

# Potential Economic Effects of the Jordan Cove Energy Project on Tourism and Recreational Activities

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Jordan Cove Energy Project, L.P. (JCEP) is proposing to develop a terminal and processing facility on the northwest shore of Coos Bay, Oregon, to receive liquefied natural gas (LNG) supplies from specially designed marine vessels, store the liquefied gas, warm it to a gaseous state, and deliver the gas to pipelines serving the Pacific Northwest and adjacent markets. In its regulatory review of the proposed project's environmental impacts, the Federal Energy Regulatory Commission (FERC) has asked JCEP to:

“Provide an analysis of the potential impact the project may have on tourism and recreational activities in Coos County. Include in the study a discussion of the current economic contribution of tourism to the county, current recreational boating activities in Coos Bay, and the potential impact on recreational boating and other water users resulting from LNG ship traffic.”

To respond to this request, JCEP contracted with ECONorthwest, an economics consulting firm with offices in Eugene and Portland, Oregon. This report presents our findings.

**Tourism.** Tourism in Coos County is concentrated during spring break and summer months, when families visit the area. The county has little tourism related to business and commercial customers. Lodging in Coos County mostly consists of smaller establishments dependent on spring-break and summer customers; upscale establishments are rare. Tourism generated retail sales of \$164.5 million (27 percent of the county's total), and 2,830 jobs (15 percent of the county's total) in 2004. Lodging-tax receipts the same year totaled \$10.4 million, of which \$430,300 (42 percent) occurred in the City of Coos Bay, and 20 percent occurred in the City of North Bend.

We found no evidence indicating that the project would have a negative impact on tourism in Coos County. The project might have a slight positive impact on tourism, insofar as it would attract workers to the area and they, in turn, would induce visits to the area by family members and friends. In addition, the area's lodging establishments probably would experience additional demand for rooms from project-induced commercial and business travelers.

**Recreational Boating and Other Water Users.** The project's foreseeable impacts on recreational activities would arise primarily from potential interactions between recreational boats and LNG vessels passing into and out of Coos Bay, insofar as the boats would be required not to impede the vessels' passage. When an LNG vessel is in the navigation channel, between the ocean and the LNG terminal, boats in or near the channel would have to move away and those seeking to approach the channel would have to delay doing so until the vessel has passed. This impact may persist as long as 20–30 minutes, as the vessel moves through the channel, and, on average, it would affect about 6 pleasure craft and 2 commercial fishing boats per transit. JCEP anticipates 80 LNG vessels will call at Coos Bay per year, and only during daylight and at high tide. The sum of the periods in which they would have an impact on recreational and other boating activity is about 1.3 percent of all daylight hours during a year.

The impacts of LNG vessels would resemble those associated with on-going traffic of cargo vessels that call at Coos Bay to collect wood chips. This traffic has declined from about 200

vessels per year ten years ago to about 50 today, and port authorities expect it will remain at this level. The additional 80 LNG vessels per year would raise the total number of deep-draft vessels calling at Coos Bay to about 130 per year. Past experience, when total traffic was this level or higher, indicates that, although some boaters might occasionally be inconvenienced for a few minutes, the transit of LNG vessels through the channel probably would not have a material impact on recreational activity in the bay.

Non-routine events might occasionally occur. For example, as with any deep-draft vessel, the transit of an LNG vessel might cause a recreational boat or commercial fishing boat, seeking to leave rough conditions on the ocean, to delay moving into the safety of Coos Bay. Such interactions between deep-draft vessels and boats occur rarely, and the delay involves only the requirement that boats must maintain some distance, outside the safety/security zone, as they follow a vessel into and through the navigation channel. Although the Coast Guard has yet to define the safety/security zone that would surround LNG vessels at Coos Bay, the zones it has defined for other vessels indicate that the delay would be less than 10 minutes: if a boat had to maintain a distance of one mile behind a vessel moving at 8 knots, for example, the delay would be about 7 minutes. JCEP anticipates that LNG vessels would not attempt to enter the bay during rough oceans conditions, diminishing the potential for impeding recreational and commercial fishing boats seeking to enter the bay.

JCEP anticipates that travel in the navigation channel will be on a first-come-first-served basis, so it is possible that the reverse would occur: a boat entering the channel ahead of it would cause an LNG vessel to delay its entrance to the channel. LNG vessels moving through the navigation channel may occasionally have positive impacts: JCEP anticipates that each LNG vessel would be accompanied by escort boats as it passes through the navigation channel and these boats might be available to help a recreational boat in distress.

The current interaction between deep-draft vessels and other boating activity in the harbor typically occurs smoothly and probably would continue to do so with LNG vessels. The Coast Guard and Oregon State Marine Board routinely remind boaters of their obligation not to impede deep-draft vessels and boaters currently accommodate the passage of these vessels routinely and without incident. We found no evidence that the past and current passage of deep-draft vessels in the navigation channel has resulted in collisions, other serious incidents, or controversial disruption of boaters' behavior. There is no apparent reason to expect that LNG vessels would induce a systematic change in this performance, insofar as the pilots moving LNG vessels through the navigation channel would be the same as those moving other deep-draft vessels, and the presence of escort boats accompanying each LNG vessel may diminish the probability of collisions and other serious incidents.

**Terrestrial Recreation.** The proposed project lies on the North Spit of Coos Bay, which experiences beach-combing, hiking, horseback riding, and similar uses. The intensity of use, about 3–4 persons per mile per day, is among the lowest for Oregon's beaches.

In concept, the project could cause a noticeable reduction in terrestrial recreation if it resulted in the closure of the Trans Pacific Parkway, the road at the northern edge of the project site that provides direct access to the bay's North Spit. JCEP, however, has received no notice from a public-safety agency indicating that the transit of LNG vessels would trigger the road's closure. Even if the road were closed, recreationists would have access to

the area but by a more indirect route, via Horsefall Beach Road, further to the north. The proposed LNG terminal and processing facility would be located in an area that already is classified for industrial use and not used for recreation, and it apparently would not directly impede recreational activities on other lands in the vicinity.

