Fiscal and Economic Impacts of Destination Resorts in Oregon



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Introduction

The recent proliferation of destination resorts, and the number of new resorts currently being proposed in Oregon, raises concerns about the potential impacts of these resort on local communities, cities and counties. Based on a literature review performed as part of the research for this study, there are no independent, thirdparty studies evaluating destination resort impacts. The only readily-available sources of information are the resort developers' own studies prepared as part of the land-use application materials.

This report represents the best effort to date to assess the impact of destination resorts in Oregon. It is a complex task and there are an almost unlimited number of potential impact areas that could be studied. To establish a manageable scope of work within the project budget, the focus of this study is on the fiscal impacts of resorts. Fiscal impacts are those that affect local governments and local taxpayers. They include both the tax revenues that will be generated and the costs to provide the services and infrastructure required to support the development. In addition to fiscal impacts, the economic impact of destination resorts was evaluated in terms of job creation and housing impacts.

This study does not address any of the environmental or social impacts associated with residential and recreational development of resorts in the State. Instead this study focuses on the monetary (fiscal and economic) impacts these destination resorts have on the local communities where they are being built.

In order to study resort impacts in detail, the proposed Thornburgh Resort in Deschutes County was used as a case study. The Thornburgh Resort is to be located near Redmond and just west of the existing Eagle Crest Resort. The Thornburgh Resort would be a medium-sized resort and was considered to be fairly typical of past and future resorts in the State.

This report is intended to be transparent. All sources of information are documented and all the calculations and methodologies are explicit. Where data were not available, reasonable assumptions were made. These assumptions are also clearly stated. In some cases, where good data were not available, alternative scenarios were used to examine a range of possible conditions.

I. Destination Resorts in Oregon

Destination resorts typically involve 500 to 3000 single-family homes and various recreational amenities, such as golf courses and clubhouses, in an attractive natural setting located away from existing cities and growth centers.

The term "destination resort" has a unique legal meaning in Oregon. Special status was given to "Destination Resorts" allowing them outside urban growth boundaries under Goal 8 (Recreational Needs) of the Land Use Planning Program.¹ This action appears to be based on the assumption that the tourism benefits would outweigh the costs associated with this form of rural development. In 1987, provisions for destination resorts were enacted into state law and codified in Oregon Revised Statutes (ORS) 197.435 through 197.467. According to ORS 197.440:

The Legislative Assembly finds that:

- (1) It is the policy of this state to promote Oregon as a vacation destination and to encourage tourism as a valuable segment of our state's economy;
- (2) There is a growing need to provide year-round destination resort accommodations to attract visitors and encourage them to stay longer. The establishment of destination resorts will provide jobs for Oregonians and contribute to the state's economic development;
- (3) It is a difficult and costly process to site and establish destination resorts in rural areas of this state; and
- (4) The siting of destination resort facilities is an issue of statewide concern.

The State Legislature attempted to enforce the tourism aspects of these developments by requiring a certain minimum amount of overnight accommodations and certain visitor-oriented facilities.² The intent was apparently that without such requirements, destination resorts would likely be little more than the classic, sprawling rural subdivisions that the Land Use Program was intended to prevent. However it is unclear that resorts are actually meeting their overnight accommodations requirements due to a lack of reporting and enforcement mechanisms.

In spite of State requirements, residential lots and private homes outnumber overnight accommodations by more than two to one. Residential lot sales represent the primary feature of existing and proposed destination resorts. Questions remain as to whether the destination resorts are essentially rural subdivisions that are increasingly having adverse impacts on cities, counties and the state that are not

¹ Goal 8: Recreational Needs (OAR 660-015-0000(8)).

² State Law requires that destination resorts permanently allocate one overnight housing unit for every two residential units in Western Oregon and two overnight units for every five residential units in Eastern Oregon (see ORS 197.445(4)).

adequately offset by tourism benefits. Our literature review found no studies examining these impacts in detail, other than those prepared by the individual resort developers themselves. So we are left with an inadequate understanding of the full impacts these development are having across the State.

The Growth of Destination Resorts

Destination resorts have proliferated rapidly in the State and will have increasingly significant impacts, both positive and negative. At this point, Oregon has eight existing resorts, most of which are historic or pre-Goal 8 resorts. Another seven are approved and under construction, and thirteen more have been proposed. Figure 1-1 shows these existing, approved and proposed resorts on a map of the State. Central Oregon shows the highest concentration of resorts in all stages of development. Southern Oregon and the Coast are also seeing resort development. Deschutes County has seen far more resort development than any other county, but Crook, Jefferson and Jackson counties are also seeing a high level of resort development.





Source: Toby Bayard

Table 1-1 provides a more-detailed summary of destination resorts that are completed, under construction, and proposed in the State. The land use and housing unit data from this table is illustrated graphically in Figures 1-2 and 1-3. It is evident that destination resorts are expanding rapidly. If the recently-approved and proposed resorts are built, Oregon's destination resort capacity will approximately triple.

The rapid growth in destination resorts raises a number of questions. Is there going to be a market demand for so much resort capacity? Will new resorts compete with established resorts and undermine their viability? And will the economies of Central Oregon and other popular resort locations become vulnerable in the event of a possible downturn or collapse of the resort market?

Table	1-1
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	0 1 00	. .	_		Overnight	
Existing Resorts	Goal 8?	County	Acres	Homesites	Units	Total Units
Bandon Dunes	Goal 2 exception	Coos	2,000	600	150	750
Eagle Crest	Yes	Deschutes	1,772	891	585	1,476
Sunriver/Crosswater	No	Deschutes	3,310	3,220	936	4,156
Black Butte	Pre-Goal	Deschutes	1,300	1,251	425	1,676
Inn of the Seventh Mt.	Pre-Goal	Deschutes	310	20	210	230
Running Y Ranch	Yes	Klamath	6,000	896	305	1,201
Otter Crest	Pre-Goal	Lincoln	35	144	130	274
Salishan	Pre-Goal	Lincoln	750	369	0	369
	Subtotal:		15,477	7,391	2,741	10,132
Under Construction						
Brasada Ranch	Yes	Crook	1,800	600	300	900
Hidden Canyon	Yes	Crook	3,250	2,450	1,225	3,675
Remington Ranch	Yes	Crook	2,079	800	400	1,200
Caldera Springs	Yes	Deschutes	390	320	160	480
Pronghorn	Yes	Deschutes	640	430	215	645
Tetherow	Yes	Deschutes	698	379	298	677
Paradise Ranch	Yes	Josephine	320	200	67	267
	Subtotal:		9,177	5,179	2,665	7,844
Proposed Resorts						
Crossing Trails	Yes	Crook	580	490	240	730
Pacific Rogue Ranch	No	Curry	592	500	150	650
Aspen Lakes	Yes	Deschutes	550	300	100	400
Skyline Forest	No	Deschutes	1,500	950	0	950
Thornburg	Yes	Deschutes	1,970	950	425	1,375
Heaven's Gate	Yes	Douglas	500	200	200	400
Hidden Valley Ranch ⁽²⁾	Yes	Jackson	883	TBD	TBD	TBD
Table Rock	Yes	Jackson	2,100	1,200	600	1,800
Ponderosa Land & Cattle	Yes	Jefferson	3,500	2,500	1,000	3,500
The Metolian ⁽²⁾	Yes	Jefferson	640	450	180	630
Crescent Creek Ranch	Yes	Klamath	5,000	1,965	785	2,750
Naples Golf & Beach	Yes	Lincoln	576	1,155	0	1,155
Elkhorn Estates	Yes	Marion	464	150	40	190
	Subtotal:		18,855	10,810	3,720	14,530
Totals:			43,509	23,380	9,126	32,506

Destination Resorts in Oregon, January 2009⁽¹⁾

(1) Data Compiled by Toby Bayard and COLW on 2/25/09
(2) Data on number of units not final at this time (TBD is to be determined).
(3) Dwelling units only. Hotel rooms were not included in the overnight units when information was available to separate them from dwelling units. Where data for the number of overnight units was not available, required State minimums were applied to Goal 8 resorts.

Figure 1-2



Figure 1-3



The Destination Resort Controversy

The booming growth in destination resorts has led to increasing concern about their impacts and more questions than answers. Do we need more destination resorts, or do we have too many already? Are these resorts beneficial to the local economy, or are they just generating profits for a few and low-wage jobs for the rest? Are local governments reaping giant tax windfalls, or are they incurring more costs than they can recover? Are resorts allowing more Oregonians to vacation in beautiful rural areas, or are they destroying the beauty of the landscape and rural character Oregonians currently enjoy? Are resorts well-planned developments that are carefully integrated with the natural environment, or are they just low-density rural sprawl and ecological disasters that threaten ground water and destroy habitat?

Regardless of the answers to these questions, opposition to new resorts has grown. For example, last year residents of conservative, rural Crook County voted 2 to 1 to halt the spread of resorts in that county. According to an editorial in *The Oregonian* newspaper,³

Crook County opponents have some justification in warning that these projects are essentially large subdivisions under the guise of destination resorts. They will, as critics complain, have a significant impact on the county's vehicle traffic, water supply and wildlife habitat.

Prineville boosters of the new resorts correctly point out that they contribute heavily through property taxes and create hundreds of jobs. But opponents are equally correct in noting that the influx of homes will inflate land values, putting unwelcome pressure on farmland and making housing unaffordable for workers who will fill all those low-paying new jobs.

Jobs for Whom?

In spite of high unemployment in Central Oregon, alarming information was reported in the *Bend Bulletin* last year that many of the local resorts were hiring from outside the U.S. to fill their jobs.⁴ According to the article, instead hiring locally, the Sunriver Resort actively recruited foreign workers at overseas job fairs, hiring 85 workers from countries such as Lithuania, Brazil and Mexico. Inn of the Seventh Mountain hired 11 workers from Jamaica and Indonesia. Other resorts may be doing the same. Even if some resorts are not hiring foreigners, studies show that many of the new jobs they create will go to newcomers rather than locals.⁵

³ "Putting the Brakes on Destination Resorts," editorial, *The Oregonian*, May 27, 2008.

⁴ "Unemployment might be high, but resorts still struggle to fill some jobs," *The Bulletin*, May 11, 2008.

⁵ See: Who Benefits from Local Job Growth, Migrants or the Original Residents, by Timothy J. Bartik, Regional Studies, vol. 27, No. 4, 1993.

Resort or Rural Subdivision?

It is increasingly clear that the primary incentive for building destination resorts is the traditional profit resulting from the real estate sales of residential lots. Developers rarely build more tourism accommodations than they are required to provide by law. The resort-oriented features appear to be little more than the vehicle by which the subdivision is allowed. Certainly the golf courses and resort amenities enhance the value of the residential lots, but developers recognize that the resort components are marginal, risky and often unprofitable investments.

Meeting the tourism-oriented overnight accommodation requirements of Goal 8 has been challenging for resort developers. Newer resorts are focused more on residential lot sales and less on tourism accommodations. There has been an increased use of smaller, lower-cost units, such as hotels and timeshares, to meet overnight lodging requirements.⁶

Resorts that are close to urban areas may end up functioning more like suburbs. The Eagle Crest Resort, for example, is less than six miles from downtown Redmond, making urban amenities and jobs just a 10-minute drive away. Some resorts may evolve into rural communities or towns of their own. The Hidden Canyon Resort for example, which will be located in Powell Butte (Crook County), will have a population roughly equal to that of the City of Madras, if it is fully developed. The proposed Ponderosa Resort could have a population three times that of the City of Sisters.

Effects of the National Recession

The dramatic expansion of the destination resort industry in Oregon has been fueled in part by a booming real estate market that seemed to have no end. Ten years of unprecedented growth peaked in 2007 and has declined rapidly since. The economic models for destinations resorts were based on assumptions of continued high land values, high real estate demand, and rapidly expanding tourism. However, the ongoing collapse of the inflated national real estate bubble and the ensuing economic downturn requires that these assumptions be revised.

In the past, the residential lots in a destination resort have been largely purchased by individuals as second homes and investment properties. The current economic recession will contract the market for second homes and will reduce the appeal of real estate investing. Unless the national economy has an unexpected, dramatic recovery, more and more potential homebuyers will be economically constrained. Potential tourists are likely to reduce travel and shun expensive vacations to save

⁶ See: *Destination Resort Siting*, a presentation by Bob Cortright, DLCD in Prineville, October 15, 2008, <u>http://www.oregon.gov/LCD/docs/rulemaking/101508/item4_att_D.pdf</u>.

money.⁷ A Central Oregon economic forecast shows tourism to be "extremely weak" and contracting through at least the end of 2010.⁸ Owners of second homes may find the cost of owning two homes to be too expensive. Under this scenario, it is likely that more of the lots created in destination resorts will be purchased for primary residences. We may see a similar shift in existing resorts, with more second homes and rental properties changing to primary residences. Resort developers may respond to the weak economy by downscaling homes to make them more affordable as primary residences.

