Research Symposium, April 1-3, 2001, Bolton Landing, NY

Nothdurft, William E., 2002. Across the Great Divide: People, Places and Poverty in the Northwest Area's Foundation Region. Saint Paul, Minnesota. Northwest Area Foundation.

OCOPD 1993. Okanogan County Office of Planning and Development. Okanogan County Comprehensive Parks and Recreation Element, Adopted 4/12/93.

OCOPD 2000. Community Master Plan Methow Valley Planning Area Sub Unit A. Adopted 3/6/2000.

Office of Service Industries, 1998. U.S. Department of Commerce, International Trade Administration, based on Bureau of Economic Analysis (BEA) estimates that are reported annually in the "Survey of Current Business."

Okanogan County, 2005. Okanogan County Comprehensive Plan Update, June 15, 2005 DRAFT.

Outdoor Industry Foundation, 2002. Outdoor Recreation Participation & Spending Study: A State-by-State Perspective. At: www.outdoorindustry.org

Pincetl, S., Wolch, J., Wilson, J. and Longcore, T., 2003. Toward a sustainable Los Angeles: A Nature's Services Approach. Report to the John Randolph Haynes and Dora Haynes Foundation. USC Center for Sustainable Cities.

Rameker, V. 2000. Valuing open space attributes in Colorado: evidence from a hedonic analysis of market transactions. MS Thesis, Department of Agricultural and Resource Economics, Colorado State University, Fort Collins, CO.

Robson, C. 1993. *Real World Research: a Resource for Social Scientists and Practitioner Researchers.* Blackwell: Oxford. pp. 510, 139

Schotzko, R.. 2003. *Measuring the Apple Industry from the 2002 Census of Agriculture*, Washington State University, Pullman, WA. At: www.agribusinessmgmt.wsu.edu/AgbusResearch/docs/apple/MeasuringAppleIndustry.pdf

Spahr, R.W., and M.A. Sunderman, 1998. Valuation of agricultural property surrounding a resort community. Unpublished manuscript. University of Wyoming, Laramie.

Spash, C. and Hanley, N. 1995. Preferences, information and biodiversity preservation, *Ecological Economics*, 12, 191-208.

Spash, C.L. 2000. Ecosystems, contingent valuation and ethics: the case of wetland re-creation, *Ecological Economics*, 34, 195-215.

TPL, 1999. *Economic Benefits of Parks and Open Space.* Trust for Public Lands: Washington, D.C.

Twisp Chamber of Commerce. At: www.twispinfo.com/

U.S. Census, 2000a. *DP-1 Profile of General Demographic Characteristics, Census 2000 Summary File 1 (SF1).* Available at: http://factfinder.census.gov

U.S. Census, 2002. *County Business Patterns NAICS Code, by Zip Code, Census 2000.* Available at: http://censtats.census.gov/cbpnaic/cbpnaic.shtml

USDA 1989. USDA Forest Service, Wenatchee National Forest Land and Resource Management Plan. U.S. General Accounting Office

USDA 1990. USDA Forest Service, Okanogan National Forest Land and Resource Management Plan. U.S. General Accounting Office

USDA 2001. USDA Forest Service Region 6, National Visitor Use Monitoring Results: Okanogan National Forest. Rev 8 Feb 2002 (wilderness demographics).

USDA 2002. USDA Forest Service Region 6, National Visitor Use Monitoring Results: Wenatchee National Forest. August 2002.

U.S. DOI, 1988; U.S. Department of the Interior, North Cascades National Park Service Complex *General Management Plan*, July 1988. U.S. General Accounting Office

Washington State Office of Financial Management. At: http://www.ofm.wa.gov/

WASS 2001, Census of Agriculture County Profile, Okanogan, Washington. NASS, U.S. Department of Agriculture. At: http://www.nass.usda.gov/census/census02/profiles/wa/cp53047.PDF (accessed 02/05/05)

OTED, 2001. Washington State Office of Trade and Economic Development, Business & Tourism Development. Olympia, WA

OTED, 2004. Washington State County Travel Impacts (1991 – 2003). Washington State Office of Trade and Economic Development, Tourism Office. Olympia, WA.

