Spending and Economic Activity from Recreation at Oregon State Park Units—Coastal Region and Milo McIver State Park, an update

Eric M. White, Darren Goodding, and Randall S. Rosenberger,
Assistant Professor, Graduate Research Assistant, and Associate Professor

Oregon State University

November, 2012

Contents

4 Executive summary

5 Introduction

6 Average trip spending

10 Recreation visits

11 Total visitor spending

13 Economic contribution of Oregon State Parks visitors

17 Economic impact of Oregon State Parks visitors

18 Unit-level reporting

23 Limitations

25 References

26 Appendix—Analytical methods

Cover photo: Heceta Head Lighthouse State Scenic Viewpoint. Photo by Anita Morzillo.

Figures and tables

12 Figure 1—Expenditure pattern of visitors to Oregon State Parks Coastal Region units.

7 Table 1—Average spending of visitors to Oregon State Parks North Coast units, $ per party per trip

8 Table 2—Average spending of visitors to Oregon State Parks Central Coast units, $ per party per trip

9 Table 3—Average spending of visitors to Oregon State Parks South Coast units, $ per party per trip

10 Table 4—Average spending of visitors to Milo McIver State Park, $ per party per trip

11 Table 5—Trip-type distribution of visits to Oregon State Parks units

11 Table 6—Total trip spending by visitors within 30 miles of Oregon State Parks units in the Coastal Region ($ millions)

13 Table 7—Total trip spending by visitors within 30 miles of Milo McIver State Park ($000's)

15 Table 8—Economic contribution to local communities from Oregon State Parks visitor spending, North Coast zone, 2011

15 Table 9— Economic contribution to local communities from Oregon State Parks visitor spending, Central Coast zone, 2011

16 Table 10— Economic contribution to local communities from Oregon State Parks visitor spending, South Coast zone, 2011

16 Table 11— Economic contribution to local communities from Oregon State Parks visitor spending, Coastal Region total, 2011

17 Table 12— Economic contribution to local communities from Oregon State Parks visitor spending, Milo McIver State Park, 2011

17 Table 13— Economic impact to local communities from Oregon State Parks visitor spending, Coastal Region total, 2011

19 Table 14—Unit-level economic activity generated from recreation visitor trip spending, 2011

27 Table 15—Cases excluded from analysis

27 Table 16—Average number of visitors per party, by trip type

28 Table 17—Response coefficients by trip type for Milo McIver State Park, per 10,000 party visits in each trip type

29 Table 18—Response coefficients by trip type for the North Coast zone, per 10,000 party visits in each trip type

30 Table 19—Response coefficients by trip type for the Central Coast zone, per 10,000 party visits in each trip type

31 Table 20—Response coefficients by trip type for the South Coast zone, per 10,000 party visits in each trip type

Executive summary

The spending of visitors to Oregon State Parks units generates economic activity in the communities located around those units. We use a survey of visitors to Oregon State Parks units located in the Coastal Region and at Milo McIver State Park to estimate the average trip spending of visitors. We then combine those estimates of average spending with estimates of the number of recreation visits and an economic model to quantify the magnitude of local economic activity generated from Oregon State Parks visitor spending.

The average trip spending of visitors ranges from about $25 per party per trip for local residents on day trips to nearly $275 per party per trip for non-local residents on overnight trips away from home. On average, most local area expenses are for gasoline, groceries, and purchases in restaurants/bars. The reported 23 million visits to Oregon State Parks units in the Coastal Region yield about $503 million in visitor spending in local communities. Non-local residents account for about $449 million of that spending. The reported 410,000 visits to Milo McIver State Park result in total visitor spending in the local area of about $6.8 million.

The economies of local communities are bolstered by the total spending from visitors and from the "chain reaction" of economic activity that results when those businesses and their employees also spend money in the local community. That chain reaction is also referred to as the "multiplier effect." For the Coastal Region, spending in the local areas around Oregon State Parks units generates about $411 million in total sales, about 6,585 full and part-time jobs, and generates total labor income of $128 million. Counting only the spending of non-local visitors, the economic impact of visitor spending within the Coastal Region amounts to total sales of $371 million, 5,942 full and part-time jobs, and $115 million in labor income. The spending of visitors to Milo McIver State Park generates about $6.7 million in total sales, 84 full and part-time jobs, and $2.3 million in labor income within the local region. Counting only the spending of non-local visitors, the economic impact of Milo McIver State Park recreation visitor spending amounts to nearly $2.6 million in total sales and 33 full and part-time jobs.

Introduction

The units of the Oregon State Parks system provide a valuable recreation resource for residents of and visitors to Oregon. Additionally, the towns and cities around Oregon State Parks units benefit economically from government spending for unit operations and from the spending of visitors recreating at Oregon State Parks facilities. In many cases, the economic activity generated from recreation visitors is an integral component of local economies. This report describes the spending, and associated economic activity, of recreation visitors to Oregon State Parks Units within the Coastal Region and at Milo McIver State Park in the Valley Region.

This report relies on survey data collected from visitors to a subset of units (Box 1) located in the Coastal Region and at Milo McIver State Park between July and August, 2011 (Bergerson 2012). More than 9,000 completed surveys were collected. A portion of those surveys are used in this analysis. Day use areas of units were sampled via on-site visitor surveys. Overnight use areas (i.e., campgrounds) were sampled through an online survey of visitors using the Oregon State Parks reservation system. The survey was designed to measure visit and visitor characteristics, visitor satisfaction, and visitor trip spending in the local area around the recreation unit. The questions used to elicit local recreation trip spending were consistent with those used in the USDA Forest Service recreation monitoring program (Zarnoch et al. 2011).

Measuring how the spending of recreation visitors affects the economies of local communities requires 1) an estimate of total recreation visitation within different trip types, 2) an estimate of the average spending of recreation visitors engaged in different trip types, and 3) a model of the local economy.

Box 1—Oregon State Parks Units sampled in 2011

North Coast
Cape Lookout SP
Cape Meares SSV
Fort Stevens HA
Nehalem Bay SP

Central Coast
Beverly Beach SP
Devil's Lake SRA
Devil's Punch Bowl SNA
Jessie Honeyman SP
South Beach SP

South Coast
Bullards Beach SP
Harris Beach SRA
Samuel Boardman SSC
Sunset Bay SP
William M. Tugman SP

Valley Region
Milo McIver SP

Average trip spending

Spending averages were estimated using data collected from visitors to all of the units sampled in 2011. Survey respondents reported trip expenditures made by their entire travel party within 30 miles of the visited facility. Trip expenses were reported within 10 expenditure categories, such as spending for hotels/motels/B&Bs, campground fees, restaurants, and gas and oil. Because they were interviewed in the middle of the trip, respondents interviewed in day use areas were asked to report expenses already made as well as anticipated expenses. Expenses at home in preparation for the trip and expenditures traveling to, but beyond 30 miles of the unit, were not reported. The visitor spending reported here does not represent spending for equipment, gear, or other durable goods that might be used for recreation.