Infrastructure Needs

The residential component of the destination resort functions much like any subdivision in a rural area. It is removed from the retail services and amenities people require. It is lacking adequate infrastructure and services required by an urban population. Greater travel distances are required for commuting and meeting daily needs. This generates demand for more roads with more capacity. When traffic growth is projected in Central Oregon, including destination resorts, the funding gap to bring the state highways to standards for traffic congestion is approximately \$750 million over the next 20 years.⁹

Resorts located close to cities and towns run the risk of becoming more residential, as residents have access to the nearby urban amenities homeowners desire. The proposed Thornburgh Resort is to be located approximately seven miles from Redmond. Such resorts may have the effect of attracting higher-end housing away from the cities, which undermines the cities' property tax base while increasing their effective populations and adding to demands for more roads and schools.

County and municipal governments will be severely squeezed for financial resources over the next few years as a result of:

- Decreasing property values that reduce property tax revenues;
- A weak economic outlook that may reduce other sources of income;
- Government costs increasing at rates exceeding Measure 47 and 50 limits on property tax increases of 3%; and,
- Decreasing Federal payments to counties in lieu of timber revenues.

Will the new destination resorts be a golden goose, or the straw that breaks the camel's back? Fiscal impact analysis can provide the answer.

⁷ Early reports indicate that major tourism destinations such as Las Vegas are seeing significantly lower tourism resulting from the recession. Gaming revenues there are down 25.8%, room rates have declined 14.3 %, and many construction projects have been canceled or scaled back, according to the Los Angeles Times (published in The Register-Guard Newspaper, 12/26/08).

⁸ Presentation: United States and Central Oregon Economic Review and Forecast, by Dr. Bill Watkins, Executive Director, UCSB Economic Forecast Project, January 2009, <u>http://www.ucsb-efp.com/PPT/2009/OR Watkins.ppt</u>.

⁹ Source: Gary Farnsworth (ODOT), Meeting Minutes for Central Oregon Area Commission on Transportation, COACT, September 13, 2007, page 3.

2. The Thornburgh Resort Case Study

In order to examine the impacts of destination resorts in detail, a typical resort was selected for in-depth analysis. The proposed Thornburgh Resort has a similar profile to most of the resorts in Oregon. It is typical in terms of its size and mix of development. It is to be located in Deschutes County, home to more destination resorts than any other county in the State. Due to its pending application, extensive current materials are available on the planned resort.

As shown in Table 2-1, the proposed Thornburgh Resort is to have 950 residential ownership units and 425 overnight units, for a total of 1,375 residential units. The application proposes a 50-room hotel with restaurant, three golf courses, recreational facilities, and retail space.

Metric	Peterson Economic Report (1/2005)	Land Use Application (2/2005)	Used in Impact Study
Total acres	1,980	1,970	1,970
Acres open space (incl. Golf)	No info	1,293	1,281 ⁽¹⁾
Residential ownership units	1,400	950	950
Residential overnight units	Unclear	425	425
Hotel rooms	100	50	50
Golf courses (regulation 18-hole)	3	3	3
Golf courses – par 3	1	0	0
Other facilities:			
Retail space		20,000 ft2	20,000 ft2
Real Estate Sales office		15,000 ft2	15,000 ft2
 Hotel and restaurant 		75,000 ft2	75,000 ft2
Recreational		60,000 ft2	60,000 ft2
 Convention facility, 		Unspecified size	Assumed part
business center			of hotel/rest.
Water system		6 new wells, 2	6 new wells, 2
		reservoirs	reservoirs
Sewer system		2 drain fields	2 drain fields

Table 2-1: Thornburgh Resort Profile for Impact Analysis

(1) From Final Master Plan.

Since the Thornburgh Resort is unbuilt, certain types of data were not available. For example, the ultimate occupancy rates and vehicle trip generation rates were unavailable. To reflect the most likely scenario for the Thornburgh Resort at full buildout, data was used from the nearby Eagle Crest Resort. Eagle Crest appears to have a similar profile in terms of the mix of uses and relative price ranges for lots and homes.

3. Thornburgh Fiscal Impact Analysis

Fiscal impact analysis generally refers to the evaluation of the financial and budgetary effects of alternative land uses or public policies on local governmental jurisdictions or other local service providers. These may include cities, counties, school districts, special-purpose districts, water and wastewater service districts, and regional authorities. Sometimes state governments are also impacted.

While the focus of fiscal impact analysis is on government revenues and costs, the broader public policy question is: How will this action or decision affect local taxpayers and the general public? Answers to this broader question allow elected officials to determine how the proposed action will affect local tax rates or the quality of local services. This question tends to be one of most interesting to local voters and the public in general.

As shown in Figure 3-1, the fiscal impact analysis compares the changes in revenues with the changes in costs of a local government entity that result from an action or decision. Revenues include taxes, fees and other income. Costs include operation (services) and maintenance (O&M) and new or expanded capital facilities and equipment.

Figure 3-1: Diagram of fiscal impacts of land development on local government (Fodor & Associates).



Usually local governments must balance their budgets so that costs don't exceed revenues. While this is true for government services, it is not the case for major capital expenditures. Local governments may issue general obligation bonds for new capital facilities that enable them to carry debt. General obligation debt is a reasonable way to finance facilities that have a broad public benefit. However, when the new facilities are constructed primarily to serve new development, an inherent inequity results, and all taxpayers pay to fund facilities that benefit a small segment of the population.

One solution to this problem is the LID, or local improvement district, that limits funding of improvements to the beneficiaries. Another is the impact fee, or system development charge (SDC) in Oregon, that directly recovers some or all of the costs associate with providing certain facilities to new development. Deschutes County also uses "Community Service Districts" to assess the costs of some public safety, fire protection and library services directly to the geographic districts they serve.

Public Infrastructure Required by Thornburgh Resort Development

Table 3-1 below summarizes the categories of infrastructure required by new development. The costs associated with all onsite facilities and services (such as local roads and utility lines) are assumed to be borne by the developer. Only the offsite impacts are examined here. Of these, transportation and schools typically represent the greatest costs, so much of the analysis work focused on these two categories.

All Categories	Evaluated
Transportation System	Yes
School Facilities	Yes
Fire & EMS Facilities	Yes
Police Facilities	Yes
Parks & Rec. Facilities	Yes
Sanitary Sewer System	NA
Storm Drainage System	NA
Water Service Facilities	NA
Library Facilities	No
General Gov. Facilities	Yes
Solid Waste Facilities	No
Public Open Space	No

Table 3-1: Basic Public Infrastructure Required by New Development

The Deschutes County Code¹⁰ requires that the resort developer pay for onsite water and sewer systems, so it was assumed that the costs associated with these facilities and services are borne by the resort and its future residents and visitors. The longterm viability of these onsite water and sewer systems is unclear. For example, the current plans indicate that the resort's sewer system will rely on drain field disposal for an indefinite period of time. This method of disposal can contaminate groundwater and has a limited lifespan. The high water demand from the resort may

¹⁰ Deschutes County Code, Chapter 18.113. Destination Resorts Zone – DR.

deplete local groundwater supplies and the resort may be obliged to indemnify nearby landowners.

The County has no requirements for offsite stormwater management facilities or services, so it was assumed that onsite stormwater management will not have offsite fiscal impacts. These resort developments are contingent on provision of open space within the development.¹¹ Therefore, additional open space needs may not be generated by the development.¹² However, any new residential development is likely to increase demands for certain County parks and recreational facilities, so these impacts were included in the study.

Electric power, natural gas, telecommunications, and solid waste disposal services to the resort are operated by private businesses. These services also require offsite infrastructure investments. Such costs tend to be added to the utility rates that are paid by all customers, not just resort residents. The costs associated with increased rates for these services were not included in the study because they are not publicsector costs and because it is difficult to obtain the necessary revenue and cost data from private companies.

Impact Analysis Methodology

In order to evaluate the potential impacts of the Thornburgh Resort, two scenarios are compared: unbuilt and full buildout. The unbuilt scenario assumes no change in current land use. The full buildout scenario assumes the resort is entirely built out (all proposed facilities are built and all lots are developed with homes). In all likelihood the resort will take many years to build out and may have undeveloped lots remaining long after most construction is completed.

To simplify the impact analysis, both the unbuilt and full buildout scenarios were compared for the year 2008. This simplification enables a direct comparison of before and after costs and revenues and eliminates the time-values of various cash flows in different years. By comparing built and unbuilt scenarios, the vagaries of uncertain approval dates and construction schedules are eliminated. It is intuitively more useful to consider the alternatives of a resort that is either built or unbuilt under current economic and fiscal conditions than to consider one option today and the other 12 years in the future.

A destination resort creates both direct and induced impacts. As described in the *Economic Impacts* section of this report, a resort induces additional growth and

¹¹ According to Deschutes County Code, DDC 18.113.060(D)(1), "The resort shall have a minimum of 50 percent of the total acreage of the development dedicated to permanent open space, excluding yards, streets and parking areas." Golf courses are considered open space.

¹² Increased use of public lands surrounding resorts by resort residents is common. For example, the Pronghorn Resort recommended that their property owners use adjoining BLM land for exercising dogs in a recent newsletter.

development beyond its physical boundaries. This is primarily the result of new jobs created at the resort. Many of these jobs will be filled by newcomers who will require additional housing and have fiscal impacts of their own. In this study the induced impacts were evaluated only for schools. All other impact areas reflect only the direct fiscal impacts of onsite development within the resort. The induced impact on schools was addressed because student generation will be significantly increased by influx of new workers at the resort and this information may be useful to school districts for facilities planning purposes.

All revenue and cost figures are given in 2008 dollars and values. Costs from other years were adjusted to 2008 values based on the appropriate inflation index or construction cost index. Tax rates were based on the 2008-09 rates. The most recent available data was used throughout the analysis.

It is important to note that from an accounting perspective, there are two basic types of costs and revenues: annual streams that occur every year, and one-time costs or payments. Tax revenues and service costs represent the former. Infrastructure costs and any associated System Development Charges are treated as the later. As soon as a new resort development is completed, the residents and visitors will need adequate road capacity, classroom space for their children, fire protection, and public safety services, so these facilities must be in place.

There are a number of standard methods for estimating the demand for new facilities and infrastructure a new development will generate. Each method has advantages and drawbacks. The methods used here were selected to yield the best estimates of demand given the limitations of available data. In most cases the capacity of services and infrastructure must be adequate to serve peak demands. For example, police and fire protection capacity must be adequate to meet peak demand periods, not just average demand. In such cases, the demand for public facilities was based on peak season resort occupancy, rather than average occupancy.

The terms "gross" and "net" are used to describe costs and revenues in this report. In the case of costs, a *gross cost* would be the total cost to provide a particular facility or service, while the *net cost* would be the gross cost, minus any payment or revenue from the resort towards that facility or service. In other words, it is the balance of costs after any revenues are deducted. Tax revenues are treated as gross revenues because they are used to pay for government costs. The net revenue for a particular service, if any, is the surplus left over after the costs of providing the service are deducted.

The fiscal impact reporting begins by evaluating the revenues the resort is likely to generate from property taxes and room taxes. Then the costs are addressed. And finally, the costs are compared with the revenues to determine net impacts.

4. Revenues from the Thornburgh Resort

A significant selling point for new destination resorts has been the tax revenues they will generate for county governments. As described later, increased tax revenues are offset by increased costs for public facilities and services required by the resort. In this analysis, both property tax revenues and transient room tax revenues are estimated for the proposed Thornburgh Resort.

Property Taxes

The Thornburgh Resort Company LLC submitted a report by Peterson Economics, of El Cerrito, California, which provided their estimate of property tax revenues, but made no estimate of room taxes. The property tax revenue estimate provided by the developer was approximately three times greater than the revenue calculated here. This was partly due to use of overinflated real estate values that may have seemed realistic during the 2004-2005 boom period, but are out of line with current real estate prices and the assessed values at the nearby Eagle Crest Resort.¹³ The annual property tax figures by Peterson were also inflated at an annual 3% rate over the 12-year construction phase so that the final annual tax revenues at completion were given for the year 2016 and are much higher than they would be today. The taxes calculated here are based on the revenues that would be generated if the resort were fully completed in 2008 under the 2008-09 tax rates.

Tables 4-1 and 4-2 summarize the estimated property tax revenues from the residential and commercial properties planned for the Thornburgh Resort. The combined total property tax revenues are \$5.1 million per year based on a total assessed value of approximately \$375 million, as shown in Table 4-3.¹⁴ The \$5.1 million tax revenue estimate is about one-third of the amount estimated by the applicant in the Peterson Report.¹⁵ However the figure calculated here is in line with data reported by other sources for actual tax revenues from other resorts.¹⁶

In order to determine where tax revenues will go in Deschutes County, the individual tax rates for each taxing district applicable to the resort were used and the

¹³ Eagle Crest Resort is considered to be comparable to the proposed Thornburgh Resort in terms of its real estate values.