WDFW, 2000. Washington State Department of Fish & Wildlife, Watchable Wildlife

Winthrop Chamber of Commerce. At: www.winthropwashington.com/winthrop/

WOFMa, 2004, Population Trends, Washington State Office of Financial Management, Forecasting Division, April 2004. Available at: http://www.ofm.wa.gov/pop/april1/finalapril12004popofcities.pdf (accessed 02/05/05)

WOFMb, 2003 Washington State Data Book, Civilian Labor Market Indicators. At: www.ofm.wa.gov/databook/economy/ct07.htm

WOFMc, 2003 Washington State Data Book, Okanogan County Profile. At: www.ofm.wa.gov/databook/county/okan.htm#08emp

WOFMd, 2003. 2002 Washington State Population Survey: Data Report. At: http://www.ofm.wa.gov/sps/2002/reports/data01.pdf

WSU selected economic indicators. At: http://niip.wsu.edu/washington/selwapdf/sel53047.pdf

Appendices

Appendix A: Pre-Survey Notification Postcard Distributed to Methow Valley Resident Random Sample

Appendix B: General Methow Valley Resident and Trail User Survey

Appendix C: Methow Valley Business Survey

Appendix D: Hedonic Pricing Model Variables (by category)

Appendix A

Pre-Survey Notification Postcard Distributed to Methow Valley Resident Random Sample

The Methow Valley Sport Trails Association (MVSTA) has joined forces with the Methow Conservancy on an exciting project to assess the values and economic benefits associated with Methow Valley trails and the natural beauty provided by open space in the Methow Valley…AND **we need your help!**

You have been randomly selected from a list of area residents and/or trail users to participate in a survey that will help us to learn more about what residents and visitors to the Valley value.

In a few days you will get the survey in the mail. The survey should take 10-15 minutes. **Your** feedback is critical!

You may also take the survey on-line at: www.mvsta.com

THANK YOU FOR YOUR TIME & HELP!

MVSTA

PO Box 147

Winthrop, WA 98862

[Message]

[Addressee name & address]

Appendix B: Methow Valley Resident and Trail User Survey & Letter†††††

Methow Conservancy

March 4, 2005

Hello:

About one week ago, you received a notice via post card to let you know that you would be receiving a survey from the Methow Valley Sport Trails Association (MVSTA) and the Methow Conservancy. As we explained in the notice, MVSTA and the Methow Conservancy are cooperating in a study to assess the range of impacts of MVSTA trails and protected lands in Washington's Methow Valley. Results of this study will be used for future conservation and trail planning projects in the Methow Valley.

To ensure that we hear from a diverse population of residents and visitors, we will be surveying a random sample drawn from each population. In addition, we will be conducting a survey of area businesses. If you wish, you may take the same survey on-line at www.mvsta.com.

The enclosed survey is designed to be completed in 10 – 15 minutes. Your help is critical in providing an accurate assessment of the range of benefits to the region made by MVSTA's trail system and other protected lands in the Methow Valley, so please take the time to answer the enclosed questionnaire. Participation is strictly voluntary, and your responses are completely confidential; no names will be associated with any of the results. We have provided a stamped envelope for your convenience.

When you have completed the questionnaire, please mail it back to us in the postage paid envelope by **March 18, 2005.** If you have any questions about this survey, please contact either MVSTA at (509) 996-3287 or via e-mail info@mvsta

Thank you again for participating in this important survey. Your views are important to us!

Sincerely,

Jay Lucas
Executive Director, MVSTA

Katharine Bill
Executive Director, Methow Conservancy

NOTE: All who complete and return the enclosed survey may enter to win a 3-day MVSTA trail pass. Simply provide your name and contact telephone number in the area provided at the end of the survey.

REMINDER: Please post your completed survey back to MVSTA by **MARCH 18, 2005**.

††††† **Note:** for the purposes of this report only, the format of the survey and size of the letter has been revised slightly to fit within page boundaries of the report. However, the content and questions put to respondents have not changed.