In this section of the report we describe (a) the current economic contribution of tourism to Coos County, and (b) the current recreation-related activities in Coos Bay and adjacent areas.

### A. Current Economic Contribution of Tourism to the County.

To describe tourism's current contribution to the county's economy we examine data regarding lodging and tourism-related spending, jobs, and tax revenue.

#### Lodging

Recent data describe the number of over-night lodging establishments, hotel occupancy rates, room rates, upscale lodging establishments, and RV parks.

#### Lodging Establishments

Tables 1 and 2 list all lodging establishments in Coos County where tourists would be expected to rent rooms overnight. Table 1 includes hotels and motels, which Smith Travel Research defines as establishments with at least 15 rooms that are designed for stays shorter than 30 days. Table 2 includes properties not captured in the Smith Travel Research database. These are primarily smaller motel and bed and breakfast properties. Excluded from these lists are single-room occupancy establishments and campgrounds. The lists show that the majority of establishments (32) have less than 50 rooms. Nine establishments have between 50 and 100 rooms; three establishments have more than 100 rooms: Bandon Dunes, Red Lion Hotel Coos Bay, and the Mill Casino Hotel.

#### Hotel Occupancy

Figure 1 shows the occupancy rate for the surveyed lodging establishments for summer 2004 through the spring of 2006. Occupancy rates are expressed as a percentage the number of room nights sold per number of room nights available; in Figure 1 occupancy rates are calculated seasonally, for winter (January-March), spring (April-June), summer (July-September), and fall (October-December).

Occupancy rates in Coos County are highly seasonal because, compared to major cities in the Pacific Northwest, there is relatively little commercial and convention business for the local hotels. Thus, lodging establishments are heavily dependent upon leisure travelers that come mostly for the outdoor recreation. Coos County is a haven for outdoor recreation because of its cool, dry summers and wide range of activities that attract tourists from other counties. Predictably cold, rainy weather from mid-fall to late spring discourages such leisure travelers and the meeting, commercial, and personal traveler segments are simply

**Table 1. Overnight Lodging Establishments, 15+ Rooms, Coos County, 2006**

<b>Overnight Lodging Establishments</b>	<b>City</b>	<b>Rooms</b>
<u>Properties with 15 or more rooms</u>		
Bandon Dunes	Bandon	144
Best Western Inn @ Face Rock	Bandon	74
Driftwood Motel	Bandon	22
Gorman Motel	Bandon	28
Harbor View Motel	Bandon	57
Shooting Star Motel	Bandon	15
Sunset Motel	Bandon	71
Table Rock Motel	Bandon	24
Windermere By The Sea	Bandon	25
Captain Johns Motel	Charleston	44
Pacific Empire Motel	Charleston	50
Bayshore Motel	Coos Bay	34
Best Western Holiday Motel	Coos Bay	83
Edgewater Inn	Coos Bay	82
Motel 6 Coos Bay	Coos Bay	94
Red Lion Hotel Coos Bay	Coos Bay	143
Timber Inn	Coos Bay	53
Myrtle Lane Motel	Coquille	25
Lakeshore Lodge	Lakeside	20
Myrtle Trees Motel	Myrtle Point	29
Comfort Inn North Bend	North Bend	96
Mill Casino Hotel	North Bend	115
Parkside Motel	North Bend	16
<b>Subtotal of larger properties</b>		<b>1,344</b>

Source: ECONorthwest with data from Smith Travel Research.

too small to offset the losses. As a result, occupancy rates in Coos County hotels and motels drop severely in the shoulder and off seasons.

This pattern was evident in 2006. In August, the average occupancy was 79.4 percent. In January, normally the slowest month, it was only 39.5 percent. Other than Spring-Break week, the shoulder seasons are quite weak because of the inclement weather that often persists in the fall and spring.

After nearly a decade of insignificant growth, room demand in Coos County has been rising at a fast 2.7 percent clip since 2000. This growth has been driven by the development of destination casino gambling and upscale golf courses, as well as a general improvement in coastal tourism in the last five years. Since 2000, average occupancies have climbed 6 percent in the summer period, 10 percent in the fall, and 16 percent in the winter. The relatively large gains in fall and winter business is partly a consequence of the Mill Casino Hotel, which offers an indoor venue for tourism.