¹⁴ Assessed values are for tax purposes and not the same as real market values.

¹⁵ For comparison purposes, the tax revenues estimated by the applicant in the Peterson Report were adjusted from the 2016 buildout year back to 2008, resulting in an estimate by Peterson of \$17,500,000 per year.

¹⁶ Tax revenues were reported for 2005-06 tax year by Linda Swearingen (a lobbyist and consultant for destination resorts) for various resorts in a presentation to the League of Women Voters, November 2005. She reported annual tax revenues for Eagle Crest at \$4,096,058 and for Black Butte at \$6,315,414.

results provided in Table 4-4. Technical details on the methodology used for property tax calculations are provided in the Appendix to this report.

Table 4-1

Estimated Property Tax Revenues from Residential Properties at Thornburgh Resort ⁽¹⁾⁽²⁾									
(Assumes full buildout and 2008-09 tax rates and property values)									
		Estimated							
Property Type	Number of Units	Lot ⁽⁴⁾	Improvements (5)	Total	Assumed AV per Unit ⁽⁶⁾⁽⁷⁾	Property Tax Rate ⁽⁸⁾	Property Taxes Single Unit ⁽⁹⁾	Property Taxes for Type ⁽¹⁰⁾	
Residential Overnight ⁽¹¹⁾	425	\$190,000	\$320,000	\$510,000	\$250,410	14.0041	\$3,507	\$1,445,665	
Resid. Owner-Occup. ⁽¹²⁾	950	\$190,000	\$320,000	\$510,000	\$250,410	14.0041	\$3,507	\$3,231,485	
							Total	\$4,677,150	

Notes:

(1) Housing Data is from the table on page 22 of the Revised application dated April 21, 2008. RMV values derived from data on Deschutes County's D.I.A.L system.

(2) This table includes all single family residential property regardless of ownership or deed restriction.

(3) Real Market Value (RMV) is the full appraised value of the land and/or improvements. While tracked it is not used to calculate taxes.

(4) Assumed Lot value derived by taking 80% of the average value of the RMV for Land as taken from Deschutes County's D.I.A.L system for a 38-lot sample of lots located at Eagle Crest. Reduction in value is intended to reflect declining prices in real estate markets. See Property Tax Methodology in Appendix for details.

(5) Assumed Improvement value derived by taking 80% of the average value of the RMV for Improvements as taken from Deschutes County's D.I.A.L system for a 35-house sample of houses located at Eagle Crest. Reduction in value is intended to reflect declining prices in real estate markets. See Property Tax Methodology in Appendix for details.

(6) A voter passed initiative in 1996 rolled the assessments of real property back to their 1995 level minus 10% and limited annual increases to 3%, Assessed Value (AV) is the result. It is the value used to calculate the property taxes due on a parcel.

(7) Oregon State Law (ORS 308.153) requires that the real market value of new property be adjusted by the application of a Exception Value Ratio to establish the amount that is to be added to the Maximum Assessed Value of a property. The Exception Value Ratio for Resort Properties is 49.1.

(8) In dollars per thousands dollars of Assessed Value. The property tax rate is that of Tax Code Area 2-004. While some of the proposed development is on parcels that currently are in Tax Code Area 2-003 it has been assumed that when Deschutes County Rural Fire Protection District #1 takes over fire and rescue responsibilities for those properties that they will changed to Area 2-004.
 (9) Assumed Assessed Value (AV) times Property Tax Rate.

(10) Calculated from 'Property Taxes Single Unit' times 'Number of Units' times 0.97 (to reflect 3% reduction for on-time payment).

(11) Units subject to a deed restriction requiring that it be available for short term rental at least 38 weeks a year. As the Residential Overnight housing units are needed to meet the Visitor-Oriented Units to Individually-owned Residential Unit Ratio in Deschutes County Code 18.113.060 D 2, it has been assumed that they will all be built.

(12) The amount of Residential Single Family Housing not subject to a deed restriction requiring it be available for short term rental at least 38 weeks a year. This table was also run assuming a 90% build out of these units, which showed an annual property tax payment of \$4,453,593.68.

Table 4-2

Estimated Property Tax Revenues from Commonly held and Commercial Property at Thornburgh Resort ⁽¹⁾

(Assumes full buildout and 2008-09 tax rates and property values)

Estimated Real Market Value per Unit ⁽²⁾

Property Type	Number of Units	Lot ⁽³⁾	Improvements ⁽⁴⁾	Total	Assessed Value ⁽⁵⁾⁽⁶⁾	Property Tax Rate ⁽⁷⁾	Property Taxes Single Unit	Property Taxes for Type ⁽¹⁵⁾
Hotel and Conference Center ⁽⁸⁾	1	\$2,169,000	\$15,000,000	\$17,169,000	\$8,429,979	\$14.0041	\$118,054	\$114,513
Golf Club House ⁽⁹⁾	2	\$578,400	\$4,000,000	\$4,578,400	\$2,247,994	\$14.0041	\$31,481	\$61,073
Golf Course ⁽¹⁰⁾	3	\$1,949,850	\$3,000,000	\$4,949,850	\$2,430,376	\$14.0041	\$34,035	\$99,043
Spa Facility ⁽¹¹⁾	1	\$433,800	\$5,000,000	\$5,433,800	\$2,667,996	\$14.0041	\$37,363	\$36,242
Recreation Center (12)	2	\$723,000	\$3,000,000	\$3,723,000	\$1,827,993	\$14.0041	\$25,599	\$49,663
Commerical Development ⁽¹³⁾	1	\$578,400	\$4,000,000	\$4,578,400	\$2,247,994	\$14.0041	\$31,481	\$30,537
Real Estate Office (14)	1	\$433,800	\$3,000,000	\$3,433,800	\$1,685,996	\$14.0041	\$23,611	\$22,903
							Total:	\$413,973

Notes

(1) Data for this table was obtained from the Thornburgh Application dated 4-21-08, the Deschutes County D.I.A.L system and cited sources.

(2) Real Market Value (RMV) is the full appraised value of the land and/or improvements. While tracked, it is not used to calculate taxes.

(3) Lot Area assumed to be twice building area. Land value of \$629,744 per acre for all land other than the Golf Course. This value is 80% of the 2008 RMV for the developed commercial parcel at Eagle Crest. The reduction in value is to reflect declining real estate values. See Property Tax Methodology in Appendix for details.

(4) Building value assumes a \$200 sq ft construction cost for buildings and \$3 million per golf course. The \$3 million dollar figure is the midpoint of the \$1.6 to 4.5 million construction cost range quoted on the USGA and American Society of Golf Course Architects web sites.

(5) A voter passed initiative in 1996 rolled the assessments of real property back to their 1995 level minus 10% and limited annual increases to 3%, Assessed Value (AV) is the result. It is the value used to calculate the property taxes due on a parcel.

(6) Oregon State Law (ORS 308.153) requires that the real market value of new property be adjusted by the application of an Exception Value Ratio to establish the amount that is to be added to the Maximum Assessed Value of a property. The Exception Value Ratio for Resort Properties is 49.1.

(7) In dollars per thousands dollars of Assessed Value. The property tax rate is that of Tax Code Area 2-004. While some of the proposed development is on parcels that currently are in Tax Code Area 2-003 it has

been assumed that when Deschutes County Rural Fire Protection District #1 takes over fire and rescue responsibilities for those properties that they will changed to Area 2-004.

(8) 75,000 sq ft building on a 150,000 sq ft lot. Includes Hotel, Restaurant, Bar and Convention Facilities.

(10) Assumes 150 acres per course. The land value used of \$12,999 an acre was obtained by taking the average RMV of five large parcels at Eagle Crest identified as containing golf holes.

(11) 25,000 sq ft of buildings on a 50,000 sq ft lot. Includes Fitness Center, Sauna and Steam rooms, Massage area.

(12) 15,000 sq ft of buildings on a 30,000 foot lot.

(13) 20,000 sq ft of buildings on a 40,000 sq ft lot. Includes Bank, Florist Shop, Drug Store, Grocery, Dry Cleaner and Art Gallery.

(14) 15,000 sq ft of buildings on a 30,000 sq ft lot. Includes Sales Leasing and Property Management Offices.

(15) Taxes reduced by 3% for ontime payment.

Fodor & Associates

^{(9) 20,000} sq ft building on 40, 000 sq ft lot Includes Locker Rooms, Pro Shop and Food Service Area.

Table 4	1-3
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Estimated Total Property Tax Revenues from Thornburgh Resort (Assumes full buildout and 2008-09 tax rates and property values)							
Property Type Total Assessed Value Annual Property Taxes							
Residential Property	\$344,313,750	\$4,677,150					
Commercial Property \$30,475,067 \$413,97							
Totals:	\$374,788,817	\$5,091,123					

Table 4-4

Distribution of Property Tax Revenues by Taxing Districts for Thornburgh⁽¹⁾ (Assumes full buildout and 2008-09 tax rates. Thornburgh estimated total assessed value of \$374,788,817)

ID	Tax District	Tax Rate	Property Taxes ⁽²⁾
001	Deschutes County	1.2783	\$464,720
007	Jail Bond	0.1335	\$48,533
010	Fairgrounds Bond	0.141	\$51,260
011	County Library	0.55	\$199,950
020	Countywide Law Enforcement	0.95	\$345,368
021	Rural Law Enforcement	1.4	\$508,963
070	Redmond Library	0.0567	\$20,613
090	County Extension/4H	0.0224	\$8,143
093	911	0.1618	\$58,822
095	911 Local Option 2008	0.23	\$83,615
202	Rural Fire District #1	1.7542	\$637,731
351	Redmond Area Park & Rec District	0.3717	\$135,130
620	School District #2J	5.0251	\$1,826,851
626	School #2J Bond 92 & 93	0.8307	\$301,997
628	School #2J Bond 2004	0.293	\$106,519
651	High Desert ESD ⁽³⁾	0.0964	\$35,046
670		0.6204	\$225,543
671	COCC Bond	0.0889	\$32,319
	Total	14.0041	\$5,091,123

(1) Tax rates from Deschutes County 2008-09 Summary of Assessment and Tax Roll page 80. (2) Tax revenues = $(AV/1000) \times Tax$ Rate x 0.97. Amount to taxing districts assuming the property owner takes advantage of the 3% discount for paying in full prior to 15 November.

(3) High Desert Educational Service District.(4) Central Oregon Community College.

Room Taxes

Transient Room Tax revenues are generated from hotels and other overnight lodging facilities in Deschutes County. The tax rate is 7% of the total room charge payable to the County. As shown in Table 4-5, the estimated room tax revenue from the Thornburgh Resort is \$430,296 per year. A complete technical explanation of room tax calculation is provided in the Appendix to the report. Currently room tax revenues are allocated to rural law enforcement and tourism, as shown in Table 4-6.

Table 4-5

Estimated Transient Room Tax Revenues from Proposed Thornburgh Resort (Assumes full buildout and 2008-09 tax rates and rental rates)

Type of Unit	Number of Units ⁽¹⁾	Daily Room Rate ⁽²⁾	Occupancy Rate ⁽³⁾	Tax Rate ⁽⁴⁾	Estimated Daily Tax Revenue ⁽⁵⁾	Estimated Annual Tax Revenue ⁽⁶⁾
Hotel Rooms	50	\$121	29%	7%	\$123	\$44,827
Residential Overnight Units ⁽⁷⁾	425	\$162	29%	7%	\$1,398	\$408,115
					Subtotal:	\$452,943
			Less Colle	ction Rein	nbursement ⁽⁸⁾ :	(\$22,647)
				Reven	ue to County:	\$430,296

1. Number of Units available as Visitor-Oriented Units is taken from page 4 of the Revised Application dated April 21, 2008.

2. Estimated Average Room Rate subject to the Room Tax. The rate for the Hotel is based on a weighted average of the rates for Hotels, Motels and Inns located in the Greater Redmond Area. The Inn at Eagle Crest showed standard room rates of \$95 to \$126 per night, depending on season. The rate for Residential Overnight Units is the average of the daily rate for 39 units in the Greater Redmond Oregon Area currently listed on the Vacation Rentals by Owner website for the area. Twenty-eight of these were located in Eagle Crest Resort.

3. While the total monthly Transient Room tax receipts are available, actual occupancy data is extremely difficult to come by. So an occupancy rate of 90% was assumed for the month of August and then adjusted for the other months based on Total Transient Room Taxes paid to the County for that month. From this an average annual occupancy rate of 29% for all rental types was derived. This table was also run assuming an annual occupancy rate of 100%, and 50% for both types of units. The resulting estimated revenue for Deschutes County was \$1,818,010 for 100% and \$909,005.13 for 50% annual occupancy rates.