Part I. GENERAL QUESTIONS:

1. Approximately how far is your residence from the Methow Valley? (Please check *one)*

_____ I/we live in the Methow Valley
_____ I/we live 25-50 miles from the Methow Valley
_____ I/we live 51 - 100 miles from the Methow Valley
_____ I/we live 101 - 150 miles from the Methow Valley
_____ I/we live 150 - 200 miles from the Methow Valley
_____ I/we live outside the State of Washington

2. If you stated that you live in the Methow Valley in Question 1 above, please tell us which of the following most accurately describes how you use your house? (Please check *one*)

____ It is my primary residence
____ It is my second home (If so, when do you reside there? _____)
____ I rent to a tenant, and do not occupy the residence
____ It is unoccupied
____ Other (Please describe_____)

3a. If you stated that you live and/or own a residence in the Methow Valley, please tell us what the proximity of MVSTA's trail(s) are in relation to your property.

a. ____An MVSTA trail runs *through* my property
b. ____An MVSTA trail runs *along the edge* of my property
c. ____The nearest MVSTA trail is less than 1 mile from my property
d. ____The nearest MVSTA trail is between 1 and 5 miles from my property
e. ____The nearest MVSTA trail is between 6 and 15 miles from my property
f. ____The nearest MVSTA trail is more than 15 miles from my property
g. ____My property is protected by the Methow Conservancy
h. ____My property is near lands protected by the Methow Conservancy. If so, how far away? _____ miles.
i. ____Don't know if my property is near either MVSTA trail lands or lands protected by the Conservancy.
j. ____Not applicable (Go to 3B below)

3b. If you do not live and/or own a home in the Methow Valley, please tell us where your primary residence is. (Check <u>all</u> that apply and identify "other" U.S. State or Canadian province by its two-digit code)

____Eastern Washington ____Western Washington ____California/Idaho/Oregon _____Other U.S. State _____Canada

Part II. RECREATION QUESTIONS:

4. How important are public and private recreational facilities in the Methow Valley? (Please *check* one answer)

____Very Important ____Important ____Somewhat Important ____Not Important ____Don't Know

5a. Do you believe that the Methow Valley has enough trails, parks, playgrounds, and other outdoor recreation facilities to meet your family's or the community's needs? (Please *circle* answer): Yes No Don't Know

5b. If No, what additional recreation facilities do you feel are the most important to be developed for the community? (Please *check* choices by level of importance to you):

	Very Important	Important	Somewhat Important	Not Important	Don't Know
a) Cross-country skiing trails					
b) Walking/Jogging/Snowshoe/Dog trails					
c) Swimming pool					
d) Mountain biking trails					
e) Ice rink					
f) Community playgrounds					
g) Public access for fishing & hunting					
h) Ball fields					
i) River access					
j) Other (specify):_____					

5c. Which of the above facilities do you believe are most important? (Please list up to three, by letter): _____

6a. If a trust fund was established for maintenance and development of future outdoor recreation facilities and trails for the Methow Valley would you be in support of such a fund? (Please *circle* answer)

Yes No Don't Know

6b. If you answered "Yes" to the above question, how much would you be willing to contribute on an annual basis? (Please check one)

____$1 – $9 ____$10 - $19 ____$20 – $29 ____$30 – $39 ____$40 - $49 ____More than $50 ____Don't Know

7a. Would you support an increase in property taxes to provide additional recreational facilities? (Please *circle* answer)

Yes No Don't Know

7b. If you answered "Yes" to the above question, how much additional money would you be willing to pay <u>annually</u> in property taxes to provide additional recreational facilities? (Please check *one*)

____$1 – $9 ____$10 - $19 ____$20 – $29 ____$30 – $39 ____$40 - $49 ____More than $50 ____Don't Know

8. Below is a list of public benefits that trails and trail corridors may provide for surrounding communities. To what extent do you feel that the Methow Valley Trails are important in providing the following benefits to the surrounding region? On a scale of 1 to 5, please circle the number that best indicates how you feel about each item, or circle "No Opinion."