**Table 2. Overnight Lodging Establishments, Small Motels and Bed & Breakfast Properties, Coos County, 2006**

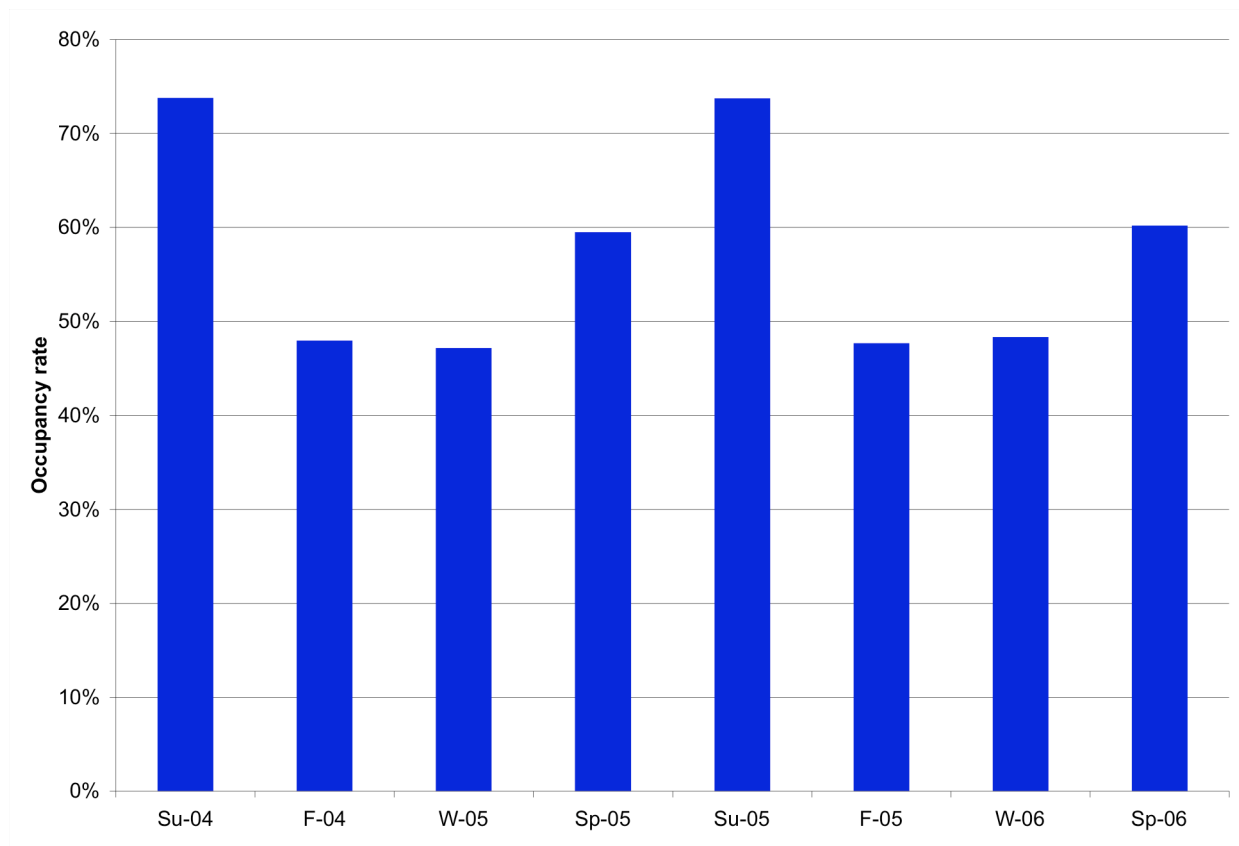
<b>Overnight Lodging Establishments</b>	<b>City</b>	<b>Rooms</b>
<u>Bed &amp; breakfast properties</u>		
Bandon Ocean	Bandon	6
Dunshee House	Bandon	1
Lighthouse B&B	Bandon	5
Nigh on the River	Bandon	3
Blackberry Inn	Coos Bay	3
Coos Bay Manor	Coos Bay	4
The Old Towner House	Coos Bay	4
This Olde House	Coos Bay	4
<b>Subtotal of bed &amp; breakfast properties</b>		<b>30</b>
<u>Small motels and other</u>		
Bandon Wayside Motel	Bandon	10
Caprice Motel	Bandon	15
La Kris Motel	Bandon	12
Lamplighter Motel	Bandon	16
Sea Star Guesthouse	Bandon	4
Charleston Harbor Inn	Coos Bay	3
Plainview Motel	Coos Bay	9
Sea Psalm Motel	Coos Bay	8
Southside Motel	Coos Bay	11
Bay Bridge Motel	North Bend	16
City Center Motel	North Bend	18
Itty Bitty Inn	North Bend	5
<b>Subtotal of small &amp; other properties</b>		<b>155</b>
<b>Grand Total</b>		<b>1,529</b>

Source: ECONorthwest with data from Smith Travel Research.

## Room Rates

Figure 2 shows the average daily room rate for the surveyed lodging establishments, which is calculated seasonally, for winter (January-March), spring (April-June), summer (July-September), and fall (October-December). Figure 2 shows that like occupancy, room rates in Coos County are seasonal. On average, lodging establishments charge about \$70 per room during the summer, and only \$58 per room during the fall and winter. Room rates have increased between 2000 and 2006; the largest change occurred in spring room rates, which increased by 19 percent. Rates also increased in the winter (16 percent), summer (13 percent), and fall (13 percent).

**Figure 1. Occupancy Rate for Surveyed Lodging Establishments, Coos County, 2000-2006**



Source: ECONorthwest with data from Smith Travel Research.

Note: The occupancy rate is the demand (total number of room nights sold) as a percent of supply (total number of rooms available for rent times the number of days in the month).