4. The current Tax rate as set by Deschutes County Ordinance.

5. The number of units times the occupancy rate, times the daily room rate, times 7%.

6. The estimated Daily Tax Revenue times 365 days. For residential units, an 80% reporting rate for room taxes was assumed. 100% reporting was assumed for hotel rooms.

7. 425 is the number of units that would be subject to a deed restriction requiring that they be available for Short Term Rental at least 38 weeks a year. It is possible that some of the owners of the other 950 housing units in the resort might also want to rent their units at least some of the time, so the actual number of available rental units could be higher.

8. Deschutes County Code 4.08.120 requires the operator to bill the transient for the Room Tax as a separate line item on the invoice or receipt and allows the operator to retain a Collection Reimbursement Charge of up to 5% of all revenues collected. While it is possible for an operator to retain less then the full 5% permitted, for the purposes of this estimate a full 5% has been assumed.

Table	4-6
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Distribution of Room Tax Revenues to County			
(Assumes full buildout and 2008-09 room tax rates and rental values)			
	Share ⁽¹⁾	Amount	
For Rural Law Enforcement	73%	\$314,116	
For Tourism-Related Activities	27%	\$116,180	
Total Room Tax Revenue	100%	\$430,296	

(1) This distribution assumes the same 73-27% split as was used in the FY 2008-09 Budget for the County.

5. Thornburgh Resort Costs

This section examines the fiscal impacts of the proposed Thornburgh resort on the following six major service categories:

- Transportation System
- Schools
- Fire & EMS
- Public Safety System
- Parks & Recreation System
- General Government

As described previously, costs occur in two basic categories:

- 1. Capital Costs: Initial, one-time costs for the increment of new or expanded capital (facilities, infrastructure and equipment) necessary to provide adequate levels of service to the resort; and,
- 2. O&M Costs: Annual costs for operation and maintenance (O&M) of the services provided to the resort.

The capital costs for expanding facilities, infrastructure and equipment were calculated for all six of the above service categories. These capital costs tend to be the greatest costs associated with serving new development. The O&M costs for providing services were calculated for fire/EMS, public safety, and parks and recreation. The tax revenues for each of these service areas were also determined, so that service costs could be compared with revenues.

For transportation and schools, revenues come from multiple sources (County, State and Federal) and are allocated based on formulas described in the following sections. Since revenues for these two categories could not be tied directly to the resort, it was not possible to compare the annual O&M costs with the revenues resulting from resort development. O&M costs were not calculated for general government services due to the complexity of assigning service costs to the resort.

The cost impacts the resort will have on these systems may be offset by tax revenues and impact fees or mitigation fees the resort will pay. The only impact or mitigation fees identified in this study are related to the transportation system. Deschutes County enacted transportation SDC (system development charge) in 2008. The Oregon Department of Transportation (ODOT) is seeking mitigation funding from the resort for impacts to intersections with state highways. Both of these potential revenues are computed and deducted from the transportation system costs. The County collects no other impact fees and the Redmond School District collects no impact fee from new development. The Thornburgh Resort is also credited with future tax payments that could potentially go towards repaying bonds for the infrastructure needs the resort creates. A new destination resort will increase the local tax base, which will distribute the bond repayment cost more widely. For example, if a new resort increases the local tax base by 5%, it will pay for 5% of the bond costs. The remaining 95% will be paid by the existing community. However, it is the new development that is creating the demand for new facilities that are calculated in this study, not the existing community. Therefore, new development will pay for only a fraction of the facility costs it creates (1/20th in this example). The actual 2008/09 tax bases for each category of service and the potential contribution of the resort towards future bond repayments is provided in the *Appendix*.

To aid in calculating some costs, an estimate of the number of houses used as primary residences at the Thornburgh Resort and an occupancy rate of these residences was developed. Average occupancy per household in Deschutes County was 2.5 persons per the 2000 Census. The Census data is for all existing housing, and therefore does not accurately reflect the occupancy of <u>new</u> housing. New housing is typically larger than the average of exiting housing and typically has more occupants per unit. The *American Housing Survey* provides data on new homes for major cities in the US. The nearest city survey is for Portland where new housing units were found to have 8.2% higher occupancy levels than for all existing units.¹⁷ This same adjustment was applied to Deschutes County to produce an estimated household occupancy rate of 2.7 persons per new house.

The percentage of housing in destination resorts used as primary residences has been the subject of some debate. Resort housing could be used for a primary residence, a second home (or vacation home), or a rental home (overnight unit). Undoubtedly, the mix of home uses will vary from resort to resort. The nearby Eagle Crest Resort appears to have a very similar profile to the proposed Thornburgh Resort and was used to establish a likely percentage of owner-occupied homes serving as primary residences.

A complete tabulation of residential properties at Eagle Crest was generated by Deschutes County from County tax assessment data.¹⁸ There were 1,538 residential properties that were developed with homes on the tax rolls. Of these, 559 property owners received tax statements at their Eagle Crest address. Tax statements are usually sent to the property owner's primary residence, so this is highly indicative of a primary residence address.

¹⁷ American Housing Survey for the Portland Metropolitan Area: 2002, Issued July 2003, U.S. Department of Housing and Urban Development.

¹⁸ Result from this tabulation were provided in Excel format to COLW by Tim Berg, Deschutes County Community Development Department on February 26, 2009.

According to a survey provided to the County by Eagle Crest Resort, an estimated 252 of the single family homes in the resort were being used as overnight units (rental units) in March of 2008.¹⁹ Deducting the 252 overnight units from the 1,538 total residential units leaves 1,286 owner-occupied units (both primary residences and second homes). Based on the addresses of the tax statements, the 559 primary residences represent 43% of the 1,286 owner-occupied units. The actual percentage of primary residences will be higher if some resort residents have tax bills sent to a post office box or to an accountant's address.

¹⁹ Letter from Alan VanVliet of Jeld-Wen Development to Catherine Morrow providing results of an annual housing survey, dated March 25, 2008.

Transportation System Costs

A key issue in destination resort development is the demand they place on the transportation infrastructure. The new travel demand generated by resorts creates costs for the required transportation infrastructure. The full cost of the transportation infrastructure to serve new growth is reflected both in the new infrastructure that must be built and in the existing capacity that is consumed.

Travel demand is a function of both the number of new vehicle trips generated and the average trip distance. The combination of the number of daily trips and the average distance of trips results in the daily "vehicle miles traveled" or VMT. VMT reflects actual roadway usage, and therefore provides a good measure for allocating transportation system costs.

Another measure of travel demand is "peak-hour trips," which is intended to reflect demand on the system during the peak period. Peak-hour trips are widely used in transportation studies because they provide an indication of transportation system conditions at the busiest time of day. However, as roads become more congested, travelers shift their travel times to avoid congestion. Instead, they contribute to congestion at other times. As transportation systems become more and more overburdened, peak congestion periods extend to multiple hours and can occur throughout the day.

One deficiency of peak-hour trips is that they only capture those trips generated at the peak hour (usually 5-6pm weekdays) and miss traffic generation at other times. Schools, for example generate considerable traffic at other hours. Resorts will also generate most trips at other hours for golf and other recreational activities. With this measure, traffic sources that do not generate peak-hour trips are not counted as impacting the transportation system, despite increased travel demand. Peak-hour trips are based on the peak traffic hour of the adjacent roadway, and not the peak for the source of the trips being studied.

Destination resorts are typically sited in relatively remote locations outside of Urban Growth Boundaries (UGBs) and away from existing cities and towns. Due to their remote locations, residents and guests will travel farther to reach common destinations, such as employment, grocery stores, department stores, etcetera. As a result, VMT generation will tend to be higher per unit of development than it would be in an urban location.

Studies show that even in urban areas, the per capita VMT increases by a factor of two to three, or more on the urban fringe compared with the urban core. Daily percapita VMT was found to be two to four times greater in the Atlanta suburbs than in the city's core area.²⁰ Similar findings were obtained for Eugene-Springfield in a 1994 travel study by Lane Council of Governments.²¹ According to a study in Rhode Island (1999), rural towns had on average 16.5 miles of local roads per 1,000 housing units, or almost three times as many as urban core communities (6.1 miles per 1,000 housing units).²²





Based on the Oregon Travel Behavior Survey,²³ Deschutes County's rural households reported an average of 7.31 daily vehicle trips. This is lower than the 9.57 trips that would be estimated using the *ITE Trip Generation* manual.²⁴ Average rural trip time was 16.52 minutes. While this trip time is comparable to that in urban areas, rural trips will tend to cover more distance and be at a higher average speed, requiring

²⁰ Source: Atlanta Journal-Constitution, 12/9/02, based on data from Georgia Regional Transportation Authority.

²¹ 1994 Estimated VMT per Capita by Production Zone, by Lane Council of Governments.

²² The Costs of Suburban Sprawl and Urban Decay in Rhode Island, Executive Summary, by Grow Smart Rhode Island, 1999, Providence, RI, The Rhode Island Foundation.

²³ Oregon Travel Behavior Survey, ODOT, 2000, Table 4.2. According to ODOT, survey data involves some underreporting, so actual daily trip will be higher than reported (see footnote, page 9 of Oregon Travel Behavior Survey).

²⁴ Institute of Transportation Engineers' reference manual for trip generation, 8th Edition.

more road infrastructure. If an average rural speed of 40 mph is assumed, the average trip distance would be 11 miles and household VMT would be 80.5 miles per day.²⁵

The Cost of Transportation Facilities

The "projection-based" method for estimating transportation system costs uses a planning estimate or projection of the future system improvements that are needed as a basis for allocating costs to the new development that will occur over the planning period. The County has prepared a 20-year list of transportation projects as part of its adoption of a new transportation System Development Charge (SDC) in 2008. This list covers all projects in the unincorporated areas of the County that are anticipated from 2008 to 2028. The total cost of all projects is \$280 million. Project costs are funding by a mix of County, State and Federal sources.

Most of these projects are capacity-increasing and will serve the needs of new growth in the County. However, a portion of the projects are maintenance-related and will not expand the system capacity. Only a very brief description is available to characterize each project on the 20-year list and no further information was available from the County. A simplified system was used to allocate individual project costs between capacity expansion and maintenance functions. New roads were allocated 100% to meet the needs of new growth. New bridges were allocated 75% to new growth. Road "widening and overlays" and "road reconstruction and widening," were allocated 50% to new growth. None of the costs for pedestrian and bike lane improvements were allocated to growth as they were considered system-wide upgrades.

Based on this cost allocation, \$240 million or 86% of these costs are growth-related (capacity increasing), while \$39 million, or 14% are for maintenance. Table 5-1 provides a summary of the project cost allocation. As shown in column 5 of Table 5-1, Deschutes County will fund less than one-third of growth-related transportation facilities, while the State will fund two-thirds. (The Federal funding is shown as being fairly small, but Federal transportation funds that are distributed by the State are listed under the State funding, so the actual Federal contribution is larger than shown.)

²⁵ The average speed of 40 mph was used to reflect overall average trip speed, including stops, starts and turns on roadways with typical 55 mph speed limits. This was intended to be conservative, as higher trip speeds would result in longer travel distances and greater road costs.

Table 5-1

20-year Transportation System Project List for Unincorporated Area of Deschutes County (2008-2028)("						
1	2	3 Percent	4	5 Percent of	6 Growth	7 Cost per
Funding Entity	Total Project Costs	of Total Costs	Growth-Related Project Costs	Growth Costs	Cost per Capita ⁽³⁾	Typical New House ⁽⁴⁾
Deschutes County	\$96,614,339	35%	\$70,165,715	29%	\$2,273	\$6,137
State of Oregon ⁽²⁾	\$157,500,000	56%	\$157,500,000	66%	\$5,102	\$13,775
Federal Gov. ⁽²⁾	\$25,431,250	9%	\$12,715,625	5%	\$412	\$1,112
Totals:	\$279,545,589	100%	\$240,381,340	100%	\$7,787	\$21,024

(1) Source: Deschutes County SDC Project List, 2008.

(2) State funding includes funds from the Federal Government to the State so this distribution only shows final source of funds.

(3) Growth-related costs are divided by the projected population increase over the same 20-year period.

(4) Costs associated with new house are based on an occupancy rate of 2.7 persons, as described earlier in this section of the report.

The per-capita cost for population growth can be estimated by allocating the growthrelated (capacity increasing) components of the County's total future transportation system costs for the next 20 years (\$240,381,340) to the estimated population increase for the same period. During this time period the population of the unincorporated County is projected to grow from 56,609 in 2008 to 87,480 in 2028, an increase of 30,871 people.²⁶ This results in a cost of \$7,787 per new person (column 6 of Table 5-1). The County's share of this cost is \$2,273 per person.