Public Benefits of Trails & Trail Corridors	**Extremely Important**				**Not at All Important**	**No Opinion**
a) Preserving undeveloped open space	1	2	3	4	5	9
b) Aesthetic beauty	1	2	3	4	5	9
c) Community pride	1	2	3	4	5	9
d) Tourism and related economic development	1	2	3	4	5	9
e) Traffic reduction and transportation alternatives	1	2	3	4	5	9
f) Opportunities for health and fitness	1	2	3	4	5	9
g) Access for persons with disabilities	1	2	3	4	5	9
h) Public recreation opportunities/location for special events	1	2	3	4	5	9
i) Public education about nature and the environment	1	2	3	4	5	9
j) Increasing nearby property values	1	2	3	4	5	9
k) Improving water quality	1	2	3	4	5	9
l) Reducing air pollution	1	2	3	4	5	9
m) Other (specify _____)	1	2	3	4	5	9

Part III. YOUR TRAIL USE IN THE METHOW VALLEY:

While the majority of this section is directed to visitors and part-time residents, we encourage all those taking the survey to read and complete the questions in this section as applicable. NOTE: All should go on to complete Parts IV and V.

9. Please tell us which days of the week you are most likely to spend in the Methow Valley on a visit to the area.

____Sunday ____Monday ____Tuesday ____Wednesday ____Thursday ____Friday ____Saturday

10a. How many days, on average, are you likely to spend on a visit to the Methow Valley? ____ (total number of days)

10b. How many days did you spend on Methow Valley trails during your last visit? ____ (total number of days)

11. If you stay overnight in the Methow Valley, what type of accommodations do you typically use? Choose up to three and rank by preference with 1 (highest) and 3 (lowest).

a) Hotel/Motel _____
b) Inn/B&B _____
c) 2nd Home _____
d) Public Campground _____
e) Private Campground _____
f) Family/Friend's Home _____
g) Cabin/Lodge Rental _____
h) Other (please identify) _____

12. When traveling to the Methow Valley do you typically travel: (Please *check* one)

a) Alone _____
b) As a couple _____
c) As a family _____
d) On business _____
e) With an organization _____
f) With friends _____
g) With other families _____
h) Other (please define) _____

13. When in the Methow Valley, what types of services and/or goods have you purchased, or do you expect to purchase, during a typical visit? Please tell us if the amount shown for each category represents an individual expense or a total for your family or group.

Item/Category of Goods & Services	Total Dollars per average visit	Individual Purchase	Group/Family Purchase
Accommodations/Lodging	$		
Groceries/Beverages/Snacks	$		
Food – Restaurant meals/Fast-foods/Bar	$		
Purchase of Recreational Equipment/Supplies (e.g., skiing, bicycling, hiking, camping, fishing, etc.)	$		
Rental of Sports Equipment (e.g., skis, boats, bikes, etc.)	$		
Fuel (gas, oil, other)	$		
Gifts/ Souvenirs (e.g., arts, crafts, regional specialties, etc.)	$		
Medical/Dental/Other Professional services	$		
Auto repair	$		
Entertainment (e.g. videos, concerts, cinema/theatre, events, etc.)	$		
Other (please indicate)	$		

14. How important is the network of ski/bike/hiking trails to your average visit to the Methow Valley?

____Most Important ____Very Important ____Somewhat Important ____Not Important

15a. Have you ever considered purchasing real estate in the Methow Valley? (Please *circle* answer) Yes No

15b. If you answered "Yes" to the question above, how important is the network of ski/bike/hiking trails to your interest in purchasing real estate in the Methow Valley?