Our goal is to estimate spending averages for meaningful groups of visitors. In developing the approach to grouping visitors, we recognize that visitor spending is mostly influenced by the type of recreation trip taken (day or overnight) and whether the individual lives in the immediate area of the recreation destination (White and Stynes 2008). In general, the recreation activity of the trip has little influence over trip spending once the type of trip is taken into account. In our approach, we have grouped visitors into five distinct types of trips to Oregon State Parks:

- **Non-local day trips**: non-local residents on day trips to the area,
- **Non-local overnight**: non-local residents staying overnight at the unit or in the area,
- **Local day trips**: local residents on day trips to the area,
- **Local overnight**: local residents staying overnight at the unit or in the area,
- **Non-primary**: visits where recreating at the unit is not the primary reason for the trip away from home.

Local residents were identified as those who travelled 30 miles or less from home to reach the facility. Visitors were classified as overnight visitors if they reported a night spent away from home in the local area, reported local expenses on lodging or camping, or claimed to be participating in camping at the unit. Visitors not classified as overnight were classified as day visitors. In some cases, an individual may be on an overnight trip away from home but on only a day trip to the local area. Those individuals are classified as “day” visitors. Finally, visitors were classified as non-primary visitors if their stated reason for traveling away from home was something other than recreation or if the unit was not the main recreation destination. In some analyses, it is desirable to exclude the recreation trip spending of non-primary visitors. Note that for the Coastal Region, about 90% of non-primary visits are associated with non-locals.

The spending averages developed for year 2011 are based on a sample of 6,295 visitors; 5,752 in the Coastal Region and 543 in the Valley Region at Milo McIver State Park. Spending estimates were developed separately for the North Coast, Central Coast, South Coast and Milo McIver (Valley Region). We report separate spending averages for each zone for use in measuring the

affects to local economies. However, the spending averages estimated for each zone are not statistically unique from one another.

Average trip spending for parties recreating at Oregon State Parks North Coast units ranges from about $44 for those parties on local day trips to about $241 per trip for non-local parties on overnight trips to the area (Table 1). Most of the expenditures of parties on day trips are for food and gasoline. For non-local overnight visitors, camping fees, gasoline, and food account for nearly all of the locally-made recreation spending. Local overnight visitors spend most of their money on food, gasoline, and camping fees.

Table 1—Average spending of visitors to Oregon State Parks North Coast units, $ per party per trip

Spending categories	Non-local Day	Non-local Overnight	Local Day	Local Overnight[a]	Non-primary
Lodging	0.00	12.62	0.00	13.42	58.94
Camping	0.00	50.79	0.00	19.92	25.04
Restaurant	23.15	38.99	11.18	19.76	42.07
Groceries	10.55	48.66	16.00	35.35	33.90
Gasoline	24.95	51.03	11.22	27.50	43.82
Entry Fees	8.74	11.47	3.58	6.40	6.62
Recreation & entertainment	1.96	4.71	1.82	4.50	3.43
Souvenirs and other expenses	6.55	22.82	0.45	5.33	18.77
Total	**75.90**	**241.09**	**44.25**	**132.18**	**232.59**
Sample size	84	813	55	105	605
Std. dev. of total	76	211	71	167	336
Percent error (95% level)	22%	6%	44%	25%	12%

All figures expressed in 2011 dollars.

[a] The sample size for local overnight visitors was insufficient and here we substitute the local overnight averages for all Coastal Region units combined.

Average trip spending for parties recreating at Oregon State Parks Central Coast units ranges from about $25 for those parties on local day trips to about $275 per trip for non-local parties on overnight trips to the area (Table 2). Most of the expenditures of parties on day trips are for gasoline and food. For non-local overnight visitors, food, camping fees, and gasoline account for nearly all the recreation spending. Local overnight visitors spend most of their money on groceries and gasoline.

Table 2—Average spending of visitors to Oregon State Parks Central Coast units, $ per party per trip

Spending categories	Non-local Day	Non-local Overnight	Local Day	Local Overnight[a]	Non-primary
Lodging	0.00	14.07	0.00	13.42	29.13
Camping	0.00	50.63	0.00	19.92	26.33
Restaurant	24.01	50.00	6.04	19.76	40.21
Groceries	10.40	53.10	8.70	35.35	30.87
Gasoline	18.34	60.39	6.82	27.50	40.71
Entry Fees	3.39	13.43	2.22	6.40	7.03
Recreation & entertainment	6.62	7.10	0.93	4.50	7.26
Souvenirs and other expenses	4.76	25.90	0.86	5.33	19.20
Total	**67.52**	**274.62**	**25.57**	**132.18**	**200.74**
Sample size	151	955	137	105	744
Std. dev. of total	94	289	45	167	266
Percent error (95% level)	23%	7%	30%	25%	10%

All figures expressed in 2011 dollars.

[a] The sample size for local overnight visitors was insufficient and here we substitute the local overnight averages for all Coastal Region units combined.

Average trip spending for parties recreating at Oregon State Parks South Coast units ranges from about $26 for those parties on local day trips to about $254 per trip for non-local parties on overnight trips to the area (Table 3). Most of the expenditures of parties on day trips are for food and gasoline. For non-local overnight visitors, gasoline, camping fees, and food account for the majority of the recreation spending. Local overnight visitors spend most of their money on groceries and gasoline.

Table 3—Average spending of visitors to Oregon State Parks South Coast units, $ per party per trip

Spending categories	Non-local Day	Non-local Overnight	Local Day	Local Overnight[a]	Non-primary
Lodging	0.00	14.93	0.00	13.42	28.97
Camping	0.00	45.82	0.00	19.92	23.75
Restaurant	20.41	45.97	4.52	19.76	37.23
Groceries	7.91	49.84	9.89	35.35	30.80
Gasoline	21.39	56.84	9.16	27.50	45.52
Entry Fees	3.11	11.81	0.65	6.40	6.31
Recreation & entertainment	3.30	5.77	0.90	4.50	3.40
Souvenirs and other expenses	5.07	23.01	0.86	5.33	13.91
Total	**61.19**	**253.99**	**25.98**	**132.18**	**189.89**
Sample size	138	729	235	105	1,001
Std. dev. of total	77	207	49	167	229
Percent error (95% level)	21%	6%	24%	25%	8%

All figures expressed in 2011 dollars.

[a] The sample size for local overnight visitors was insufficient and here we substitute the local overnight averages for all Coastal Region units combined.

Average trip spending for parties recreating at Milo McIver State Park (Valley Region) ranges from about $38 for those parties on day trips to about $151 per trip for non-local parties on overnight trips to the area (Table 4). Most of the expenditures of parties on day trips are for groceries and gasoline. For non-local overnight visitors, camping fees, groceries, and gasoline account for nearly all the recreation spending. Local overnight visitors spend most of their money on groceries and camping fees.