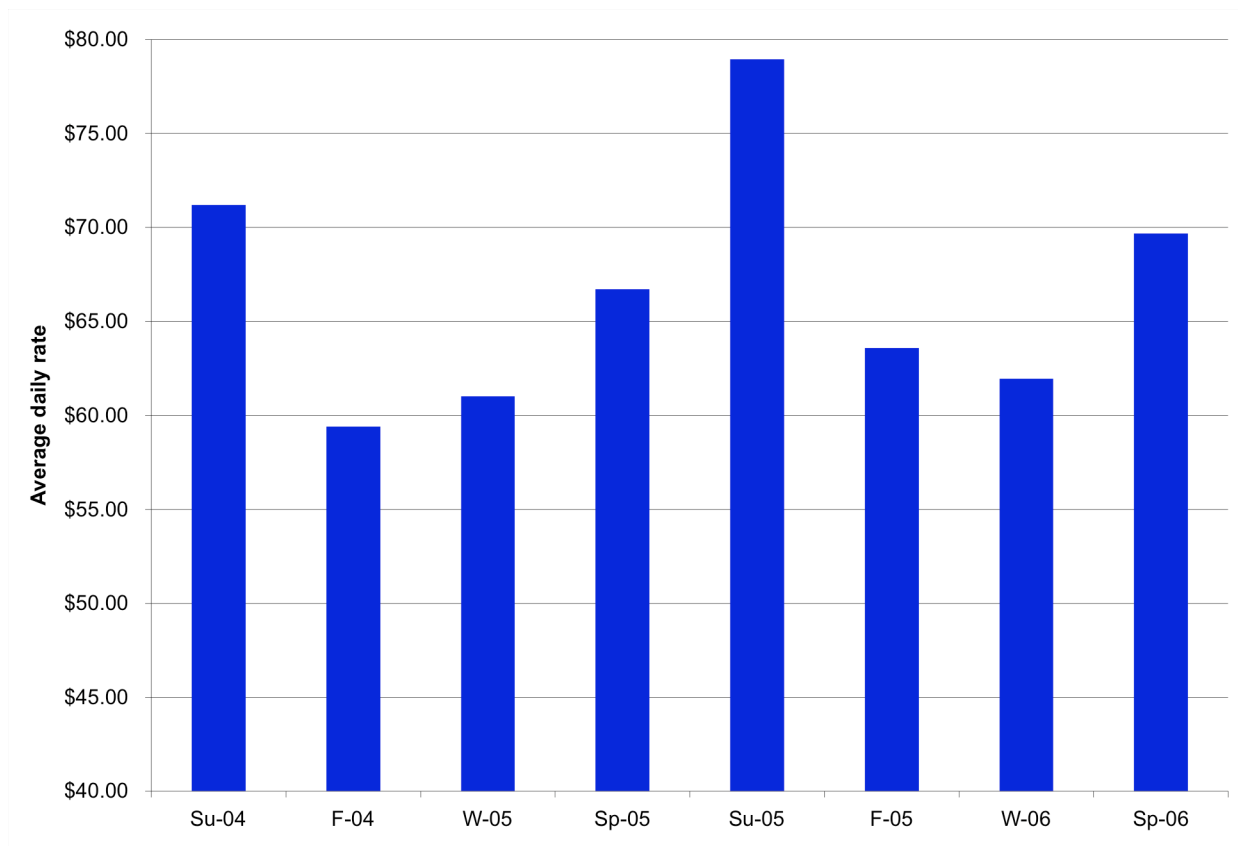
### Upscale Lodging

Because of this extreme seasonality, it has been generally impractical for lodging establishments to spend heavily on capital improvements as the costs of such expenditures would be shouldered mainly by summer customers rather than be spread out over many more guest nights throughout the year.

The lack of incentive to spend money on capital improvements also means that there are very few upscale establishments. Two of the largest hotels in the county, the Mill Casino and the Bandon Dunes resort, have circumvented this trend.

- The Mill Casino attracts year-round customers to its casino, and the hotel has benefited from this traffic. In addition, casino revenue helped subsidize some of the more upscale hotel elements. The Mill Casino in North Bend has a 112 room hotel, which it is currently expanding to 200 rooms by 2007, making it the largest hotel in the county. The Mill Casino recently added a 102-site waterfront RV park this year.

**Figure 2. Average Daily Room Rate for Surveyed Lodging Establishments, Coos County, 2000-2006**



Source: ECONorthwest with data from Smith Travel Research.

Note: The average daily rate is the revenue divided by the number of rooms sold over a time period.

- Bandon Dunes Golf Resort also was able to incorporate upscale elements into its hotel because it attracts affluent golfers who visit the associated nationally recognized, first-class golf course adjacent to the hotel. Like most other lodging establishments in the area, Bandon Dunes has a long off-season in the winter.

## RV Parks

Table 3 shows a list of all of the recreational vehicle (RV) parks in Coos County.

As shown in Table 3 there will be 1,676 RV spaces and nearly 600,000 space nights. The occupancy rate for RV parks is typically 45 to 50 percent on a year-round basis.

**Table 3. Space Nights in RV Parks in Coos County**

Type, Name of RV Park, and Season if Not Full Year	Place	Spaces	Space Night Supply in 2008
<b>Private Parks:</b>			
Bandon by the Sea	Bandon	43	15,738
Bandon Loop	Bandon	21	7,686
Bandon RV Park	Bandon	46	16,836
Robbins Nest RV Park	Bandon	50	18,300
Charleston Marina RV Park	Charleston	108	39,528
Oceanside RV Park	Charleston	70	25,620
Plainview RV Park	Charleston	46	16,836
Alder Acres RV Park	Coos Bay	38	13,908
Arbe's RV Park	Coos Bay	15	5,490
Kelley's RV Park	Coos Bay	38	13,908
Lucky Logger	Coos Bay	78	28,548
Midway RV Park	Coos Bay	45	16,470
North Lake Resort (8 Mo. Season)	Lakeside	110	26,840
Osprey Point RV Resort	Lakeside	132	48,312
Oregon Dunes KOA	North Bend	63	23,058
The Firs RV Park	North Bend	88	32,208
The Mill Casino	North Bend	102	37,332
<b>Publicly Owned Parks:</b>			
Bullards Beach State Park	Bandon	185	67,710
Sunset Bay State Park	Coos Bay	63	23,058
Umpqua Lighthouse State Park	Coos Bay	20	7,320
William M. Tugman State Park	Coos Bay	102	37,332
Bastendorff Beach County Park	Coquille	56	20,496
La Verne	Coquille	46	16,836
West La Verne	Coquille	22	8,052
Sixes River	North Bend	19	6,954
Powers County Park	Powers	70	25,620
<b>Total RV space nights</b>		<b>1,676</b>	<b>599,996</b>

Source: ECONorthwest.

### Summary of Lodging

Together, these data show that lodging in Coos County mostly consists of smaller establishments that are dependent on spring break and summer customers. Upscale establishments are rare and usually connected to more upscale tourist attractions. Room demand and rates are more dependent on summer and spring break vacation business than on the state as a whole because the county lacks business and commercial customers.

## Tourism-Related Spending, Jobs, and Tax Revenue

### Tourism-Related Spending

Table 4 shows visitor spending at travel destinations in Coos County and the entire Oregon Coast from 1991 to 2004. Visitor spending in Coos County consistently makes up about 12% of visitor spending on the entire Oregon Coast. The amount spent per year by visitors is increasing in both places, though it is increasing slightly faster in Coos County (6.4% annually) than on the Coast as a whole (5.2% annually). Tourism-related spending in Coos County in 2002, \$149.2 million, represents about 27 percent of total retail sales in the county that year.<sup>1</sup>

**Table 4. Visitor Spending at Travel Destinations in Millions of Dollars, Coos County and Oregon Coast, 1991-2004**

	Coos County	Oregon Coast	Coos County as a percent of Coast
1991	\$73.0	\$687.7	11%
1999	124.0	1,069.0	12%
2000	135.6	1,163.7	12%
2001	144.6	1,237.7	12%
2002	149.2	1,265.5	12%
2003	158.1	1,273.1	12%
2004	164.5	1,327.1	12%
<b>AAGR 1991-2004</b>	<b>6.4%</b>	<b>5.2%</b>	<b>-</b>

Source: ECONorthwest with data from Dean Runyan Associates. 2006. *Oregon Travel Impacts, 1991-2005P: Statewide Preliminary Estimates and Detailed County Estimates*.