____Most Important ____ Very Important ____Somewhat Important ____Not Important ____Don't Know

16. In 2004, which months did you visit and use the trails of the Methow Valley? (*Check* all that apply)

____Jan ____Feb ____Mar ____Apr ____May ____June
____July ____Aug ____Sept ____Oct ____Nov ____Dec

17. What types of activities do you/your family typically participate in on Methow Valley trails? (C*heck* all that apply)

a) Cross Country Skiing _____ d) Horseback Riding _____
b) Hiking _____ e) Snow Shoeing _____
c) Bicycling _____ f) Other (please define) _____

18a. Have you ever participated in any organized special events on Methow Valley trails? (e.g., Cross Country Ski race). (Please *circle* answer)

Yes No

18b. If you answered "No" to the question above, do you think you might in the future? (Please *circle* answer)

Yes No Not likely Don't Know

19. Have you ever purchased, or plan to purchase a Methow Valley Sports Trails Association trail pass?

____ Yes, I have purchased or plan to purchase an MVSTA pass in the future.
____ No, I have not purchased or it is not likely that I will purchase an MVSTA trail pass in the future.

Part IV. OPEN SPACE QUESTIONS:

20. How important is it to you to preserve the natural beauty and open space in the Methow Valley? (please check *one*)

____Very Important ____Important ____Somewhat Important ____Not Important ____Don't Know

21. Natural beauty and open space can be hard to define. Below is a list of the types of natural beauty and open space one might find in the Methow Valley. Please choose four that you believe are the most important. Please rank your choices in order between 1 (highest priority) and 4 (lowest priority).

a) Scenic views _____
b) Wildlife habitat _____
c) Clean air and water _____
d) Accessible public lands _____
e) Few houses _____
f) Solitude _____
g) Farmland _____
h) Peaceful/Quiet _____
i) Dark skies _____
j) Other, specify: _____

If you do not think any of the above should be protected please check here: _____

22. What actions do you believe should be taken to preserve these characteristics? (Please *circle* answer for each)

a)	None	Yes	No	Don't Know
b)	Government purchase of land (e.g., county, municipality, etc.)	Yes	No	Don't Know
c)	Payment to private landowners for land protection	Yes	No	Don't Know
d)	Local non-profit group purchasing land	Yes	No	Don't Know
e)	Regulatory control of land (e.g., zoning laws, ordinances, etc.)	Yes	No	Don't Know
f)	Voluntary land protection (e.g., private donation, conservation plans, etc.)	Yes	No	Don't Know
g)	Acquisition of conservation easements by county or local non-profit group	Yes	No	Don't Know
h)	Environmental education	Yes	No	Don't Know
i)	Other, specify: _____			

23a. Do you believe that the natural beauty and open space of the Valley are threatened? (Please *circle* answer)

Yes No Don't Know

23b. If you answered "Yes" to 23a above, please tell us the most pressing threat you see.

_____

_____

24. Below is a list of geographic areas in the Methow Valley. Which do you believe should have priority for continued protection? Choose **three** that you believe should have priority for continued protection. Please rank them in order between 1 (highest priority) and 3 (lowest priority). If an area is unfamiliar to you, indicate DK (Don't Know).

a) Methow _____
b) Twisp _____
c) Winthrop _____
d) Carlton _____
e) Mazama _____
f) Other natural area(s), important to you not listed above (please identify) _____

If you do not believe that any of the above should be preserved/protected, check here: ____

25. What type of land in the Methow Valley do you believe should receive priority for continued protection?
Please rank them in order between 1 (highest priority) and 6 (lowest priority). If a type of land is unfamiliar to you, indicate DK (Don't Know).

a) Forests _____
b) Farms/orchards/ranches _____
c) Ridgelines _____
d) Rivers/lakes/ponds _____
e) Shrub-steppe _____
f) Other, specify: _____

If you do not believe that any of the above should be protected, check here: _____

26. Which one of the following characteristics was most important in your decision to live in or visit the Methow Valley? (please check *one*)

a) Proximity to recreational opportunities _____
b) Natural beauty _____
c) Rural character _____
d) Employment opportunities _____
e) Community _____
f) Other (please identify): _____

Part V. DEMOGRAPHIC QUESTIONS:

27a. If you are a resident of the Methow Valley, how long have you been a resident? (Please *check* appropriate length of time)