Table 4—Average spending of visitors to Milo McIver State Park, $ per party per trip

Spending categories	Non-local Day[a]	Non-local Overnight	Local Day	Local Overnight	Non-primary
Lodging	0.00	1.95	0.00	0.32	2.29
Camping	0.00	38.96	0.00	43.47	19.06
Restaurant	4.45	15.78	4.45	7.13	14.63
Groceries	13.71	36.76	13.71	50.85	23.66
Gasoline	11.55	33.74	11.55	25.62	37.07
Entry Fees	5.91	6.14	5.91	11.65	6.50
Recreation & entertainment	2.62	9.20	2.62	4.73	1.46
Souvenirs and other expenses	0.13	8.29	0.13	0.70	5.74
Total	**38.37**	**150.82**	**38.37**	**144.48**	**110.40**
Sample size	112	148	112	150	107
Std. dev. of total	52	171	52	104	158
Percent error (95% level)	25%	19%	25%	12%	28%

All figures expressed in 2011 dollars.

[a] The sample size for non-local day visitors was insufficient and here we substitute the local day averages.

Recreation visits

According to Oregon State Parks' figures, units in the Coastal Region received nearly 23 million recreation visits in 2011. Along the coast, the Central Coast zone received the greatest number of visits (11.5 million)—approximately double the number of recreation visits of the North and South zones (about 5 million and 6 million visits, respectively). Milo McIver State Park received slightly more than 400,000 visits in 2011.

Information from visitor surveys was used to determine the types of recreation trips taken to Oregon State Parks units (Table 5). Along the Coast, the majority of visits are non-primary visits; non-local overnight visits are the second most common type of visit. The high rate of non-primary visits at Oregon State Parks Coastal Region units likely reflects the Oregon Coast as being a recreation destination facilitated by the presence of Oregon State Parks units rather than those units being the specific trip destination. The North Coast zone has the greatest number of non-primary visits. The Central Coast zone experiences the greatest number of visits by non-locals involving an overnight stay inside or outside the unit. The South Coast zone has the greatest share of visits from local users on day trips. Day trips by local residents are the most frequent type of visit at Milo McIver State Park. Non-primary trips, at nearly ¼ of visits, are the second most common type of visit there.

Table 5—Trip-type distribution of visits to Oregon State Parks units

Location	Non-local Day	Non-local Overnight	Local Day	Local Overnight	Non-primary	Sum
North Coast	8%	19%	5%	2%	66%	100%
Central Coast	15%	22%	11%	2%	50%	100%
South Coast	9%	16%	16%	4%	55%	100%
Coastal Average	**12%**	**19%**	**11%**	**3%**	**55%**	**100%**
Milo McIver State Park	13%	8%	45%	10%	24%	100%

Total visitor spending

Because visitor spending is on a party basis, we first convert the reported number of visits to party visits based on average party sizes estimated from the visitor survey data. The nearly 23 million visits to Oregon State Parks units on the Oregon Coast generate about $503.1 million in visitor trip spending within the communities around the units (Table 6). Non-local overnight visitors have the greatest total spending ($295.8 million) of any visitor group. Spending for gasoline ($122.8 million) and groceries ($119.8 million) constitute the greatest total expenses for recreation groups (Figure 1). Including the 90% of non-primary visits from non-locals, visitors from outside the area (non-locals) spent about $449 million in communities around Oregon State Parks units in the Coastal Region.

Table 6—Total trip spending by visitors within 30 miles of Oregon State Parks units in the Coastal Region ($ millions)

Spending category	Non-local Day	Non-local Overnight	Local Day	Local Overnight	Non-primary[a]	Total
Lodging	$0.00	$15.70	$0.00	$2.00	$0.00	$17.80
Camping	$0.00	$55.80	$0.00	$3.00	$0.00	$58.90
Restaurant	$17.10	$52.60	$4.90	$3.00	$26.10	$103.60
Groceries	$7.30	$57.90	$8.00	$5.40	$41.20	$119.80
Gasoline	$14.70	$64.80	$6.60	$4.20	$32.60	$122.80
Entry Fees	$3.10	$14.20	$1.50	$1.00	$8.00	$27.70
Recreation & entertainment	$3.90	$7.10	$0.80	$0.70	$4.30	$16.70
Souvenirs & other expenses	$3.80	$27.70	$0.60	$0.80	$2.80	$35.70
Total	**$49.90**	**$295.80**	**$22.40**	**$20.10**	**$115.00**	**$503.10**

All figures expressed in 2011 dollars.

[a] We apply the average spending for local day trips to non-primary visits. Local day trip spending is a conservative estimate of the additional marginal expenses associated with visiting an Oregon State Parks unit when already in the area for some other reason.

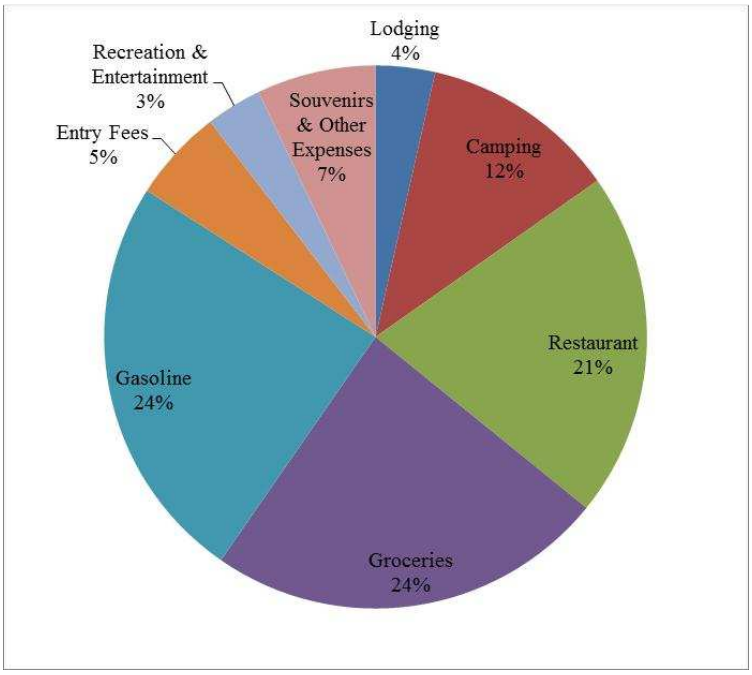

Figure 1—Expenditure pattern of visitors to Oregon State Parks Coastal Region units.

Local day visits are the most common type of trip to Milo McIver State Park and those visits generate the greatest total visitor expenditures for that unit (Table 7). Local resident overnight visits generate the second greatest amount of total spending. Expenses for groceries and gasoline account for most of the visitor spending in the local area around Milo McIver State Park. Including the 50% of non-primary visits associated with non-locals, non-resident visitors to Milo McIver State Park spend about $2.6 million in the local area.

Table 7—Total trip spending by visitors within 30 miles of Milo McIver State Park ($000's)

Spending category	Non-local Day	Non-local Overnight	Local Day	Local Overnight	Non-primary[a]	Total
Lodging	$0.0	$16.8	$0.0	$3.3	$0.0	$20.1
Camping	$0.0	$335.1	$0.0	$454.1	$0.0	$789.2
Restaurant	$77.8	$135.7	$237.9	$74.5	$142.3	$668.2
Groceries	$239.8	$316.2	$732.9	$531.2	$438.3	$2,258.4
Gasoline	$202.0	$290.2	$617.4	$267.7	$369.2	$1,746.5
Entry Fees	$103.4	$52.8	$315.9	$121.7	$188.9	$782.8
Recreation & entertainment	$45.8	$79.1	$140.1	$49.4	$83.8	$398.2
Souvenirs & other expenses	$2.3	$71.3	$6.9	$7.3	$4.2	$92.0
Total	**$671.2**	**$1,297.2**	**$2,051.1**	**$1,509.3**	**$1,226.6**	**$6,755.4**

All figures expressed in 2011 dollars.