Table 5 shows the economic output generated by travel spending in both Coos County and the Oregon Coast, expressed in millions of dollars, from 1991 to 2004. Total economic output increased in both Coos County (7 percent annual growth) and the Oregon Coast as a whole (5 percent annual growth). The area that increased most quickly between 1991 and 2004 in Coos County was arts, entertainment and recreation (11 percent annual growth); for the Oregon Coast as a whole, the fastest-growing area was auto rental and other ground transportation (10 percent annual growth). Output from arts, entertainment, and recreation accounted for a larger share of the Oregon Coast total, increasing from 8% of that activity on the Oregon Coast in 1991 to 15 percent by 2004. This increase can be attributed, in part, to the opening of the Mill Casino-Hotel in North Bend in 1995. Travel-related economic output from Coos County, however, represents only 12 percent of the total economic output generated by travel spending on the Oregon Coast.

<sup>1</sup> Total retail sales from U.S. Census Bureau. 2006. "Coos County, Oregon." *State & County Quick Facts*. <http://quickfacts.census.gov/qfd/states/41/41011.html> (accessed November 7, 2006).

**Table 5. Economic Output Generated by Travel Spending, in Millions of Dollars, Coos County and Oregon Coast, 1991-2004**

		Accommodations & Food Service	Arts, Entertainment, & Recreation	Retail*	Auto Rental & Other Ground Transportation	Air Transportation (Visitor Only)	Other Travel**	Total Direct Earnings
Coos County	1991	12.9	2.5	3.0	0.1	0.1	0.3	18.9
	2004	27.8	9.7	5.3	0.3	0.2	0.5	43.7
	AAGR 91-04	6%	11%	4%	9%	5%	4%	7%
Oregon Coast	1991	138.2	29.5	27.9	0.3	0.1	1.5	197.5
	2004	256.2	63.0	51.8	1.0	0.2	1.9	374.2
	AAGR 91-04	5%	6%	5%	10%	5%	2%	5%
Coos County as a percent of Coast	1991	9%	8%	11%	33%	100%	20%	10%
	2004	11%	15%	10%	30%	100%	26%	12%

Source: Source: ECONorthwest with data from Dean Runyan Associates. 2006. *Oregon Travel Impacts, 1991-2005P: Statewide Preliminary Estimates and Detailed County Estimates*. AAGR = average annual growth rate for the indicated period.

Notes: \*Retail expenditures include gasoline.

\*\*"Other Travel" expenditures include resident air travel and travel agency services.

Table 6 shows visitor spending by type of accommodation in Coos County and on the Oregon Coast in 2004, expressed in millions of dollars. Visitors to Coos County spend a slightly higher percentage on campground accommodations, both private and public, than do visitors on the coast overall. Visitors to Coos County also spend a slightly lower percentage on day trips than do visitors to the coast.

**Table 6. Visitor Spending by Type of Travel Accommodations in Millions of Dollars, Coos County and Oregon Coast, 2004**

	Coos County	Percent	Oregon Coast	Percent
Hotel, Motel	62.9	38%	488.0	37%
Private Campground	18.2	11%	95.8	7%
Public Campground	14.0	9%	97.1	7%
Private Home	7.3	4%	32.5	2%
Vacation Home	4.8	3%	94.2	7%
Day Travel	57.4	35%	519.5	39%
<b>Spending at Destination</b>	<b>164.5</b>	<b>100%</b>	<b>1,327.1</b>	<b>100%</b>

Source: ECONorthwest with data from Dean Runyan Associates. 2006. *Oregon Travel Impacts, 1991-2005P: Statewide Preliminary Estimates and Detailed County Estimates.*

Table 7 shows visitor spending by commodity in Coos County and Oregon in 2004, expressed in millions of dollars. Coos County visitors spend a larger share of money on arts, entertainment and recreation, as well as ground transportation, than do visitors to the Oregon Coast, which can partially be attributed to the Mill Casino-Hotel and Bandon Dunes Resort. Visitors to Coos County spend a smaller share of money on retail sales, accommodations, and food stores than all visitors to the Oregon Coast.

**Table 7. Visitor Spending by Commodity Purchased in Millions of Dollars, Coos County and Oregon Coast, 2004**

	Coos County	Percent	Oregon Coast	Percent
Accommodations	27.8	17%	255.7	19%
Food & Beverage Services	43.9	27%	368.5	28%
Food Stores	15.8	10%	155.7	12%
Ground Tran. & Motor Fuel	13.3	8%	48.7	4%
Arts, Entertainment & Recreation	37.3	23%	226.5	17%
Retail Sales	25.5	16%	271.0	20%
Air Transportation (visitor only)	1.0	1%	1.0	0%
<b>Spending at Destination</b>	<b>164.5</b>	<b>100%</b>	<b>1,327.1</b>	<b>100%</b>

Source: ECONorthwest with data from Dean Runyan Associates. 2006. *Oregon Travel Impacts, 1991-2005P: Statewide Preliminary Estimates and Detailed County Estimates.*

## Tourism-Related Jobs

Table 8 shows the estimated number of jobs generated by travel spending in Coos County and Oregon between 1991 and 2004. Coos County increased its share of jobs provided by travel spending from 12% of all jobs generated by travel spending on the Oregon Coast in 1991 to 14% in 2004. Growth of jobs generated by travel spending has averaged 2.9% annually for Coos County, and 1.8% annually for the Oregon Coast. The 2,890 tourism-related jobs in Coos County in 2003 represent about 15 percent of the county's total, non-farm employment.<sup>2</sup>

**Table 8. Industry Employment Generated by Travel Spending, Coos County and Oregon Coast, 1991-2004**

	Coos County	Oregon Coast	Coos County as a Percent of the Coast
1991	1,950	16,200	12%
1999	2,550	18,500	14%
2000	2,590	19,300	13%
2001	2,840	20,400	14%
2002	2,800	20,500	14%
2003	2,890	20,300	14%
2004	2,830	20,500	14%
<b>AAGR 91-04</b>	<b>2.9%</b>	<b>1.8%</b>	

Source: Source: ECONorthwest with data from Dean Runyan Associates. 2006. *Oregon Travel Impacts, 1991-2005P: Statewide Preliminary Estimates and Detailed County Estimates*.