____ Less than 1 year ____ 1 to 5 years ____ 6 to 10 years ____ 11-20 years ____ Over 20 years

27b. If you are a newer resident to the Methow Valley (lived here 5 years or less), what brought you to the area? (Please explain below)

28. What is your age? (Please *check* the group that includes your age)
a) 16-19 ___ b) 20-29 ___ c) 30-39 ___ d) 40-49 ___ e) 50-59 ___ f) 60-69 ___ g) 70 or over ___

29. Gender: a) Female___ b) Male___

If you would like to enter the drawing for a MVSTA 3-day pass, please provide your name and telephone number below;

Name: _____ **Phone:** (_____)_____

THANK YOU for assisting with this study!
Please place your completed survey in the envelope provided and drop in any mailbox.
No postage is needed.

This page intentionally left blank.

Appendix C: Methow Valley Business/Merchant Survey & Letter

Methow Conservancy

March 4, 2005

Dear Methow Valley Business Owner or Operator:

The Methow Valley Sport Trails Association (MVSTA) and the Methow Conservancy are cooperating in a study to evaluate the nature and range of local and regional economic impacts of MVSTA trails and protected lands in the Methow Valley. This study will serve to update and expand an earlier study conducted in 1998, in which you may have participated.

We want to include as many businesses within the Methow area as possible to ensure that we accurately reflect the extent of related business activities and economic impacts generated throughout the Methow Valley region. In addition, we are conducting a related random sample survey of area residents and visitors to guarantee that our study gives us true measures of impacts and indicators for the Valley.

The enclosed survey is designed to be completed in 10 – 15 minutes. Your help is critical in providing an accurate assessment of the business related impacts made by MVSTA's trail system and other protected lands in the Methow Valley. We hope that you will take the few minutes needed to help. Participation is strictly voluntary, and your responses are completely confidential; no names will be associated with any of the results. Someone will be contacting you in a few days to collect your completed survey. Alternatively, you may send it to MVSTA in the accompanying envelope by **March 18, 2005**.

If you have any questions about this survey, please contact MVSTA at (509) 996-3287 or via e-mail at: info@mvsta.com.

Thank you again for participating in this important survey. Your views are important to us!

Sincerely,

Jay Lucas
Executive Director, MVSTA

Katharine Bill
Executive Director, Methow Conservancy

Someone will be checking back with you to collect your completed survey.
Alternatively, you may post your completed survey back to MVSTA
in the accompanying envelope by MARCH 18, 2005.

1. Where is your business located within the Methow Valley? (Please check *one*)

_____ Winthrop
_____ Twisp
_____ Mazama
_____ Carlton
_____ Methow
_____ Other (please identify)

2. Please tell us which of the following classifications most accurately describes your business? (Please check *all* that apply)

____ Restaurant (sit down meals, bar, etc.)
____ Lodging/Accommodations (hotel, motel, bed & breakfast, inn, etc.)
____ Camping, campgrounds
____ Fast Food (snacks, take-out prepared foods, etc.)
____ Groceries, deli, beverages, etc.
____ Equipment / Supplies (skiing, hiking, bicycling, camping, kayaking, canoeing, fishing, etc.)
____ General Merchandise (clothing, shoes, drugs, etc.)
____ Equipment Rental (skis, snowshoes, bikes, kayaks, etc.)
____ Tours and Outfitters (educational, outdoor activities, etc.)
____ Fuel (gas, oil)
____ Art, Gifts, Souvenirs, Crafts
____ Technology (computers, web site design services, internet services, consulting, etc)
____ Services (printing, legal, other professional)
____ Health care and related businesses (medical, dental, physical therapy, massage, acupuncture, naturopathy, yoga, etc.)
____ Construction (related trades, building materials, etc.)
____ Auto repair/service station
____ Entertainment (music, concerts, theatre/plays, video, etc.)
____ Real estate
____ Other (Please describe_____)

If you checked more than one classification above, please tell us which one best describes your business _____