[a] We apply the average spending for local day trips to non-primary visits. Local day trip spending is a conservative estimate of the additional marginal expenses associated with visiting an Oregon State Parks unit when already in the area for some other reason.

Economic contribution of Oregon State Parks visitors

Spending by recreation visitors for the purchase of goods (e.g., souvenirs) and services (e.g., restaurant meals or guided trips) creates economic activity in the communities around Oregon State Parks units. To provide a good or service to a visitor, a business typically must hire employees and buy goods and services (e.g., fuel) from other businesses in the local area. Additionally, the employees of businesses serving visitors use their income to make their own household purchases in town. This "chain reaction" of economic activity in local communities resulting from visitor spending is quantified by a metric referred to as an "economic multiplier." The economic activity resulting from the initial spending by visitors is referred to as the "direct effect;" the activity associated with businesses and employees interacting because of visitor spending are "secondary effects." The combination of direct and secondary effects is referred to as the "total effects."

There are several important considerations for interpreting the estimates of the economic contribution of visits to Oregon State Parks. First, in traditional economic impact analysis, the spending of those who live within the impact area of the park (within 30 miles—local residents) would be excluded from the analysis because their spending does not represent "new" money to the region. Because we have included the spending of locals, we refer to this analysis as an economic contribution analysis. Second, we have included only a portion of the spending of those visits where the stated reason for the trip away from home was something other than visiting the Oregon State Parks unit (e.g., business, visiting friends and relatives, recreating elsewhere). Economic contribution or impact analyses attempt to estimate the economic activity associated strictly with the presence of the recreation site. Because the recreation facility did not

cause the trip away from home in those “non-primary” visits, much of the spending by those individuals cannot be attributed strictly to the unit. We have applied the average spending of local resident day visitors to those visits where the trip was caused by something other than recreating at the unit. Local resident day visitor spending is considered a conservative estimate of the additional cost of recreating at the unit for someone who is already in the local area. Third, we have relied on the economic multipliers included in Money Generation Model-version 2 estimated for generic rural and small metro areas throughout the United States. Those economic multipliers adequately characterize the economies of rural and small metro communities within the U.S., but were not estimated using data only from Oregon communities.

We characterize the economic contribution of recreation visitor spending in terms of business sales, full- and part-time jobs, labor income, and value added.

- **Sales** are the sales of firms within the region associated with visitor spending.
- **Jobs** are the number of jobs in the region supported by the visitor spending. Job estimates are not full time equivalents, but include part time and seasonal positions.
- **Personal income** includes wage and salary income, proprietor’s income and employee benefits.
- **Value added** is a commonly used measure of the contribution of an industry or region to gross national or gross state product. Value added is personal income plus rents and profits, plus indirect business taxes. As the name implies, it is the “value added” by the region to the final good or service being produced. Value added can also be defined as the final price of the good or service minus the costs of all of the non-labor inputs to production.

Note that the values for direct effect sales are less than total visitor spending. This occurs because for some types of purchases (e.g., gasoline, sporting goods, and souvenirs) only the retail and wholesale margin portions of visitor expenditures will accrue to the local economy. For those purchases, the expenditure associated with the cost of producing the product (e.g., refining gasoline) immediately “leaks” out of the region because that product (refined gasoline) is not made within the region. The “capture rate” describes what portion of total spending results in direct sales of products and services produced in the region. In this analysis, regional capture rates are 64% to 69%.

The economic contribution of recreation visitor spending in the North, Central and South zones is reported in tables 8 through 10. The magnitudes of economic contribution in the North and South zones are similar—given similar levels of total spending. The economic contribution of recreation at units in the Central zone is greater (Table 9). Economic contribution and impact for individual Coastal Region units are reported in a subsequent table.

Table 8—Economic contribution to local communities from Oregon State Parks visitor spending, North Coast zone, 2011

Sector/Spending category	Sales $000's	Jobs	Labor Income $000's	Value Added $000's
Direct Effects				
Motel, hotel cabin or B&B	3,426	45	873	1,819
Camping fees	12,882	185	3,399	5,373
Restaurants & bars	24,491	490	8,190	12,743
Admissions & fees	7,883	192	1,925	4,389
Recreation & entertainment	3,462	84	845	1,928
Grocery stores	7,610	149	3,746	5,514
Gas stations	5,033	78	1,899	3,434
Other retail	3,449	73	1,497	2,550
Wholesale trade	2,936	22	1,020	2,180
Local production of goods	1,416	5	186	320
Total Direct Effects	**$72,589**	**1,324**	**$23,580**	**$40,249**
Secondary effects	24,971	248	6,879	14,564
Total Effects	**$97,560**	**1,572**	**$30,459**	**$54,814**
Multiplier	1.34	1.19	1.29	1.36

Table 9— Economic contribution to local communities from Oregon State Parks visitor spending, Central Coast zone, 2011

Sector/Spending category	Sales $000's	Jobs	Labor Income $000's	Value Added $000's
Direct Effects				
Motel, hotel cabin or B&B	9,175	120	2,337	4,872
Camping fees	31,185	449	8,229	13,007
Restaurants & bars	54,533	1,092	18,237	28,374
Admissions & fees	14,758	359	3,604	8,216
Recreation & entertainment	9,661	235	2,359	5,378
Grocery stores	13,956	273	6,870	10,112
Gas stations	10,853	168	4,094	7,406
Other retail	9,754	207	4,233	7,211
Wholesale trade	6,024	46	2,093	4,473
Local production of goods	2,635	9	347	597
Total Direct Effects	**$162,534**	**2,957**	**$52,403**	**$89,646**
Secondary Effects	56,159	559	15,494	32,746
Total Effects	**$218,692**	**3,517**	**$67,897**	**$122,392**
Multiplier	1.35	1.19	1.30	1.37

Table 10— Economic contribution to local communities from Oregon State Parks visitor spending, South Coast zone, 2011

Sector/Spending category	Sales $000's	Jobs	Labor Income $000's	Value Added $000's
Direct Effects				
Motel, hotel cabin or B&B	4,752	62	1,211	2,524
Camping fees	13,368	192	3,528	5,576
Restaurants & bars	22,235	445	7,436	11,569
Admissions & fees	4,894	119	1,195	2,724
Recreation & entertainment	3,512	85	857	1,955
Grocery stores	7,360	144	3,623	5,333
Gas stations	5,775	89	2,179	3,941
Other retail	4,112	87	1,784	3,040
Wholesale trade	3,077	23	1,069	2,285
Local production of goods	1,379	5	181	312
Total Direct Effects	**$70,464**	**1,253**	**$23,063**	**$39,258**
Secondary Effects	24,456	244	6,747	14,246
Total Effects	**$94,920**	**1,496**	**$29,810**	**$53,504**
Multiplier	1.35	1.19	1.29	1.36

Collectively, the direct spending of visitors to Oregon State Parks units in the Coastal Region supports about 5,534 full and part time jobs, $99 million in labor income, and $169 million in value added (Table 11). The secondary activity generated from visitor spending increases sales by about $105 million, supports an additional 1,051 full and part-time jobs, and $29 million in income.