## Tourism-Related Tax Revenues

Table 9 shows the tax receipts generated by travel spending in Coos County and the Oregon Coast between 1991 and 2004 expressed in millions of dollars. In 2004, travel spending generated \$1 million in local taxes and \$3.7 million in state taxes for Coos County. Coos County's 2004 local tax receipts only make up 7% of the total Oregon Coast local tax receipts (although Coos County receives 12% of visitor spending, as shown in Table 5); however, Coos County receives 14% of the Coast's state tax receipts. Both local and state tax receipts have increased between 1991 and 2004 for Coos County and the Coast as a whole.

<sup>2</sup> Total employment from U.S. Census Bureau. 2006. "Coos County, Oregon." *State & County Quick Facts*. <http://quickfacts.census.gov/qfd/states/41/41011.html> (accessed November 7, 2006).

**Table 9. Tax Receipts Generated by Travel Spending in Millions of Dollars, Coos County and Oregon Coast, 1991-2004**

		Local Tax Receipts	State Tax Receipts	Total Direct Tax Receipts
Coos County	1991	0.4	1.7	2.2
	2004	1.0	3.7	4.7
	AAGR 91-04	7.3%	6.2%	6.0%
Oregon Coast	1991	5.9	12.9	18.7
	2004	13.5	25.6	39.1
	AAGR 91-04	6.6%	5.4%	5.8%
Coos as a percent of Coast	1991	7%	13%	12%
	2004	7%	14%	12%

Source: ECONorthwest with data from Dean Runyan Associates. 2006. *Oregon Travel Impacts, 1991-2005P: Statewide Preliminary Estimates and Detailed County Estimates*.

Table 10 shows the local lodging tax receipts by jurisdiction for Coos County from fiscal year 1995-2005. In 2005, Coos Bay received the greatest share of lodging tax receipts (43%), followed by Bandon (34%) and North Bend (20%).

**Table 10. Local Lodging Tax Receipts by Jurisdiction in Thousands of Dollars, Coos County, Fiscal Year 1995-2005**

Year	Bandon	Coos Bay	Lakeside	North Bend
1995	227.4	358.8	8.6	52.1
1996	231.7	382.9	8.4	54.9
1997	227.2	384.1	11.0	52.1
1998	237.9	278.5	22.3	47.2
1999	256.7	405.2	24.1	55.5
2000	302.7	412.3	22.2	60.6
2001	320.7	379.0	23.1	152.2
2002	341.3	380.0	26.5	185.4
2003	361.4	415.3	28.4	196.2
2004	367.3	430.3	35.4	202.4
2005	375.4	467.6	35.6	215.0
Percent of Total 2005	34%	43%	3%	20%
Current Rate	6.0%	7.0%	7.5%	7.0%

Source: ECONorthwest with data from Dean Runyan Associates. 2006. *Oregon Travel Impacts, 1991-2005P: Statewide Preliminary Estimates and Detailed County Estimates*.

## Summary of Tourism-Related Spending, Jobs, and Tax Revenue

Tourism generated retail sales of \$164.5 million (27 percent of the county's total), and 2,830 jobs (15 percent of the county's total) in 2004. Lodging-tax receipts the same year totaled \$10.4 million, of which \$430,300 (42 percent) occurred in the City of Coos Bay, and 20 percent occurred in the City of North Bend.

### B. Current Recreation-Related Activities in Coos Bay and Adjacent Areas

Below we describe recreational boating in Coos Bay, terrestrial recreation on the bay's North Spit, other boating activities in Coos Bay, and deep-draft-vessel traffic in the bay.

#### Recreational Boating

A 2005 study found that, for all of Coos Bay, recreational boaters engaged in 36,547 use-days of boating activity (a use-day indicates one person engaging in the activity for part or all of one day) associated with 30,996 boat trips.<sup>3</sup> Nearly 90 percent of the use-days involved fishing, almost 9 percent involved pleasure-cruising, and a small number involved sailing and water skiing. The portion of these activities that occurred in the lower bay, between the site of the proposed LNG terminal and the mouth of the bay is not known. Most of them originated in this area, however: about 40 percent of all boating activities in Coos Bay originated at the Charleston Boast Basin; 20 percent at the Empire ramp; and an unspecified number at other ramps in the vicinity. During the year, boaters took 8,954 boat trips from Coos Bay into the ocean to engage in 6,196 use-days of activity. All involved fishing. The study's authors do not report the temporal distribution of the recreational boating activities, but most activity occurs in summer months when the weather is good and on weekends.<sup>4</sup>

#### Terrestrial Recreation

Additional recreational activities occur on the North Spit of Coos Bay, a strip of land between the Pacific Ocean and the bay. These include watching commercial vessels pass through the navigation channel, off-highway vehicle use, day hiking and beach-combing, bay-shore clamming and crabbing, surf fishing, picnicking, and wildlife-viewing.<sup>5</sup> The overall activity level is low relative to most other portions of the Oregon coast; a 2002 study found the 14.5-mile area from Coos Bay north to Tenmile Creek had, on average, 4 persons

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<sup>3</sup> The data in this paragraph come from Oregon State Marine Board and Oregon State University, Survey Research Center. 2005. *Boating in Oregon: Triennial Survey Results – 2005*. November.

<sup>4</sup> Charlie Yates, Coos Bay Bar Pilot. Personal communication.