3. How long have you been in business in the Methow Valley? (Please *check* appropriate length of time)

____ Less than 1 year ____ 1 to 2 years ____ 3 to 5 years ____ 5 to 9 years ____ 10 to 14 years

____ 15 to 19 years ____ Over 20 years

4. Which of the following best identifies the organization of your business?

____ Sole Proprietorship ____ General Partnership ____ Limited Partnership ____ Non-Profit

____ Limited Liability Partnership (LLP) or Company (LLC) ____ Corporation ____ Other (please *specify* below)

_____

5. In an average year, how many people do you employ, <u>full-time</u>, at your business? (Please *specify* number)

_____Winter _____Spring _____Summer _____Fall

6. In an average year, how many people do you employ, <u>part-time</u>, at your business? (Please *specify* number)

_____Winter _____Spring _____Summer _____Fall

7. Over the period of time in which you have been in business in the Methow Valley, would you say your peak season(s) are generally: (Please *check* one)

____Dependent on tourists ____Somewhat dependent on tourists ____Not dependent on tourists ____Don't know

8. Over the period of time in which you have been in business here, would you say the number of people who come to the area to take advantage of recreational trails and the natural beauty of the Valley has generally: (Please *check* one):

____Increased significantly ____Increased somewhat ____Not increased ____Declined ____Don't Know

9. Below is a list of general categories or classes of revenue generating groups. Please tell us how important each is in terms of generating revenues (sales) for your business? (Please *check* choices by level of importance):

	Very Important	**Important**	**Somewhat Important**	**Not Very Important**	**Not At All Important**
a) Recreational Visitors					
b) General Visitors / Non-recreational					
c) X-Country Skiers					
d) Hikers					
g) Mountain bikers					
h) Participants in recreational events (e.g., ski, foot, bike races, etc.)					
i) Nature enthusiasts					
j) Fishermen, hunters					
k) Campers					
l) Motorized recreationists (e.g., snomobilers, motorcyclists, etc.)					
m) Other (specify):_____					

10. Over the course of your time in business in the Methow Valley, what percentage of your average annual gross revenues would you estimate coming from ALL visitors? (Please *check* answer that most closely approximates this value)

____0 to 20% of gross ____21 to 49% of gross ____50 to 74% of gross ____75 to 90% of gross ____91 to 100% of gross

11. What percentage of your average annual gross revenues would you estimate comes from <u>just</u> those visitors who come to use the local network of trails for non-motorized recreation? (We are seeking your best estimate, not an exact measure. The type of recreationsts we are asking about might include: hikers, bicyclists, skiers, and those who attend special recreational events.)

_____Winter % _____Spring % _____Summer % _____Fall %

12. On a scale of 1 to 5 how important do you believe the natural beauty, wildlife, and open space of the Methow Valley are to your business' success? (1=extremely important, 2=important, 3=somewhat important, 4=not very important, 5=not at all important)**.** _____

THANK YOU for assisting with this study!
Someone will call on you in a few days to collect your survey. Alternatively, you may place your completed survey in the envelope provided and drop in any mailbox.

Appendix D: Hedonic Pricing Model Variables (by category)

Structural Attributes (S_i)

- Number of bathrooms
- Number of bedrooms
- Size of structure
- Fireplace
- Lot size
- Pool
- Quality of building/structure
- Condition of structure
- Age of structure
- Air conditioning
- Central heating (type)
- Parking type (garage, on-street, carport, etc.)

Neighborhood / Economic Attributes (N_i)

- Year (trend variable)
- Land value
- Tax amount
- Site influence
- Neighborhood location (situs zip)
- Unemployment rate
- Interest rate
- Dow Jones Industrial Average
- Housing price indices
- Sale data
- Seasonal demand for housing
- Other economic or social trends

Environmental / Amenity Variables (Q_i)

- Distance to greenway/buffer
- Distance to water body
- Distance to open space
- Distance to trail/linear park
- Distance to local/community park
- Distance to National Park/Forest
- Distance to agricultural/range lands
- Distance to wildlife/habitat area
- Distance to recreation area
- Presence of scenic views/viewshed (based on information from local realtors)
- Zoning