Table 11— Economic contribution to local communities from Oregon State Parks visitor spending, Coastal Region total, 2011

Effect	Sales $000's	Jobs	Labor Income $000's	Value Added $000's
Direct Effects	**$305,586**	**5,534**	**$99,046**	**$169,154**
Secondary effects	105,586	1,051	29,121	61,557
Total Effects	**$411,172**	**6,585**	**$128,167**	**$230,711**

The more than 400,000 visits to Milo McIver State Park generate about $4.1 million in direct sales and support 61 full and part-time jobs in the communities around the Park (Table 12). The secondary economic activity from spending by visitors to the Park generates an additional $2.6 million in sales and supports an additional 23 full and part-time jobs.

Table 12— Economic contribution to local communities Oregon State Parks spending, Milo McIver State Park, 2011

Effect	Sales $000's	Jobs	Labor Income $000's	Value Added $000's
Total Direct Effects	**$4,084**	**61**	**$1,477**	**$2,397**
Secondary Effects	2,590	23	873	1,631
Total Effects	**$6,674**	**84**	**$2,350**	**$4,028**

Economic impact of Oregon State Parks visitors

The primary difference between economic contribution and economic impact analyses is the inclusion of spending by local residents in the former analysis. Economic impact analysis attempts to quantify the economic activity generated from "new" money brought to the region. Economic impact analysis attempts to quantify the amount of economic activity that would be lost to the region were the attraction not present. In this analysis, we include the 90% of non-primary visits that are associated with non-locals. As in all other analyses, we apply the average spending of day visitors already in the area to non-primary visits. The economic impact of Coastal Region visitation results in about $276 million in direct sales, supports 4,990 full and part-time jobs, and generates about $89 million in labor income (Table 13). Secondary economic activity from non-local visitor spending generates an additional $95 million in sales and supports an additional 952 full and part-time jobs.

Table 13— Economic impact to local communities from Oregon State Parks visitor spending, Coastal Region total, 2011

Effect	Sales $000's	Jobs	Labor Income $000's	Value Added $000's
Total Direct Effects	**$275,869**	**4,990**	**$89,217**	**$152,262**
Secondary Effects	95,561	952	26,374	55,714
Total Effects	**$371,430**	**5,942**	**$115,591**	**$207,976**

Unit-level reporting

Unit-level estimates of economic activity are desirable for a variety of local management purposes. In 2011, only a portion of the Oregon State Parks units within each of the Coastal Region zones underwent visitor sampling. Lacking survey data for each individual unit, we assume that the average spending of visitors and the distribution of trip types at unsampled units is similar to that observed at nearby sampled units. Average spending, within trip type, likely varies little across sites located within the same coastal zone. For example, the average spending of local day visitors at an unsampled unit is likely similar to the average spending of local day visitors at a nearby sampled unit. The distribution of trip types is more likely to differ meaningfully between sampled and unsampled units. In computing unit-level spending, we assume that the trip-type distribution at unsampled units is represented by the zonal average trip type distribution (e.g., the North Coast zone) estimated from nearby sampled units. The transferability of trip-type distribution may be limited for sites such as waysides and small facilities used primarily as intermediate stops on recreation trips. We control for differences across all units related to the presence of a campground within the unit.

Unit-level estimates represent the economic activity generated in the local communities around the individual units (Table 14). Results for individual units can be summed to represent the regional totals. Economic activity generated in communities around units is reported both in terms of economic contribution and economic impact. The economic impact results are computed based only on the spending of non-local visitors. The magnitude of economic activity generated around individual units traces mostly to the amount of recreation use at the unit and the presence of a campground.

Table 14—Unit-level economic activity generated from recreation visitor trip spending, 2011

Unit	Day visits	Overnight visits	Total spending ($000's)	Total spending—non-locals ($000's)	Economic contribution			Economic impact (non-local visitors only)		
					Jobs	Labor income ($000's)	Value added ($000's)	Jobs	Labor income ($000's)	Value added ($000's)
North Coast zone										
ARCADIA BEACH SRS	287,292		5,599	5,171	72	1,386	2,495	67	1,283	2,309
BOB STRAUB SP	128,808		2,510	2,319	32	621	1,119	30	575	1,035
BRADLEY SSV	96,956		1,889	1,745	24	468	842	23	433	779
CAPE LOOKOUT SP	132,484	108,002	8,338	7,829	111	2,178	3,912	104	2,054	3,689
CAPE MEARES SSV	421,352		8,211	7,585	106	2,033	3,660	98	1,882	3,387
CLAY MYERS SNA AT WHALEN ISLAND	54,660		1,065	984	14	264	475	13	244	439
DEL REY BEACH SRS	89,468		1,744	1,610	22	432	777	21	400	719
ECOLA SP	331,866		6,467	5,974	83	1,601	2,883	77	1,482	2,668
FORT STEVENS HA	144,884		2,823	2,608	36	699	1,258	34	647	1,165
FORT STEVENS SP	877,424	213,677	30,976	27,743	409	7,978	14,353	368	7,194	12,933
HUG POINT SRS	210,084		4,094	3,782	53	1,014	1,825	49	938	1,689
MANHATTAN BEACH SRS	69,164		1,348	1,245	17	334	601	16	309	556
MUNSON CREEK FALLS SNS	42,786		834	770	11	206	372	10	191	344
NEHALEM BAY SP	390,024	139,217	15,908	14,458	210	4,115	7,399	192	3,763	6,763
OCEANSIDE BEACH SRS	280,156		5,460	5,043	70	1,352	2,433	65	1,251	2,252
OSWALD WEST SP	418,150	0	9,839	8,327	129	2,494	4,494	110	2,127	3,830
SADDLE MOUNTAIN SNA	55,778	1,663	1,087	1,004	14	269	484	13	249	448
SUNSET BEACH	77,700		1,514	1,399	20	375	675	18	347	625
TOLOVANA BEACH SRS	547,584		10,671	9,857	137	2,642	4,756	127	2,446	4,402
Central Coast zone										
AGATE BEACH SRS	205,262		4,510	4,115	61	1,171	2,111	56	1,075	1,938
ALSEA BAY HIP	0		0	0	0	0	0	0	0	0
BEACHSIDE SRS	60,992	35,562	2,788	2,572	38	732	1,317	35	680	1,223
BEAVER CREEK SNA	32,235		708	646	10	184	331	9	169	304
BEVERLY BEACH SP	164,184	149,623	10,045	9,445	136	2,645	4,761	128	2,500	4,499

Table 14 (cont.)—Unit-level economic activity generated from recreation visitor trip spending, 2011