The cost per new house can be estimated based on the typical occupancy rate of 2.7 persons per new house (calculated earlier). At this occupancy rate, the total cost per new house is \$21,024. The County's share of this cost is \$6,137 per new house.

A new transportation System Development Charge (SDC) was approved by Deschutes County in July of 2008 to help recover a portion of the County's share of capacity-increasing transportation costs. While the State SDC Statute²⁷ allows for a reimbursement component, the County's fee does not include a reimbursement component to recover the cost of existing roadway capacity that will be consumed by future growth. The SDC fee will be phased in gradually up to \$3,504 per new peakhour vehicle trip by 2011. For a new single-family dwelling, 1.01 peak-hour trips are generated and the SDC is \$3,539 per SFD (not including the \$45 administrative charge allowed by State Statute). Deducting the SDC (full 2011 rate) from the County's gross cost per new house (\$6,137) results in a net transportation system cost to the County of \$2,598 per new house for the capacity-increasing components.

 ²⁶ Based on Deschutes County 2000-2025 Coordinated Population Forecast. The forecast was extended to 2028 using the growth rate for the 2020-2025 period of 2.2%/year.
 ²⁷ ORS 223.297-314.

Reimbursement Value of Existing Transportation Infrastructure

As noted, the Deschutes County SDC project list does not address the value of transportation infrastructure capacity that has already been built that will be consumed by new development (also referred to as "excess capacity"). If average roadway congestion levels on existing roads did not increase over the 20-year project timetable, then there would be no loss in mobility (or increase in congestion), and therefore no "consumption" of existing excess capacity. However, it is unlikely that the County will be able to build enough new facilities to prevent such congestion increases. Nationwide the roads have become increasing congested as cities, counties and states across the country have been unable to keep up with demand.²⁸

To investigate changes in traffic levels on existing roadways, historic traffic count data must be analyzed. The County's traffic count data reports Average Daily Traffic (ADT) for 281 roadway segments.²⁹ Data was obtained from the County for the 11-year period, 1998 to 2008. Data was not available for every year for every segment, so the average of the traffic counts in the first four years (1998-2001) was compared with average of the last four years (2005-2008). Only the 212 road segments that had traffic counts in both time periods were analyzed. The results show that traffic increased from an average ADT per road segment of 1,473 to 1,780, an increased volume of 20.8% on County roads in a roughly seven-year span.³⁰ It is therefore reasonable to conclude that new development in the County is generating transportation system demand faster than the County is building new capacity and that new development is consuming existing excess road capacity.

There is no data on the existing excess capacity of County roads. The County's Level-of-Service (LOS) standard for rural roads is "D" or better. A LOS of D represents average daily traffic (ADT) of up to 9,600 vehicles for a two-lane road. Therefore, 9,600 vehicles is the effective capacity of the roadway under the LOS standard. The County's 1996 *Transportation System Plan* shows ADT and LOS for the 36 busiest roadway segments in the County at that time. None of the segments exceeded a LOS of D and most were rated B or C with 3,000 to 5,000 ADT. Based on this somewhat dated data, it appears that the County had more than 50% excess capacity on its main road network in 1996.³¹

²⁸ The 2007 Urban Mobility Report, by the Texas Transportation Institute reports that over last 24 years we have built only 41% of the transportation infrastructure necessary to keep up with growing demand.

²⁹ A sample of this data can be found on the Deschutes County Road Department web site at <u>http://www.co.deschutes.or.us/download.cfm?DownloadFile=0D8135CF-BDBD-57C1-98378109FA737581</u>. The full data set was used for this study.

³⁰ This increase in traffic occurred over a period of approximately seven years, based on using the midpoint of each of the two periods compared. The period is approximate because traffic count data was not available for all years.

³¹ The more-recent County traffic count data referred to earlier shows an average ADT at 212 road locations of 1,780 for the 2005-2008 period. If all of these roadways have a capacity of 9,600 ADT,

The value of the County's excess roadway capacity is significant, however, due to data limitation there is no direct way to accurately determine either the value of this capacity or the amount that will be consumed by new development. However, rather than leave this cost area completely unaddressed, a very rough, but conservative estimate was developed. To make this estimate, the following rough assumptions were used:

- 1. Excess capacity in 2008 is at least 40% of existing roadways.
- 2. New development over the next 20 years will consume half of the remaining excess capacity.
- 3. The value of the excess capacity can be indexed based on its replacement costs today and the population increase served by the total value of the capacity-increasing projects on the SDC project list.

To roughly estimate the replacement value of the existing transportation system it was assumed that the value could be based on the estimated costs necessary to serve future population growth. The value of the growth-related (capacity increasing) projects in the 20-year SDC project list is \$240,381,340. This results in a cost of \$7,787 for each new person projected in the County over the 20-year period. Applying the per-capita cost to the 56,609 persons currently living in the unincorporated County in 2008 results in an existing system value of \$441 million. This figure is the approximate replacement value for the system required to serve today's population. The figure is low, since it does not account for building the excess capacity that exists today. None-the-less, as a very rough estimate, the value of excess capacity consumed over the next 20 years is 20% of \$441 million, or \$88 million. Dividing \$88 million by the projected population growth over the next 20 years of 30,871 people, results in a reimbursement cost of \$2,856 per new person. Based on an occupancy rate for new homes of 2.7, the reimbursement cost per new home is \$7,711.

Table 5-2 combines the value of new facilities and the value of excess capacity used to serve new growth in the unincorporated area of the County. As shown, total transportation system costs (from all funding sources) for new growth are \$10,637 per person, \$28,720 per new house, and \$3,929 per daily vehicle trip. Note that the estimates in Table 5-2 are based on planning projections and are therefore only as accurate as the projections they are based upon.

then there is approximately 80% excess capacity in the road network. However, the data is not adequate to assess the actual capacity of each roadway segment.

Table 5-2

Estimated Transportation System Costs to Serve New Growth for Unincorporated Area of Deschutes County (2008-2028)

	County Costs	State Costs ⁽⁵⁾	Federal Costs	Total Costs
Value of New Capacity for Future				
Growth ⁽¹⁾	\$70,165,715	\$157,500,000	\$12,715,625	\$240,381,340
Value of Existing Capacity Consumed ⁽²⁾	share unknown	share unknown	share unknown	\$88,000,000
Total Growth-Related Costs	share unknown	share unknown	share unknown	\$328,381,340
Cost per Capita for New Population ⁽³⁾				\$10,637
Cost per New House ⁽⁴⁾				\$28,720
Cost per Daily Vehicle Trip ⁽⁵⁾				\$3,929

(1) Derived from Deschutes County SDC Project List, 2008.

(2) Rough estimate based on estimated excess system capacity consumed by new growth.

(3) Growth-related costs are divided by the projected population increase over the same 20-year period.

(4) Cost associated with new house are based on an occupancy rate of 2.7 persons, as described at the beginning of this section.

(5) Based on the Oregon Travel Behavior Survey, Deschutes County's rural households reported an average of 7.31 daily vehicle trips.

(6) State funding includes funds from Federal Government to the State so this distribution only shows final source of funds.

Transportation System Impacts of Thornburgh Resort

Estimating the transportation system impacts associated with a destination resort is more complex because standardized data on destination resort travel demand is unavailable and the use has unique characteristics. These resorts contain a variety of commercial and residential uses. The commercial uses cannot be readily estimated from the same per-capita basis used for residential land uses. Also, resorts will accommodate a certain percentage of vehicle trips internally. Internal trips are those that do not leave the resort, and would include residents visiting the golf course or resort restaurant. Since the road structure within the resort is funded entirely by the resort developer, these internal trips do not create an impact on the external public road system.

There are various estimates for the number of external vehicle trips generated by resorts. The Thornburgh Resort submitted their own traffic study showing that a vast majority of vehicle trips would be accommodated internally and that the resort would generate a total of 517 peak PM hour trips (5-6pm weekdays).³² However, the "peak PM trips" metric failed to capture the peak trip generation by the resort, which occurred earlier than for the adjacent roadways. Peak resort traffic occurred between 1pm and 4pm.

³² Transportation Impact Analysis, Revision II, by Group McKenzie, September 28, 2005, Table 9B.

A study by Kittelson and Associates³³ measured the traffic generation from the nearby Eagle Crest Resort by counting trips in and out of the resort for several weekday periods. The study concluded that 4.4 offsite trips are generated per residential unit and suggested that this is an appropriate value to use for destination resorts. These trip counts include all the commercial and recreational activities at the resort, as well as the residences. Therefore, they are an indication of the total trip generation by the resort, indexed to the number of residential units.

The Thornburgh Resort has 1,375 residential units. Based on the Kittelson Study, the resort would generate at total of 6,050 daily vehicle trips. These would all be external, or offsite trips. For comparison purposes, the trips were estimated using standard trip generation rates for conventional development (see Table 5-3). As a conventional development, the uses at Thornburgh would generate approximately 17,054 daily vehicle trips. However, since destination resorts are likely to accommodate more vehicle trips internally than conventional developments, the empirical data from Kittelson was used instead.

Using the estimate based on the Kittelson Study of 6,050 daily trips and the cost per vehicle trip of \$3,929 from Table 5-2, the total gross transportation system cost associated with the resort is \$23.8 million. To obtain a net cost for the Thornburgh Resort, SDC payments and developer contributions to the transportation system must be deducted. That step is done at the conclusion to this section.

Description (ITE Code)	Units ⁽²⁾	Expected Units	Expected Daily Trips
Single Family Homes (210)	DU	1,375	13,159
Hotel (310)	Rooms	50	446
Health/Fitness Club (493)	TSF Gross	60	1,976
General Office (710)	TSF Gross	15	165
Shopping Center (820)	TSF Gross	20	859
Quality Restaurant (931)	TSF Gross	5	450
Total Trips:			17,054

Table 5-3

Conventional Trip Generation Estimate for Thornburgh Destination Resort⁽¹⁾

(1) Based on *ITE Trip Generation* manual, 7th Edition.

(2) DU = dwelling units; TSF = thousand square feet of gross floor area.

³³ Central Oregon Resort Trip Generation Study, by Kittelson and Associates, September 12, 2006.

Standards-Based Costing Method

The transportation system costs calculated above in Table 5-2 are based on the projected population growth of the County and the projected transportation infrastructure needs for the next 20 years. Both projections are estimates for a long period of time and could involve substantial errors. It is notoriously difficult to estimate future population growth, but it is even more difficult to anticipate and accurately estimate all the transportation infrastructure needs for a county 20 years into the future.

To examine the transportation system costs from another perspective, a standardsbased impact analysis was performed. This method is based on meeting County level-of-service (LOS) standards. Travel demand was used to determine the number of new lane-miles of roads that are needed to serve new homes. A roadway cost perlane mile was developed and the number of lane-miles required by new development was used to estimate road costs.

Estimates of new road costs were not available from Deschutes County, so road costs per lane-mile were compiled from three sources, including the County SDC project list and ODOT in order to develop a reasonable estimate. Values for two-lane, rural roads on flat terrain were selected. As shown in Table 5-4, the average cost per new lane-mile for all sources is \$3.4 million.

The seven new roads on the Deschutes County Transportation SDC Project List were used to develop one road cost estimate. The average cost of these roads per lane-mile was \$3 million. The cost for one road segment included an overpass, so that some other roadway costs are included as well. Representative road costs should include the costs of intersections, signalization, bridges, and other associated system costs.

For comparison, Table 5-4 shows the road costs for a rural road on flat terrain from ODOT's Highway Economic Requirement System (\$2.7 million/lane-mile) and an estimate for rural roads from the Victoria Transportation Policy Institute (\$4.5 million/lane-mile). These figures bracketed the Deschutes County road costs, so the \$3 million per lane-mile figure was used for road costs.
KOAD COST ESTIMATES FROM VARIOUS SOURCES (All costs adjusted to 2008 dollars)				
	Cost per Lane-Mile			
	Construction	Land		
Source	Cost	Acquisition Cost	Total Cost	
New Roads in Deschutes Co. SDC Project List ⁽¹⁾	\$2,807,982	\$240,000	\$3,047,982	
ODOT New HERS Improvement Costs ⁽²⁾	\$2,461,980	\$240,000	\$2,701,980	
Victoria Transportation Policy Institute ⁽³⁾	\$4,199,040	\$263,340	\$4,462,380	
Average of Sources:			\$3,404,114	

(1) Average cost for new roads on list. Land values based on total road ROW width of 80 feet and land acquisition costs of \$50,000 per acre. (2) ODOT New Highway Economic Requirement System (HERS) Improvement Costs, lane-mile costs for constructing new rural major collector on flat terrain.