<sup>5</sup> U.S. Bureau of Land Management. "North Spit." *Recreation.gov*. <http://www.recreation.gov/detail.cfm?ID=1730>. (accessed November 2, 2006); Carlson, C. and R.W. Fujimoto. 2002. *New Carissa Recreational Loss Pre-Assessment Report*. October. Damage National Oceanic and Atmospheric Administration, Assessment and Restoration Program. <http://www.fws.gov/oregonfwo/NewCarissa-DARP/Appendix%204%20%20Trustee%20Studies/Final%20Recreation%20Report/edited%20carlson%20report%20pt%201.pdf> (accessed November 2, 2006).

per mile on weekend day, and 3 persons per mile on weekdays.<sup>6</sup> Activities typically are prohibited on private, industrial lands and restricted on public lands, at some times of the year, to protect habitat for endangered species. Table 11 shows the number of vehicles that entered a parking area and the number of people who used the restroom facilities associated with a boat-ramp area maintained by the Bureau of Land Management (BLM) in 1998. The total number of recreational visitors to the North Spit is larger than this, insofar as some never enter the area, but the extent to which the total is larger than the numbers shown is not known.

**Table 11. Number of Visitors to North Spit Facilities Maintained by the Bureau of Land Management**

1998	January	February	March	April	May	June	July	August	September	October
People	700	900	1,000	1,575	930	1,200	2,790	897	903	565
Vehicles	659	845	1,066	913	803	942	935	1,130	1,421	1,786

Source: Carlson, C. and R.W. Fujimoto. 2002. *New Carissa Recreational Loss Pre-Assessment Report*. October. Damage National Oceanic and Atmospheric Administration, Assessment and Restoration Program. <http://www.fws.gov/oregonfwo/NewCarissa-DARP/Appendix%204%20%20Trustee%20Studies/Final%20Recreation%20Report/edited%20carlson%20report%20pt%201.pdf> (accessed November 2, 2006).

Table 12 shows estimates of the economic value of different recreational activities. Specifically, the table shows estimates of the average consumer’s surplus per person per day for each activity. Consumer’s surplus measures the value of the benefit an individual derives from the activity, net of the costs he or she incurs to participate in it.

**Table 12. Economic Value of Common Recreational Activities in the Coos Bay Area (Average Consumer’s Surplus per Person per Day, 1999 dollars)**

Activity	Value
Off-Highway Vehicle Use	\$15.60 – \$22.31
Camping	\$13.39 – \$28.54
Day Hiking	\$18.24
Picnicking	\$25.36
Fishing	\$10 – \$100
General Beach Activities	\$14.39

Source: Carlson, C. and R.W. Fujimoto. 2002. *New Carissa Recreational Loss Pre-Assessment Report*. October. Damage National Oceanic and Atmospheric Administration, Assessment and Restoration Program. <http://www.fws.gov/oregonfwo/NewCarissa-DARP/Appendix%204%20%20Trustee%20Studies/Final%20Recreation%20Report/edited%20carlson%20report%20pt%201.pdf> (accessed November 2, 2006).

### Other Boating Activities in Coos Bay

Fewer than 100 commercial fishing boats operate out of Charleston Boat Basin, near the mouth of Coos Bay. Commercial fishing activity typically revolves around the pursuit of crab (December–February), salmon (June–October), and albacore (July–September). Recent

<sup>6</sup> Shelby, B. and J. Tokarczyk. 2002. *Oregon Shore Recreational Use Study*. Oregon Parks and Recreation Department.

years, though, have seen disruptions and curtailments, as fishery managers have acted to protect threatened and endangered species. Commercial shell fishing does not occur in the portion of Coos Bay through which LNG vessels would pass because the water in this area contains discharge from the wastewater-treatment plants for the City of Coos Bay and the City of North Bend.<sup>7</sup>

About 100 barges pass through the Coos Bay navigation channel each year, carrying wood, petroleum, and other products.

Commercial fishing boats and barges, like recreational boats, are shallow-draft vessels that, if necessary, can maneuver out of the navigation channel to avoid deep-draft vessels.

### Deep-Draft-Vessel Traffic

Table 13 shows the annual number of calls at the Port of Coos Bay by deep-draft vessels since 1986. The number has declined from more than 300 calls per year in the late 1980s to about 200 ten years ago, to about 50 today. Port authorities expect that traffic, other than LNG vessels, will remain at this level for the foreseeable future.

Deep-draft vessels enter and exit the port under the control of a Coos Bay Bar Pilot. The port’s navigation channel is so narrow it provides only a single lane for deep-draft vessels, and it cannot simultaneously accommodate traffic into and out of the port. When a deep-draft vessel passes through the channel other boats in the channel are required to take early action to move out of the way to allow sufficient room for the vessel’s safe passage, and boats out of the channel must defer entering the channel until the vessel has passed.<sup>8</sup>

**Table 13. Deep-Draft-Vessel Calls at Coos Bay**

Year	Calls	Year	Calls
1986	277	1996	218
1987	288	1997	178
1988	310	1998	119
1989	309	1999	90
1990	277	2000	81
1991	276	2001	65
1992	235	2002	65
1993	253	2003	55
1994	171	2004	48
1995	238	2005	47

Source: Oregon International Port of Coos Bay.

<sup>7</sup> Martin Callery, Oregon International Port of Coos Bay. 2006. Personal communication. October 19.

<sup>8</sup> U.S. Coast Guard. No date. “Rule 9: Narrow Channels.” *Navigation Rules: International – Inland*. [http://www.navcen.uscg.gov/mwv/navrules/rotr\\_online.htm](http://www.navcen.uscg.gov/mwv/navrules/rotr_online.htm) (accessed October 23, 2006).

### Potential Impact on Tourism

We found no information indicating that the project would have a negative impact on overall tourism in the county. The project might have a slight positive impact on tourism, insofar as it would attract workers to the area and they, in turn, would induce visits to the area by family members and friends. In addition, the area's lodging establishments probably would experience additional demand for rooms from project-induced commercial and business travelers.