					Economic contribution			Economic impact (non-local visitors only)		
Unit	Day visits	Overnight visits	Total spending ($000's)	Total spending—non-locals ($000's)	Jobs	Labor income ($000's)	Value added ($000's)	Jobs	Labor income ($000's)	Value added ($000's)
BOILER BAY SSV	533,320		11,717	10,693	158	3,042	5,484	145	2,794	5,035
CARL G WASHBURNE/PONSLER VP	220,628	31,530	5,507	4,763	74	1,428	2,576	65	1,249	2,251
D RIVER SRS	1,024,584		22,511	20,542	303	5,844	10,535	278	5,368	9,672
DEPOE BAY	0		0	0	0	0	0	0	0	0
DEVIL`S LAKE SRA	132,240	37,929	4,198	3,745	57	1,095	1,973	51	986	1,775
DEVIL`S PUNCH BOWL SNA	458,760		10,079	9,198	136	2,617	4,717	125	2,404	4,331
DRIFTWOOD BEACH SRS	133,596		2,935	2,678	39	762	1,374	36	700	1,261
ELLMAKER STATE WAYSIDE	287,224		6,310	5,759	85	1,638	2,953	78	1,505	2,711
FOGARTY CREEK SRA	210,230		4,619	4,215	62	1,199	2,162	57	1,101	1,985
GLENEDEN BEACH SRS	177,812		3,907	3,565	53	1,014	1,828	48	932	1,679
GOV PATTERSON MEMORIAL SRS	215,264		4,729	4,316	64	1,228	2,213	58	1,128	2,032
H B VAN DUZER FOREST SSC	421,326		9,257	8,447	125	2,403	4,332	114	2,207	3,977
HECETA HEAD LIGHTHOUSE SV	719,280		15,803	14,421	213	4,103	7,396	195	3,768	6,790
JESSIE M HONEYMAN MEMORIAL SP	529,976	144,670	16,478	14,665	222	4,296	7,742	199	3,859	6,951
LOST CREEK SSR	149,694		3,289	3,001	44	854	1,539	41	784	1,413
NEPTUNE SSV	455,332		10,004	9,129	135	2,597	4,682	124	2,386	4,298
NESKOWIN BEACH SRS	173,564		3,813	3,480	51	990	1,785	47	909	1,638
ONA BEACH SP	174,886		3,842	3,506	52	997	1,798	47	916	1,651
OTTER CREST SSV	484,072		10,635	9,705	143	2,761	4,977	131	2,536	4,570
ROADS END SRS	407,360		8,950	8,167	120	2,323	4,189	111	2,134	3,845
ROCKY CREEK SSV	178,056		3,912	3,570	53	1,016	1,831	48	933	1,681
SEAL ROCK SRS	185,046		4,066	3,710	55	1,055	1,903	50	969	1,747
SIUSLAW NORTH JETTY	503,268		11,057	10,090	149	2,870	5,175	137	2,637	4,751

Table 14 (cont.)—Unit-level economic activity generated from recreation visitor trip spending, 2011

					Economic contribution			Economic impact (non-local visitors only)		
Unit	**Day visits**	**Overnight visits**	**Total spending ($000's)**	**Total spending—non-locals ($000's)**	**Jobs**	**Labor income ($000's)**	**Value added ($000's)**	**Jobs**	**Labor income ($000's)**	**Value added ($000's)**
SMELT SANDS SRS	297,224		6,530	5,959	88	1,695	3,056	81	1,557	2,806
SOUTH BEACH SP	614,706	140,803	17,839	15,747	240	4,644	8,371	214	4,140	7,458
STONEFIELD BEACH SRS	23,400		514	469	7	133	241	6	123	221
WB NELSON SRS	50,800		1,116	1,018	15	290	522	14	266	480
YACHATS OCEAN ROAD SNS	239,872		5,270	4,809	71	1,368	2,466	65	1,257	2,264
YACHATS SRS	394,050		8,657	7,900	117	2,248	4,052	107	2,065	3,720
YAQUINA BAY SRS	1,166,906		25,637	23,395	345	6,656	11,999	317	6,114	11,016
South Coast zone										
ALFRED A LOEB SP	94,594	18,008	2,629	2,192	33	658	1,183	28	558	1,003
ARIZONA BEACH	20,020		339	299	4	81	145	4	72	130
BANDON SNA	306,412		5,181	4,573	62	1,241	2,225	56	1,109	1,989
BULLARDS BEACH SP	395,960	97,060	11,943	10,101	151	3,001	5,391	130	2,581	4,634
CAPE ARAGO SP	292,136		4,940	4,360	59	1,183	2,121	53	1,058	1,896
CAPE BLANCO SP	207,972	32,389	5,467	4,510	69	1,366	2,453	58	1,147	2,060
CAPE SEBASTIAN SSC	205,484		3,474	3,067	42	832	1,492	37	744	1,334
CRISSEY FIELD SRS	173,692		2,937	2,592	35	704	1,261	31	629	1,127
FACE ROCK SSV	267,364		4,521	3,990	54	1,083	1,941	48	968	1,735
GEISEL MONUMENT SHS	15,834		268	236	3	64	115	3	57	103
GOLDEN & SILVER FALLS SNA	17,326		293	259	4	70	126	3	63	112
HARRIS BEACH SRA	930,904	88,858	22,037	17,787	276	5,476	9,838	228	4,506	8,089
HUMBUG MOUNTAIN SP	68,796	23,810	2,376	2,052	30	600	1,078	27	526	945
MCVAY ROCK SRS	130,332		2,204	1,945	26	528	946	24	472	846
OPHIR REST AREA	117,440		1,986	1,753	24	476	853	21	425	762
OTTER POINT SRS	27,124		459	405	5	110	197	5	98	176
PARADISE POINT SRS	64,282		1,087	959	13	260	467	12	233	417
PISTOL RIVER SSV	124,116		2,099	1,852	25	503	901	23	449	805
PORT ORFORD HEADS SP	112,496		1,902	1,679	23	456	817	20	407	730
SAMUEL H BOARDMAN SSC	726,192		12,279	10,838	147	2,942	5,273	132	2,629	4,713

Table 14 (cont.)—Unit-level economic activity generated from recreation visitor trip spending, 2011

					Economic contribution			Economic impact (non-local visitors only)		
Unit	**Day visits**	**Overnight visits**	**Total spending ($000's)**	**Total spending—non-locals ($000's)**	**Jobs**	**Labor income ($000's)**	**Value added ($000's)**	**Jobs**	**Labor income ($000's)**	**Value added ($000's)**
SEVEN DEVILS SRS	58,592		991	874	12	237	425	11	212	380
SHORE ACRES SP	216,072		3,653	3,225	44	875	1,569	39	782	1,402
SUNSET BAY SP	530,778	63,179	13,108	10,677	164	3,264	5,864	137	2,709	4,864
TSERIADUN	40,554		686	605	8	164	294	7	147	263
UMPQUA LIGHTHOUSE SP	322,200	26,002	7,421	5,953	93	1,842	3,308	76	1,506	2,704
UMPQUA SSC	28,800		487	430	6	117	209	5	104	187
WILLIAM M TUGMAN SP	206,516	36,412	5,613	4,660	71	1,404	2,523	60	1,187	2,131
WINCHUCK SRS	66,900		1,131	998	14	271	486	12	242	434
Valley Region										
Milo McIver State Park	381,264	29,532	6,755	2,592	84	2,350	4,028	33	921	1,574

Limitations

This analysis incorporates a large volume of data collected from a variety of Oregon State Parks units. The estimates of average visitor spending are computed from several thousand survey responses. To estimate average visitor spending and total spending attributable to Oregon State Parks units, we follow the framework adopted by the USDA Forest Service and the National Park Service. Many of the uncertainties and errors in recreation economic impact studies tend to inflate impact estimates (Stynes and White 2006). To counter that general pattern, we have adopted a conservative approach to estimating visitor spending and the attribution of visitor spending. The estimates of average spending found in this study are consistent with those reported for the USDA Forest Service and National Park Service (White and Stynes 2010, Stynes 2011). The numbers of recreation visits at each unit are Oregon State Parks estimates developed using established internal procedures.