(3) Source: VTPI Transportation Cost and Benefit Analysis II - Roadway Costs, Table 5.6.3-4, January 2009. Value for undivided highways in outlying areas. Year 2000 dollars were adjusted to 2008 using Oregon Highway Construction Cost Trends.

As described earlier, the Oregon Travel Behavior Survey provides the best available travel demand data for rural households in the unincorporated area of Deschutes County. From this survey data it was estimated that the average daily rural household VMT is 80.5 miles. To translate this into a lane-mile demand for new roadways, a level-of-service standard must be assumed. The County's minimum LOS standard of "D" represents the maximum congestion limits acceptable on County roads. The ADT at LOS D is 9,600 vehicles. A two-lane roadway operating at LOS D could accommodate 4,800 vehicles per day per lane in each direction. At this congestion level, the lane-mile distance required to accommodate the 80.5 miles of daily VMT generated by the typical rural household is 0.017 lane-miles. The cost of building 0.017 lane miles at \$3 million per lane-mile, is \$51,000 per new household.

To maintain a higher LOS standard of "C" (ADT of 5,700, closer to what County residents now enjoy), requires 0.028 lane miles per new household, or \$84,000 in new road system costs per new household. The costs on a per-trip basis are shown for both LOS standards in Table 5-5. While costs of \$51,000 to \$84,000 per household may seem incredibly high, they should be adjusted even higher to reflect the higher occupancy rate that can be expected in a new home compared with the average of existing homes from which the travel survey data was derived. Using the 8% higher occupancy rate of a new house relative to an existing house, the costs would be \$55,000 to \$90,700 for LOS of D and C respectively.

Table 5-5)
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	Cost Per Household	Cost Per New Vehicle Trip ⁽¹⁾
Cost to maintain LOS "D"	\$51,000	\$6,977
Cost to maintain LOS "C"	\$84,000	\$11,491

Standards-Based Transportation System Costs per New Vehicle Trip

(1) Based on 7.31 trips per household reported for Deschutes County in the Oregon Travel Behavior Survey.

These standards-based costs are much higher than the \$28,720 per new house cost estimated by using the County's 20-year projections for new road infrastructure and population growth. One possible reason for the higher standards-based cost is that the County is not planning enough future road capacity to maintain current LOS standards and will see roads become increasingly congested in the future. As mentioned previously, road congestion is increasing nationwide and planned road construction is inadequate to maintain current standards. The high cost of maintaining even the County's minimum LOS standard under continuing growth may be too high for the public to bear. Instead of paying for construction of new roads, county residents will likely pay indirectly through the travel delays and increased fuel use associated with growing congestion.

Standards-Based Transportation System Impacts of Thornburgh Resort

As noted previously, a destination resort generates a complex mix of uses and accommodates many of its vehicle trip onsite. The trip generation estimate from Kittelson and Associates is a total trip generation rate of 4.4 trips per dwelling unit that includes all uses in the resort (residential and commercial). For Thornburgh this would be 6,050 daily vehicle trips. Using the cost per vehicle trip to maintain a LOS of D of \$6,977 from Table 5-5, the cost for building the offsite road capacity for 6,050 new trips is \$42.2 million.

Depending on the fiscal impact analysis method employed, the gross transportation facilities costs for the Thornburgh Resort would range from \$23.3 million to \$42.2 million (see Table 5-6). While both figures are reasonable estimates, the higher, standards-based figure probably does a better job of representing the full cost of transportation system impacts. This is because the standards-based method assures that the current minimum LOS standard of D is maintained, while the projection-based method does not. It is also worth reiterating that the LOS standard used here still allows for a considerable increase in average road congestion that is not included in the \$42.2 million cost, and therefore is a conservative (low) estimate.

Table 5-6

Estimated Transportation System Costs for Thornburgh Resort

Impact Analysis Method	Cost
Planning projection-based estimate	\$23.3 million
Standards-based estimate (LOS=D)	\$42.2 million

Net Transportation Cost from Thornburgh Resort

To obtain a net cost, SDC payments and developer contributions to the transportation system must be deducted.

The Thornburgh Resort will pay a Transportation SDC for each development. The SDC may be based on the standard rate indicated in the SDC adoption resolution, or an alternative rate based on the applicant's data showing that a reduced number of vehicle trips will be generated.³⁴ The approximate total SDC payments under both methods range from \$1.8 million to \$6.5 million, as shown in Table 5-7.

Estimated SDC Payments for Thornburgh Resort – Conventional Method							
ITE		(Assumes full rate	charged wite Expected	th no trip re PM Trip	ductions)	Cost per	Full SDC
Code	SDC Category	Units	Units	Rate	PM Trips	Trip ⁽¹⁾	Rate
210	SF Detached	DU	1375	1.01	1388.8	\$3,504	\$4,866,180
310	Hotel	Rooms	50	0.59	29.5	\$3,504	\$103,368
493	Athletic Club	TSF Gross	60	5.76	345.6	\$3,504	\$1,210,982
710	General Office	TSF Gross	15	1.49	22.4	\$3,504	\$78,314
814	Specialty Retail	TSF Gross	20	2.71	54.2	\$3,504	\$189,917
931	Quality Restaurant	TSF Gross	5	2.15	10.8	\$3,504	\$37,668
	Totals:				1851.2		\$6,486,430

Table 5-7

Alternative Method with Trip Reductions

517.0

\$3.504

(1) Excludes administrative fees.

(2) Transportation Impact Analysis, Revision II, by Group McKenzie, September 28, 2005, Table 9B, prepared for Thornburgh Resort.

According to an unsigned "Cooperative Improvement Agreement" between the Thornburgh Resort and ODOT, the resort will mitigate its immediate, direct

Resort's Estimated PM Peak Trips⁽²⁾

\$1,811,568

³⁴ Deschutes County Resolution #2008-059 establishes the SDC charge, standard rates, and the allowance for exceptions to the standard rates.

impacts on a nearby intersection with the State highway. This mitigation includes payment of up to \$1,125,000 towards improvements at the Cline Falls Hwy/US 20 intersection in Tumalo. The improvement to the Cline Falls Hwy/US 20 intersection is included on the SDC project list, so this contribution should be deducted from the resort's gross transportation system costs. The maximum potential payment of \$1,250,000 is applied.

The increase in State gas tax revenues resulting from the resort should also be considered. Gas taxes are collected from gasoline sales, but the State distributes them to counties based on the number of registered vehicles in the county. The extent to which the resort increases the number of county-wide registered vehicles will determine the increase in gas tax revenues attributed to the resort. Only permanent, year-around residents of the resort are likely to register their vehicles locally. There was no clear method for estimating the increase in the number of register vehicles resulting from the resort, so this impact could not be computed. However, the impact would be quite small. For example, if there were 400 additional registered vehicles, County Road Fund revenue would increase less than \$16,000, which would be insignificant relative to the costs.³⁵

The final cost estimate for the transportation system impacts of the Thornburgh Resort assumes that the resort will apply for trip reductions to lower their SDC payment to a total of \$1.8 million. As shown in Table 5-8, the final cost range is \$20.7 million to \$39.1 million, depending on the impact method used. The higher standards-based figure is used in the final impact analysis because it does a better job of reflecting the full impacts of this development, as discussed previously.

		SDC	Maximum Developer	
Impact Analysis Method	Gross Cost	Payments ⁽¹⁾	Contribution ⁽²⁾	Net Cost
Planning projection-based estimate	\$23,770,450	(\$1,811,568)	(\$1,250,000)	\$20,708,882
Standards-based estimate (LOS=D)	\$42,210,850	(\$1,811,568)	(\$1,250,000)	\$39,149,282

Estimated Net Transportation System Costs for Thornburgh Resort

(1) Assumes alternate SDC calculation method with trip reductions.

(2) Maximum possible contribution towards ODOT expenses at the Cline Falls Hwy/US 20 intersection.

³⁵ For the 2007-08 fiscal year Deschutes County received \$7,963,277 in State Road Funds and had 205,402 registered vehicles, equivalent to \$38.77 per registered vehicle (based on Oregon Department of Transportation, Financial Services, Highway Revenues Apportionment data).

School Facilities Costs

Destination resorts will generate new K-12 school students and additional demand for school facilities. This section looks at the likely impacts of the proposed Thornburgh Resort on the revenues and costs of the Redmond School District. The resort will generate school students both from the new resort housing and from the newcomers attracted to fill jobs created by the resort.

According the current Working Draft of the Deschutes County Comprehensive Plan:³⁶

Schools

One of the basic problems with larger amounts of residential development is that it rarely pays in property taxes for the services that must be provided. This is particularly true for the most expensive public facility--schools. Additional permanent residences require more facilities and teachers. When this plan was written, much of the new development had been provided for seasonal recreation and was therefore not likely to require schools. However, the County was realizing that much of the seasonal development was becoming full-time residences. This forced the school districts to seek additional funds for new buildings and more teachers. In addition, costs rose because many of the new residences were in rural areas and required ever more expensive busing.

Student Generation by Resort Housing

The new, private resort homes that are occupied as primary residences will generate new school students, but the specific level of student generation is unknown. There is no data that clearly differentiate the student generation rate of a private home in a destination resort from a typical new home in the same county. If resort homes are occupied full-time by their owners, they may have a similar demographic profile to other new houses in the area. If they are used as part-time second homes (or vacation homes), they will generate few, if any new students. It is assumed that homes built exclusively for overnight lodging purposes will generate no new students. Therefore, homes designated for overnight lodging are not included in the following analysis.

As described at the beginning of this section, homes used as primary residences were found to constitute 43% of owner-occupied (non overnight) units in the nearby Eagle Crest Resort. This percentage may vary considerably from resort to resort. In order to examine the potential impacts of the proposed Thornburgh Resort, two scenarios are used to model the range of potential student generation by the private, owner occupied homes in the resort:

³⁶ Working Draft Deschutes County Comprehensive Plan, draft of 5-14-08, Page 3-18.

Scenario #1: High student generation. Private, owner-occupied homes in the resort are assumed to generate the same demand as new private homes elsewhere in the County. (Overnight units are assumed to generate no demand.) This scenario may become increasing likely if resort homes are purchased and used as primary residences. The Thornburgh resort has no age limits or household limitations regarding children, so the market will decide who owns these units and how they are used. A continued weak national economy may encourage consolidation of home ownerships, reducing the number of second homes. A weaker economy may also reduce the sizes and prices of future resort homes, making them more attractive to families.

Scenario #2: Low student generation. This is the "vacation resort" scenario. Private, owner-occupied homes in the resort are assumed to be used largely as retirement homes and as second (vacation) homes and to generate only 25% of the new students generated by new homes elsewhere in the County. This scenario would be more applicable if expensive, higher-end housing is constructed, which would favor more-affluent owners and may reduce the number of families with school-age children and increase the percentage of retirees without school-age children.

If a resort were age-restricted (such as 55 and above), it might generate no students from the new homes. However, we are not aware of any destination resorts in Oregon with age restrictions.

In Deschutes County, 16.1% of the population is of K-12 school age, 5 through 17 years of age.³⁷ This is slightly lower than the statewide school-age figure of 16.9% of the population. Applying the percent of school-age children to the occupancy rate of 2.7 for new homes, yields a school-age generation rate of 0.43 students per new house.

State Law requires that destination resorts provide a certain amount of overnight accommodations to assure that they meet their tourism function. In Deschutes County there must be at least one housing unit available for overnight accommodations for every two private, owner-occupied housing unit created at a destination resort. Most resorts build only the minimum number of overnight units, and therefore adhere closely to this ratio. It is not clear that resorts continue to adhere to the minimum number of overnight units once construction is completed, and some overnight units may convert to owner-occupied status.

For the Thornburgh Resort, 950 of the 1,375 housing units will be owner-occupied. A 50-room hotel will be used to meet the balance of the overnight housing requirement. There are no age or demographic restrictions on ownership, so the use

³⁷ The most recent US Census estimates for households in Deschutes County are for 2006. This data includes the incorporated areas of the county.

of these homes will be market-driven. These homes may be used either as primary residences or as second homes (vacation homes).

Table 5-9: Estimated K-12 student generation by residential housing atThornburgh Resort.

	Scenario #1	Scenario #2
Total owner-occupied housing units	950	950
Students generated per housing unit	0.43	0.11
Students generated by resort housing	409	102

Student Generation from Resort Employment

In addition to student generation from the housing in a destination resort, there is a secondary demand resulting from the new jobs created at the resort. These new jobs will attract new households to the area and generate new students. Since the construction jobs are temporary, the number of new students generated by resort employment will fluctuate as households move in and out of the area to meet employment needs.

Employment impacts are addressed in more detail in the *Economic Impacts* section of this report. The direct and induced employment resulting from the Thornburgh Resort is estimated to peak in year six at 2,015 jobs and then decline by 1,471 jobs to a steady level of 544 jobs from year twelve onward. There is no straightforward method for estimating school system impacts resulting from short-term employment. Undoubtedly the students generated by the 1,471 temporary jobs will significantly impact the school system.