### Potential Impact on Recreational and Other Boating

JCEP anticipates vessels delivering the gas will call at the facility about 80 times per year, entering or exiting Coos Bay at or near slack high tide during daylight hours. The bar pilots who direct the movement of deep-draft vessels into and out of port anticipate that the impacts of LNG vessels on fishing and other boats would closely resemble those of the other deep-draft vessels that call on Coos Bay to collect wood chips.<sup>9</sup> The actual impacts will depend, in part, on the dimensions of the safety/security zone surrounding each LNG ship, within which traffic other than escort boats will be excluded. JCEP anticipates that the Coast Guard will define these dimensions in 2007, and that this zone will be similar to those associated with other vessels carrying sensitive cargoes, such as naval vessels and cruise ships, and will require that, as each LNG vessel enters or exists Coos Bay, it will be surrounded by a safety/security zone that excludes all other vessels, including commercial fishing boats, recreational fishing boats, and other recreational water users. The safety/security zone will extend ahead, to the sides, and behind the LNG vessel, and may be enforced by armed escort boats.

In general, as deep-draft vessels move in the navigation channel, boats in or near the channel get out of the way and others defer entering the channel until the vessels have passed. The bar pilots anticipate similar interactions would occur as LNG vessels move in the navigation channel, but more smoothly and with greater certainty, insofar as escort boats accompanying the LNG vessels would be on the scene to ensure that boats move out of the way in a timely manner.<sup>10</sup> They also would be available to assist boats that might be experiencing mechanical or other difficulties in moving out of the way.

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<sup>9</sup> This discussion generally reflects a personal communication on October 25, 2006, with Charlie Yates, one of two members of the Coos Bay Pilots Association.

<sup>10</sup> The escort boats may require boats to come to a complete halt as an LNG vessel passes, whereas, when another deep-draft vessel passes through the channel, boats can continue moving as long as they are not impeding the vessel's passage. Moffatt & Nichol International. No date. *Jordan Cove LNG Terminal Coos Bay, Oregon: Traffic Study*.

As they guide cargo vessels into and out of the port, the bar pilots currently encounter about 6 recreational boats and 2 commercial fishing boats per transit, on average. The numbers are typically lower in winter and on weekdays than during the summer and on weekends. They do not anticipate that the numbers would be significantly different as they move LNG vessels. The bar pilots anticipate they will guide the LNG vessels through the navigation channel only at slack high tide, during daylight hours. They would not enter the channel under severe weather conditions or if vessel traffic in the channel were heavy enough for the pilot to conclude there is a significant probability that the traffic would not be safely cleared from the vessel's path. Under these circumstances, the pilot would wait for the next appropriate slack high tide.

The pilots anticipate the transit between the offshore buoy and the turning basin at JCEP's LNG facility on the north shore of Coos Bay would take about one hour, on average, and probably no less than 45 and no more than 75 minutes. The impact on boats at any point in the channel would last about 20-30 minutes, the same as with other deep-draft vessels. In other words, the pilots anticipate that, if a pleasure craft were in or near the channel, it would move out of the way as the vessel approached and be able to return to its previous location about 20 minutes later. The impact on commercial fishing boats and others boats not in the channel should be similar: passage of an LNG vessel would cause boats in Charleston harbor to wait about 20 minutes before they could enter the channel.<sup>11</sup>

The current interaction between deep-draft vessels and other boating activity in the harbor occurs smoothly, as it did when the number of cargo vessels calling at Coos Bay was larger than the anticipated sum of cargo and LNG vessels. The Coast Guard and Oregon State Marine Board probably will continue to remind boaters of their obligation not to impede the deep-draft vessels and boaters probably will routinely accommodate the passage of deep-draft vessels—whether they carry LNG or wood chips—without incident. Non-routine events may occasionally occur, if a pleasure boater were to move out of an LNG vessel's way more slowly than expected, for example, or if a commercial or recreational boat in the ocean, seeking to escape rough weather, were to follow an LNG vessel into the harbor more closely than usual. Such interactions between deep-draft vessels and boats occur rarely. Delay entering the channel involves only the requirement that boats must maintain some distance as they follow any deep-draft vessel into and through the navigation channel. Although the Coast Guard has yet to define the safety/security zone that would surround LNG vessels at Coos Bay, the zones it has defined for other vessels indicate the delay would be less than 10 minutes: if a boat had to maintain a distance of one mile behind a vessel moving at 8 knots, for example, the delay would be about 7 minutes. JCEP anticipates that LNG vessels would not attempt to enter the bay during rough oceans conditions, diminishing the potential for impeding recreational and commercial fishing boats seeking to enter the bay.

The likelihood of collisions and other incidents may be less with LNG vessels than with those calling at Coos Bay for wood chips, insofar as the boats escorting each LNG vessel would be available to help boats get out of the vessel's way. Future levels of boating traffic in Coos Bay that may interact with LNG vessels will depend on several factors, including

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<sup>11</sup> These conclusions are supported by a study that simulated the potential interactions between LNG vessels and other traffic. Moffatt & Nichol International. No date. *Jordan Cove LNG Terminal Coos Bay, Oregon: Traffic Study*. and *Jordan Cove LNG Terminal Coos Bay, Oregon LNG Carrier Maneuvering Simulations*.

population growth locally and in the region, economic growth, and populations of salmon and other fish. The area has experienced slow growth for several years, however, and declines in salmon populations have shortened fishing seasons, indicating that boating traffic is likely to remain stable, decline, or grow slowly. For the foreseeable future, LNG vessels are likely to encounter roughly the same number of boats as those currently encountered by deep-draft vessels coming to Coos Bay for wood chips.

## Potential Impact on Terrestrial Recreation

The project should have no effect on recreational activities at the proposed project site in the north side of Coos Bay, insofar as the site currently is zoned for industrial use and recreational activities are not allowed. The project may enhance recreational activities elsewhere around Coos Bay for those who enjoy watching the passage of deep-draft vessels through the navigation channel. In concept, the project could cause a noticeable reduction in terrestrial recreation if it resulted in the closure of the Trans Pacific Parkway, the road at the northern edge of the project site that provides direct access to the bay's North Spit. JCEP, however, has received no notice from a public-safety agency indicating that the transit of LNG vessels would trigger the road's closure. Even if the road were closed, recreationists would have access to the area but by a more indirect route, via Horsefall Beach Road, a short distance to the north, and recreationists probably would use this alternative route to reach their destination or shift their recreational activities to another nearby location rather than abandon them.

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