In some cases, visitors may enter and exit units multiple times in a single day during a single visit or may complete visits to a single unit on consecutive days in conjunction with an overnight stay (e.g., at a hotel) in the local area. Multiple entries and exits on a given day during a single visit have the potential to inflate the estimate of the number of actual visits, and thereby the estimates of total spending, received at a unit. To the extent re-entry is not corrected for in the existing visit estimates, the estimates of total spending may be inflated. The spending averages for overnight visitors represent spending in the local area during the entire trip. To the extent that some visitors might stay overnight in hotels or motels (a single trip), but enter the same unit on multiple consecutive days (multiple visits), the estimate of total spending may be inflated. Re-entry to the same unit on consecutive days during the same trip likely presents little issue for the units considered here.

There are numerous Oregon State Parks units located along the Oregon Coast. Given the proximity of units to one another, it is possible for individuals to complete visits to multiple units during a trip to the coast. When multiple units are visited on a single trip, it makes it difficult to attribute visitor spending across the units. In addition, in some cases when the units are within 30 miles of each other, visits to multiple units on the same trip could lead to double-counting of trip expenditures, i.e., average visitor spending for the trip is applied to each unit's visit. From the current survey data, we are unable to determine the extent of multi-unit visitation. There is the potential for some double counting of expenditures. However, our conservative treatment of non-primary visits (where multi-unit visits would likely be classified) dampens the potential magnitude of double counting.

A subset of units along the coast was sampled in 2011. To develop estimates for all units collectively and for units not sampled, we assume the distribution of trip types at units not sampled can be represented by the sampled units. The trip-type distributions for the North,

Central, and South coast zones are generally similar. Given that stability, we expect the trip-type distributions to be stable across most units along the coast. For some distinct types of units, such as waysides or historical sites, the trip-type distribution may not fully represent the types of trips those units receive. Likely, the standard trip-type distribution underestimates the share of non-primary trips to those locations.

To estimate the economic activity in rural communities associated with Oregon State Parks visitor spending, we must rely on models of the economies of those communities. In any application, the extent to which the model is an adequate representation of reality influences the accuracy of model results. In this study, we have relied on an established modeling system, the Money Generation Model-version 2. That modeling system has been used for a variety of applications at the federal, state, and local levels.

To estimate the average spending of recreation visitors, we rely on data collected from a sample of recreation visitors. The percent errors (or size of the 95% confidence intervals relative to the estimated means) of our estimated figures are in most cases 10% to 25% (tables 1 – 4). The interpretation of the percent error is that we are 95% confident that the true average spending is, in most cases, within 10% to 25% of our estimated mean. For a few spending averages, small sample sizes lead to percent errors of more than 30%. The percent errors found in this study are fairly typical of those found for outdoor recreation visitor spending.

It is not common practice to place confidence intervals on estimates of economic contribution or impact. Regardless, we are not able to do so in this case because variance estimates were not provided for Oregon State Parks visitation figures. Further, the variance patterns around the spending averages reported above do not trace though linearly to the contribution and impact estimates from the economic model. The reasonableness of the estimated economic effects is frequently judged based on the statistical confidence regarding the inputs (i.e., average visitor spending and recreation use estimates). In this analysis we have relied on response coefficients to estimate economic activity (see Appendix). Because we do that, one could estimate economic activity across a range of visitation figures. This allows a user to get some idea of how sensitive estimates of economic activity are to changes in input assumptions.

Expenditures by Oregon State Parks to operate and staff units also create economic activity in local communities. We have not estimated that economic activity here. However, we do model the economic activity generated from expenditures for campground fees. The fees we estimate here are collected by Oregon State Parks as well as private campgrounds and other public campgrounds. Campground fees collected by Oregon State Parks are largely spent in the local area by the same unit for campground operation. Because of how we have handled campground fees, those “operation” expenditures by Oregon State Parks are represented partially in this analysis. Because it would lead to some double counting, the economic activity results reported here should not be added directly to any estimates of economic activity developed for Oregon State Parks operations and staffing.

References

Bergerson, T. 2012. Visitor survey of day use and overnight use at Oregon State Park Coastal Region Parks—final report. Oregon Parks and Recreation Report. 129 p.

Stynes, D.J.; White, E.M. 2006. Reflections on measuring recreation and travel spending. Journal of Travel Research. 45(August): 8–16.

White, E.M.; Stynes, D.J. 2008. National forest visitor spending averages and the influence of trip-type and recreation activity. Journal of Forestry. 116(1): 17–24.

White, E.M.; Stynes, D.J. 2010. Spending profiles of national forest visitors, NVUM Round 2 update. 68 p. http://www.fsl.orst.edu/lulcd/Publicationsalpha_files/White_Stynes_NVUM2010a.pdf. (2 May 2012).

Stynes, D.J. 2011. Economic benefits to local communities from National Park visitation and payroll, 2010. Natural Resource Report NPS/NPSS/EQD/NRR 2011/481. 44 p.

Zarnoch, S.J.; White, E.M.; English, D.B.K.; Kocis, S.M.; Arnold, R. 2011. The National Visitor Use Monitoring methodology and final results for Round 1. Gen. Tech. Rep. SRS-144. Asheville, NC: U. S. Department of Agriculture, Forest Service Southern Research Station. 74 p.

Appendix—Analytical methods

Data for estimating visitor spending

We adopted a variety of rules for data cleaning and exclusion in developing visitor spending averages. The rules we have adopted in this analysis are consistent with those used in estimating visitor spending for the USDA Forest Service and National Park Service. The data contained 2,769 observations where expenditures in all categories were blank. When presented with missings across all spending variables one must decide if those missings represent zero spending or a respondent who did not wish to report their spending. In these spending averages, we have filled all missing spending variable observations with zeros. All else being equal, that will reduce estimated average spending. However, we have also identified 1,130 observations where the spending responses were missing because the respondent appeared to stop taking the survey (based on their non-response to a series of questions). We have not included those 1,130 cases in these estimates.

In addition to handling missings, we also adopted rules to minimize the influence of contaminant and outlier observations. Contaminants are observations that do not belong to the population or are erroneous observations. An observation that includes spending that actually occurred outside the 30-mile radius around the recreation site or an observation that misplaces the decimal point when reporting an expense (i.e., 1,000.00 dollars versus 10.00) are both examples of contaminants. An outlier is an observation that does belong to the population under study but has undue influence on the estimation of the sample mean given the size of the sample. For example, some day visitors may spend $800 during an outdoor recreation trip, but such spending is uncommon and the vast majority of visitors spend substantially less or nothing at all (Stynes and White 2006). When sample sizes are small, outlier observations can significantly influence the estimate of the sample mean.