This study evaluates the school impacts resulting from only the permanent jobs generated by the resort. These employment-related school impacts are included in order to better account for the full impact resort development has on the local school district. Based on estimates developed in the *Economic Impacts* section, 347 new households will be created by the 408 jobs filled by newcomers.

Table 5-10: Estimated K-12 student generation by newcomers filling permanentjobs at Thornburgh Resort.

Total new housing units for resort-related employment	347
Students generated per housing unit	0.43
Students generated by resort employment	149

Table 5-11 shows total student generation for new resort housing and resort employment. Under Scenario #1, resort housing will generate a similar number of new students as other new housing in Deschutes County, resulting in a total of 558 new students. Under Scenario #2, resort housing will generate only 25% of the students of a typical new house in the County, resulting in a total of 253 new students. These two scenarios provide a reasonable range of 251 to 558 new students generated by the Thornburgh Resort.

Table 5-11: Total K-12 student generation by Thornburgh Resort housing and	d
employment.	

	Scenario #1	Scenario #2
Students generated by resort housing	409	102
Students generated by resort employment	149	149
Total students generated	558	251

School Funding in Oregon

Schools in Oregon are funded primarily by a combination of state and local sources. The primary local source is property taxes. The State School Fund formula determines how much state funding a school district gets. The formula bases the state funding on the number of students served and deducts the local property taxes going to schools. The state funding is directed to school operations, maintenance, repairs and transportation needs. If the local property tax revenues increase due to a new destination resort, the state contribution to local school funding will be reduced by an equal amount. For new students generated by the resort, the district will receive the same funding per student as they do for the rest of their students. Therefore, new developments provide no extra funding to local school districts for general operations.

New school facilities needed to serve growth are funded primarily through issuance of voter-approved local general obligation bonds that are repaid through local property taxes. Local property tax revenues for bond repayment are not deducted from the State's operation funding.

The tax base for the Redmond School District comes from the total assessed values of the District in both Deschutes County and Jefferson County. Table 5-12 shows the total tax base is \$4,937,455,942 for 2008-09.

County	Assessed Value Total 2008-09 ⁽¹⁾
Deschutes County	\$3,594,082,824
Jefferson County	\$1,343,373,118
Total School District Tax Base:	\$4,937,455,942
(1) O B B B B B B B B B B B B B B B B B B	

 Table 5-12: Assessed value for the Redmond School District 2J tax base.

(1) Source: Redmond School District.

Assuming that the Thornburgh Resort is fully built out as planned, the estimated increase in the assessed value of the school district's tax base would be \$374,788,817. At full buildout, Thornburgh would represent 7.1% of the tax base available to the school district. Based on the estimated increase in the total tax base available to the Redmond School District that would be created by the Thornburgh Resort, the resort will pay for approximately 7.1% of facility bonds issued for new construction by the District. This percentage will be deducted from the school facility costs generated by the resort.

School Facility Costs

To estimate the cost of expanding school facilities to increase student capacity, the total costs for new facilities at all grade levels must be determined. The Redmond School District passed a bond in May of 2008 for a new high school and new elementary school. A new middle school was built by the District in 2006. The costs for these new facilities are added to the land values to obtain a total school facility cost for each grade level, as shown in Table 5-13 below.

Grade Level	Building Cost	Land Cost ⁽³⁾	Total School Facility Cost
High school ⁽¹⁾	\$80,000,000	\$13,600,000	\$93,600,000
Middle school ⁽²⁾	\$22,764,955	\$3,000,000	\$25,764,955
Elementary school ⁽¹⁾	\$20,000,000	\$2,600,000	\$22,600,000

Table 5-13: School facility costs.	Redmond School District. 2	2008.
a die 5-15. School lachity costs	, Keumonu School District, 2	2000.

Notes:

(1) Building costs based on a bond issue by the Redmond SD approved by voters May 20, 2008 as Measure 9-56.

(2) Building cost based on Elton Gregory Middle School completed in 2006 for \$20 million. Costs adjusted to 2008 using ENR Construction Cost Index for closest location (Seattle).

(3) Based on actual acreage and a current land value estimate of \$200,000 per acre.

The total school facility cost is divided by the capacity of students for each facility to calculate at cost per unit of student capacity (see Table 5-14).

Grade Level	Total School Facility Cost	Student Capacity ⁽¹⁾	Cost per Unit Student Capacity
High school	\$93,600,000	1400	\$66,857
Middle school	\$25,764,955	804	\$32,046
Elementary school	\$22,600,000	600	\$37,667

Table 5-14: School facility costs per unit student capacity, Redmond SchoolDistrict, 2008.

(1) Capacity for each school from Redmond School District.

The "cost per unit of student capacity" is then distributed across the student generation rate at each grade level for a typical new house in Deschutes County, as shown in Table 5-15. Based on facility costs in the Redmond School District, the total school facilities cost associated with typical new house is \$21,542.

Grade Level	Cost per Unit Student Capacity	Percent of Total Students at Grade Level ⁽¹⁾	Student Generation by Grade Level for New House	School Facility Costs per New House
High school	\$66,857	47%	0.202	\$13,507
Middle school	\$32,046	23%	0.098	\$3,147
Elementary school	\$37,667	30%	0.130	\$4,888
Totals:		100%	0.430	\$21,542

(1) Based on 2007 enrollment data.

Estimated School Facilities Costs for Thornburgh Resort

The Redmond School District does not charge a school excise fee (a development impact fee authorized by the State Legislature) for new and expanded school facilities, so development makes no direct contribution to school facility costs outside of ordinary property tax payments. If the district were to adopt the fee, it could collect up to \$1 per square foot. A new 3,000 square foot house would pay a fee of up to \$3,000.

Based on the high and low student generation rate scenarios (Scenarios #1 and #2), it is possible to estimate the range of total students generated by the destination resort and the resulting total facility costs. The Thornburgh Resort will generate costs for new and expanded school facilities ranging from a low estimate of \$12.6 million to a high of \$27.9 million, as shown in Table 5-16.

Table 5-16: Total facility costs for K-12 student generation by ThornburghResort housing and employment.

	Scenario #1	Scenario #2
Number of primary residences in resort ⁽¹⁾	950	238
Number of new households for permanent employees	347	347
Total new households generating school-age students	1297	585
Total students generated (at 0.43 per house)	558	251
School facility costs per new house	\$21,542	\$21,542
Total school facilities costs (#houses x \$/hse):	\$27,939,974	\$12,591,299

Note (1) Scenario #1 assumes that 950 owner-occupied resort houses will have similar occupancy to typical new houses in Deschutes County, while Scenario #2 assumes that only 25% of resort houses will be similar and the rest will be second homes that generate no school children.

For the final fiscal impact on school facilities, only the student generation from Thornburgh Resort housing was included. Impacts from resort employment were not included in order to be consistent with the rest of the impact study, which did not include secondary or induced impacts. The costs associated with only the resort housing range from \$5 million to \$20 million, as shown in Table 5-17.

Table 5-17: Total facility costs for K-12 student generation by ThornburghResort housing.

	Scenario #1	Scenario #2
Number of primary residences in resort ⁽¹⁾	950	238
Total students generated (at 0.43 per house)	409	102
School facility costs per new house	\$21,542	\$21,542
Total school facilities costs (#houses x \$/hse):	\$20,464,900	\$5,116,225

Note (1) Scenario #1 assumes that 950 owner-occupied resort houses will have similar occupancy to typical new houses in Deschutes County, while Scenario #2 assumes that only 25% of resort houses will be similar and the rest will be second homes that generate no school children.

In order to credit the resort for future property tax payments that would potentially contribute to school construction bonds, the estimated 7.1% contribution to the tax base should be deducted from the school facility costs attributed to the resort (see previous discussion on this). Therefore the net costs for school facilities attributed to the resort range from \$4.8 million to \$19 million, as shown in Table 5-18. To be conservative, the \$4.8 million cost associated with the low-student-generation-rate scenario (Scenario #2) was used in the final cost estimates.

Table 5-18: Net K-12 school facilities costs for Thornburgh Resort after deducting future property tax contributions.

	Scenario #1	Scenario #2
Total school facilities costs:	\$20,464,900	\$5,116,225
Future property tax contribution (at 7.1%)	(\$1,453,008)	(\$363,252)
Net school facilities costs:	\$19,011,892	\$4,752,973

Net School Facilities Costs

Fire & EMS System Costs

The Thornburgh resort would receive fire and emergency medical service (EMS) services from the Deschutes County Rural Fire Protection District #1 (DC RFPD#1). Four of the ten existing land parcels that make up the proposed Thornburgh Resort are located within the boundaries of the Fire District and the remaining 6 parcels have been recently annexed within the District at the request of the resort developer.

Deschutes County Rural Fire Protection District #1 does not independently provide fire and EMS services, but rather has entered into a cooperative agreement with the City of Redmond to jointly provide Fire Protection and EMS services to both City and District residents through Redmond Fire and Rescue (RF&R). With an annual budget of \$6,483,074 and utilizing the services of 40 career and 23 volunteer fire fighters, Redmond Fire and Rescue provides fire and EMS services to the 42,000 residents of its 145 square mile service area (450 square miles for ambulance service).³⁸ To do this it operates four fire stations: The Headquarters Station located within Redmond proper; the Airport Station at Roberts Field; and the Cline Falls and Terrebonne Fire Stations within DC RFPD#1.

Operational Capacity

Assessing the capacity of a fire department is a difficult task. First, it is impossible, for both fiscal and operational reasons, to have a fire department of sufficient size to meet all possible operational situations. Second, the random nature of emergency calls makes establishing a reasonable base level of service difficult. In 2007 RF&R experienced 4,253 dispatched 9-1-1 service calls, 2,864 in the city of Redmond and 1,388 rural calls.³⁹ This included 2,894 EMS calls, 830 fire calls and 511 medical transfers. While this averages out to roughly 12 calls per day, or 3 calls per station per day, these call levels are not consistent. They can come in bunches as well as one at a time. Several years ago, a single arsonist, starting fires along Highway 97 managed to overtax the fire departments in three Central Oregon counties.⁴⁰

The impression from Chief Knorr's report on RF&R operations in the agency's 2007 Annual Report is that of an organization operating within its capabilities. Yet one of the unfunded budget requests in the FY 2008-09 RF&R Budget was for three additional firefighter/paramedics to staff a second ambulance to handle nonemergency medical transfers. Because this went unfunded, the Terrebonne position

³⁸ 2007 Annual Report, Redmond Fire & Rescue, page 11 and data provided by RF&R staff.

³⁹ 2007 Annual Report, Redmond Fire & Rescue, page 3.

⁴⁰ From phone conversation with Redmond Fire and Rescue staff.

is vacant and they are unable to respond to calls for these transfers.⁴¹ It appears that the Redmond Fire & Rescue has sufficient capacity to provide a reasonable level of Fire Protection for the 42,000 residents living and working within its 145-square mile area of responsibly. Whether the RF&R has sufficient un-utilized operational capacity to provide additional fire protection for the residents of the Thornburgh Resort is not clear.

Capital Costs

The combined operation provides one fully-equipped fire station for every 10,500 residents.⁴² In order to apply this current population-based service standard to the resort, an "effective population" was used that reflects the number of structures at the resort requiring fire protection. This population figure is the number of people typically associated with these structures in the County and is not intended to represent the actual population of the resort at any given time.⁴³ As shown in Table 5-19 the Thornburgh Resort would have an effective population for Fire/EMS demand of 3,813. To meet the standard of one station for every 10,500 people, an additional 36.3% of a fire station would need to be provided to meet the demand Thornburgh places on the capacity of Redmond Fire & Rescue.

Type of Housing Unit	Number of units	Persons per unit ⁽¹⁾	Persons per Type ⁽²⁾
Hotel	50	2	100
Residential Overnight Units ⁽³⁾	425	2.7	1,148
Houses	950	2.7	2,565
	Estimated Po	pulation:	3,813

Table 5-19

Thornburgh Effective Population Estimate for Fire/EMS System Demand

Notes:

(1)Hotel room occupancy figure is an estimate. The 2.7 figure used is the residential occupancy rate for new homes in Deschutes County.

(2) Number of Units x Persons per Unit.

(3) These are the housing units that would be subject to a deed restriction requiring that they be available for short term rental at least 38 weeks a year.

⁴¹ Section 2, Fire Fund, City of Redmond FY 2008-09 Budget, page 5

⁴² It would be preferable to use number of addresses or type or number of structures located within the district as the main metric in an evaluation of this type, but as Redmond Fire & Rescue does not have that data we were limited to what is available, which is population data.