In these spending averages, we excluded observations under the following conditions:

- The number of nights spent away from home in the local area was greater than 30,
- The reported size of the group was greater than 10 individuals,
- Spending per day/night was greater or equal to $500 or spending on recreation and equipment rental was greater or equal to $500 in total,
- Cases we could not classify as local or non-local or if the respondent did not state if nights were spent in the local area.

Table 15—Cases excluded from analysis

All surveyed cases	**9,953**
Respondents only partially completing survey	**1,130**
Outlier and contaminant cases	**2,185**
Nights spent locally > 30	30
Group size > 10	1,140
Spending per night >= 500 or recreation equipment expenses >= 500	1,015
Unable to classify into a visitor segment	**343**
Did not answer if any nights were spent locally	235
Could not classify as local or non-local	108
Cases for economic analysis	**6,295**

Determining trip-type distribution and average party size

Visit estimates for year 2011 were provided for individual units by Oregon State Parks. Visits were reported separately for day use areas and overnight facilities of individual units. In the sampling effort, visitors within day use areas were surveyed on-site via intercept sampling; visitors using overnight facilities were surveyed online using reservation records. From those separate samples of day use area and overnight visitors, we determined the shares of survey respondents completing day and overnight trips, the share of local and non-local visitors, and the share of non-primary visitors. For day-use-only units, we distributed visits into trip types using only responses from those individuals sampled at day use units. For units with both day- and overnight-use areas, we apportioned day visits across trip types using the day use area sample and overnight visits across trip type using the overnight use sample. In determining the trip-type distribution, we assumed that we have a representative sample of visits to Oregon State Parks units.

To estimate total spending, the estimates of recreation use and average visitor spending must be placed in the same units. For this study we have converted visits to party visits using estimates of average party size, within trip type. Average party size estimates were computed for Milo McIver State Park and each coastal zone using the collected survey data (Table 16).

Table 16—Average number of visitors per party, by trip type

Area	Non-local Day	Local Day	Non-local Overnight	Local Overnight	Non-primary
Milo McIver SP	3.2	3.5	3.7	3.8	3.0
North Coast	3.9	3.7	4.0	4.1	3.3
Central Coast	3.7	2.9	4.2	4.2	3.4
South Coast	4.0	3.3	3.8	3.8	3.1

Response coefficients for economic analysis

To accommodate a range of options for completing analyses for individual units or in aggregate and to facilitate excluding particular trip types (e.g., visits from local residents) we used response coefficients to estimate economic activity generated by visitor spending. Response coefficients relate a given number of visits (e.g., 10,000 party visits) or amount of spending (e.g., $1 million in spending) to the response in the local economy. Separate sets of response coefficients were estimated for each coastal zone and Milo McIver State Park within the Money Generation Model—version 2. Year 2010 multipliers representing generic rural economies were used for analyses of Coastal Region units. Year 2010 multipliers representing generic small metro areas were used for analyses of Milo McIver State Park. To match the multiplier year, average spending figures were deflated to 2010 dollars using Bureau of Labor Statistics price indices for the economic sectors related to visitor spending. The response coefficients (on a 10,000-party-visit basis) used for this analysis are reported in tables 17 through 20. The availability of the response coefficients allow for revision of the economic contribution or impact analysis given revised visitation estimates or with changes in the types of trips included (e.g., only overnight trips).

Table 17—Response coefficients by trip type for Milo McIver State Park, per 10,000 party visits in each trip type

	Non-local Day	Local Day	Non-local Overnight	Local Overnight	Non-primary[a]
Direct Economic effects					
Sales ($000's)	$218	$218	1,003	$938	$218
Jobs	3	3	14	13	3
Personal Income ($000's)	$77	$77	$370	$351	$77
Value added ($000's)	$131	$131	$569	$530	$131
Total Economic Effects					
Sales ($000's)	$347	$347	$1,681	$1,588	$347
Jobs	5	5	20	19	5
Personal Income ($000's)	$120	$120	$601	$574	$120
Value added ($000's)	$213	$213	$996	$940	$213

[a] We apply the average spending for local day trips to non-primary visits. Local day trip spending is a conservative estimate of the additional marginal expenses associated with visiting an Oregon State Parks unit when already in the area for some other reason.

Table 18—Response coefficients by trip type for the North Coast zone, per 10,000 party visits in each trip type

	Non-local Day	Local Day	Non-local Overnight	Local Overnight	Non-primary[a]
Direct Economic effects					
Sales ($000's)	$455	$243	1,554	$832	$243
Jobs	9	5	27	14	5
Personal Income ($000's)	$151	$82	$490	$260	$82
Value added ($000's)	$262	$141	$833	$451	$141
Total Economic Effects					
Sales ($000's)	$601	$321	$2,115	$1,128	$321
Jobs	11	5	32	17	5
Personal Income ($000's)	$190	$104	$646	$342	$104
Value added ($000's)	$348	$186	$1,159	$623	$186

[a] We apply the average spending for local day trips to non-primary visits. Local day trip spending is a conservative estimate of the additional marginal expenses associated with visiting an Oregon State Parks unit when already in the area for some other reason.

Table 19—Response coefficients by trip type for the Central Coast zone, per 10,000 party visits in each trip type

	Non-local Day	Local Day	Non-local Overnight	Local Overnight	Non-primary[a]
Direct Economic effects					
Sales ($000's)	$433	$139	1,769	$832	$139
Jobs	9	3	31	14	3
Personal Income ($000's)	$143	$47	$560	$260	$47
Value added ($000's)	$246	$81	955	$451	$81
Total Economic Effects					
Sales ($000's)	$572	$183	$2,399	$1,128	$183
Jobs	10	3	37	17	3
Personal Income ($000's)	$180	$59	$735	$342	$59
Value added ($000's)	$327	$107	$1,322	$623	$107

[a] We apply the average spending for local day trips to non-primary visits. Local day trip spending is a conservative estimate of the additional marginal expenses associated with visiting an Oregon State Parks unit when already in the area for some other reason.

Table 20—Response coefficients by trip type for the South Coast zone, per 10,000 party visits in each trip type

	Non-local Day	Local Day	Non-local Overnight	Local Overnight	Non-primary[a]
Direct Economic effects					
Sales ($000's)	$362	$117	1,628	$832	$117
Jobs	7	2	28	14	2
Personal Income ($000's)	$122	$42	$516	$260	$42
Value added ($000's)	$208	$70	$880	$451	$70
Total Economic Effects					
Sales ($000's)	$478	$155	$2,207	$1,128	$155
Jobs	8	3	34	17	3
Personal Income ($000's)	$153	$52	$677	$342	$52
Value added ($000's)	$276	$93	$1,217	$623	$93

[a] We apply the average spending for local day trips to non-primary visits. Local day trip spending is a conservative estimate of the additional marginal expenses associated with visiting an Oregon State Parks unit when already in the area for some other reason.