⁴³ In the case of fire protection, all buildings (empty as well as occupied) have the potential of placing demand on the capacity of the system. "Effective population" was used here to reflect the number of structures in the resort, relative to those serving the general population. This population figure is different than the figure used in estimating the demand Thornburgh would place on public safety or public parks. In the case of public safety or the park system, it is people who place demand on the capacity of the system.

The Terrebonne Fire Station opened in August of 2007 and is the newest station in the Redmond Fire and Rescue system. It cost \$1.3 million dollars to construct. The cost of constructing a similar station in 2008 is about \$1,362,920.⁴⁴ This station is staffed 24/7 by 6 firefighters and has the equipment listed in Table 5-20.

Table 5-20

Fire Apparatus at Terrebonne Fire Station

	0
Equipment Type ⁽¹⁾	Cost
Light Rescue Truck ⁽²⁾	\$70,000
Light Brush Truck (Type 6 Fire Engine) ⁽³⁾	\$80,000
Heavy Brush Truck ⁽⁴⁾	\$150,000
Fire Engine ⁽⁵⁾	\$250,000
Ambulance ⁽⁵⁾	\$150,000
Total	\$700,000
Notes	

(1) Equipment list provided by staff at the Terrebonne Station. In addition to the apparatus listed that station also has a boat to facilitate access to parts of Smith Rock Park.

(2) The cost figure was estimated using prices for used equipment currently listed on the Internet.

(3) The \$80,000 is the amount budgeted to purchase the truck.

(4) The cost figure was estimated using prices for used equipment currently listed on the Internet.

(5) The cost value used was provided by RF&R staff.

The combined cost of constructing a new station and providing it with the same type and number of apparatus is about \$2,062,920.⁴⁵ Based on the estimated need to provide 36.3% of a new fire station to serve the Thornburgh Resort, the total capital cost for providing Fire Protection services to the resort is about \$748,840.

Oregon Law does not permit the imposition of System Development Charges or impact fees to recover the Fire/EMS system capital costs associated with new development. Therefore, these capital costs for expanding the system will fall on all of the property owners within the DCRPD#1, not just those in the Thornburgh Resort.

One of the projects RF&R has been undertaking is researching the feasibility of a fire station in DCRFPD#1's southern area. Due to prudent fiscal planning the DCRFPD#1 has \$840,800 in its building reserve fund and \$77,250 in its equipment

⁴⁴ Adjusted using the ENR Construction Cost Index for the nearest city (Seattle).

⁴⁵ In addition to the fire house structure and the fire apparatus there are a large number of other items that are needed for a fully functioning Fire Station. Items such as beds, stove, washer-dryer, hoses, breathing apparatus, tools, lights, hose nozzles, etcetera, were not included in this cost estimate.

reserve.⁴⁶ However, that is much less then the \$2,062,920 needed to build and equip an additional fire station in the District's southern operating area, particularly as those funds would also be needed to cover the eventual replacement of existing buildings and equipment.

To obtain the final net fire/EMS system costs, estimated future contributions to the District tax base from the resorts are deducted from the cost above. If fully developed, the Thornburgh Resort would represent 22% of the DCRFPD#1 tax base. Deducting the contribution through future tax payments, leaves a net cost for fire/EMS facilities of \$580,813, as shown in Table 5-21.

Table 5-21: Net fire/EMS facility cost for Thornburgh Resort after deducting future property tax contributions.

Net Fire/EMS Facilities Costs	
Total fire/EMS facilities cost:	\$748,840
Future property tax contribution (at 22%)	(\$168,027)
Net fire/EMS facilities cost:	\$580,813

Operational Costs

Redmond Fire & Rescue has an annual budget of \$6,487,876 of which \$5,830,680 is allocated for department operations.^{47,48} That amount includes the replacement of the division commander's vehicle and \$27,000 to replace four ambulance gurneys and similar operational expenses. For the service district population, this operations cost amounts to \$138.83 per resident per year.

For the estimated 3,813 Thornburgh residents, it should take about \$529,359 to maintain this level of service. It is important to note that 18 of the firefighter positions in the RF&R are to be filled by volunteers. As such, the value of their labor is not included in that operational cost.⁴⁹ At this time, finding individuals with the interest, ability and commitment necessary to become volunteer firefighters is not easy.

As reported in the *Revenues* section of this report, Thornburgh Resort property owners will pay an estimated \$637,731 in property taxes to the DCRFPD#1. This exceeds the estimated cost of \$529,359 needed to provide the current level of service

⁴⁶ DCRFPD#1 FY 2008-09 Annual Budget

⁴⁷ Section 2, Fire Fund, City of Redmond FY 2008-09 Budget, page 4

⁴⁸ Ibid

⁴⁹ Section 2, Fire Fund, City of Redmond FY 2008-09 Budget, page 2

for those residents. The revenue surplus of \$108,372 would not be adequate to meet the capital costs to build and equip the additional fire station infrastructure necessary to serve the resort.

There is another non-monetary operational cost that the rest of the District residents will bear, at least in the short term, because of the development of the Resort within their District: A reduction in the level of service caused by increased driving time. The Thornburgh resort is located at the extreme edge of the district's southwest boundary and, as a result, fire and EMS vehicles going to and coming from Thornburgh will have longer response times to call in other parts of the district. The construction of an additional fire station in the southern part of the DCRFPD#1's operating area should mitigate some of this negative impact.

Additionally, as the proposed Thornburgh Resort is not intended for permanent full time residents, it is not a likely source of additional volunteer firemen and this burden will fall on the other full-time residents of the District. So while the property taxes should adequately cover the day-to-day costs of providing fire protection for the Thornburgh resort, the need to provide volunteer firefighters and to bear the major portion of the capital cost of constructing and equipping an additional station as well as a reduction in service due to extended travel times until it is built means that in the final analysis the current residents of the Deschutes County Rural Fire Protection District #1 would incur net costs if the Resort is constructed.

Public Safety System Costs

Public safety involves many different functions, including patrols, prosecution, incarceration, parole, 911 services, courts, and others. Some resorts provide their own onsite security and patrol services. Sunriver, Black Butte and Pronghorn are examples. Some, such as Eagle Crest provide limited onsite security. These services lack the police powers of the Sheriff's officers and are therefore a limited substitute for County public safety services.⁵⁰ Thornburgh Resort has not indicated that it will provide any onsite security, so security and patrols are assumed to be provided by the Sheriff's Department.

To estimate the impacts of the Thornburgh Resort on public safety facilities and services, data is needed on public safety facility costs and the Sheriff's Department operating budget. This analysis was complicated by the many different public safety functions and the lack of usable facility cost data.

There are three Sheriff's substations that serve unincorporated Deschutes County: Terrebonne, Sisters and La Pine substations. There is no facility cost data for any of these since two are being leased (Sisters and Terrebonne) and one is part of the South County Building that contains multiple uses. The service area for the substation also cannot be determined, since they have no particular boundaries and overlap coverage. The Thornburgh Resort could be served by either the Sisters or Terrebonne substation. In addition, the main Sheriff's office in Bend provides services for the unincorporated area near Bend.

Public safety functions include:

- 911 County Service District
- Adult Parole and Probation
- Community Justice Juvenile
- District Attorney's Office
- Justice Court
- Sheriff's Office
- Deschutes County Adult Jail

Public safety facilities must be adequate to handle peak demands at the height of tourist season. There is very little opportunity to adjust or downsize the system for off-peak periods. For this reason, public safety facilities must have capacity to serve the resort during peak occupancy.

⁵⁰ Private security services are limited in their ability to arrest, detain and use force and do not replace the need for true law enforcement services.

The Deschutes County Adult Jail was built in 1994 and has a capacity of 228 beds. According to the *Corrections Needs Assessment: Deschutes County*, Volume One, Master Plan (January 26, 2006),⁵¹ the capacity of the jail is currently being exceeded. The 2005 average daily population (ADP) was estimated to be 270 inmates. Modeling of future jail demand results in a projected ADP of 578 in the year 2015, increasing to 818 in 2025. A two-phased plan is proposed for meeting current and future jail expansion needs.

Allowing for fluctuations in jail bed demand, the first phase of development would address projected corrections needs through year 2015 at 690 beds, with occupancy of expanded facilities assumed to occur, in the year 2010. A second phase of development would then address projected corrections needs through the year 2025 at 975 beds, with facility occupancy assumed to occur in the year 2020. The cost for phase one is \$70,989,839. Phase two, to be constructed starting in 2020, will cost approximately \$54 million.

Deschutes Jail Expansion Master Plan ⁽¹⁾				
Year	Population Estimate ⁽²⁾	Existing Jail Beds	ADP ⁽³⁾	Jail Beds Needed ⁽⁴⁾
2005	143,053	228	284	349
2010	166,572	690	427	520
2015	189,443	690	578	690
2020	214,145	975	689	820
2025	240,811	975	818	975

(1) Corrections Needs Assessment: Deschutes County, Volume One, Master Plan and Volume Two, Technical Appendices, January 26, 2006.

(3) ADP is average daily population from page D.3.3 of Corrections Needs Assessment. Current values for

(4) Includes capacity to handle daily fluctuations (peaking factor).

Based on the estimated population increase of 3,688 people resulting from the peak occupancy of the Thornburgh Resort (Table 5-23) and the cost for the associated increase in jail capacity, at \$1,129 per person (Table 5-24), the associated cost for jail capacity is \$4,163,752. Note that jail facility costs are assigned on a population-weighted basis and do not assume that resort residents will be more or less likely to be incarcerated than average residents. In principle, all residents benefit equally from the increased safety that adequate jail facilities provide.

⁽²⁾ Based on Deschutes County 2000-2025 Coordinated Population Forecast.

ADP are higher than actual to include early releases.

⁵¹ Corrections Needs Assessment: Deschutes County, Volume One, Master Plan and Volume Two, Technical Appendices, January 26, 2006. See <u>http://www.co.deschutes.or.us/go/objectid/29B167F2-BDBD-57C1-9A456F288808D927/index.cfm</u>.

Table !	5-23
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Type of Housing Unit	Number of units	Persons per unit ⁽¹⁾	Peak Occupancy Rate ⁽²⁾	Persons per Type ⁽³⁾
Hotel	50	2	90%	90
Residential Overnight Units ⁽⁴⁾	425	2.7	90%	1,033
Houses	950	2.7	100%	2,565
Estimated Population:			3,688	

Thornburgh Peak Population Estimate for Public Safety System Demand

Notes:

(1)Hotel room occupancy figure is an estimate. The 2.7 figure is the residential occupancy rate for a new house in Deschutes County. This occupancy rate is applied to overnight housing as well, even though many resort rentals show capacity for 8 to 12 persons.

(2) The peak occupancy rates used for the hotel and overnight units are those used to generate the transient room tax data.
 (3) Number of Units x Persons per Unit x Occupancy Rate.

(4) These are the housing units that would be subject to a deed restriction requiring that they be available for short term rental at least 38 weeks a year.

Table 5-24

Jail Expansion Costs Associated with Population Growth

Phase One Cost ⁽¹⁾	\$70,989,839
Increase in Beds	462
Cost per New Bed:	\$153,658
Increase in Needed Beds, 2005-2015	341
Cost for increase in needed beds,	
2005-2015	\$52,397,262
Cost per capita for population growth,	
2005-2015 ⁽²⁾	\$1,129

Cost to meet projected needs in 2015 per *Corrections Needs Assessment: Deschutes County*, Volume One, Master Plan and Volume Two, Technical Appendices, January 26, 2006.
 Population growth for this period was based on the official population forecast for Deschutes County provided in the Appendix.

To estimate the costs for other public safety facilities (other than jail facilities), the 2008-09 Deschutes County Capital Asset Query File was used to compile capital costs. It was impossible to determine values for all facilities because some are shared facilities that provide multiple functions and there was no way to separate out the public safety components. These facilities are indicated as zero-values in Table 5-25.

Table 5-25 provides the most complete listing possible from the Capital Asset database. Each facility cost was adjusted to 2008 building costs using the ENR Construction Cost Index for the year in which the asset was built or purchased to obtain an estimated current replacement value. The total estimated replacement value of public safety facilities is \$22.5 million. This total does not include some shared facilities nor any rented facilities. Land values, patrol cars and Sheriff's equipment costs were adjusted for inflation to 2008 values.

Table 5-25

Value of Existing Public Safety Facilities (Excluding Jail) ⁽¹⁾ Source: Deschutes County 2008-09 Capital Asset Query File				
(A	II buildings and improvements adjusted to 2	008 values using ENR	Construction Cost In	dex)
Dept Code (Location Code)	Facility/Dept Name	Buildings and Improvements	Land Improvements	Total Facility Value ⁽²⁾
21	Civil/Special Units	\$0	\$0	\$0
29	Automotive/Communiciations	\$0	\$45,536	\$45,536
33	Investigations/Evidence	\$7,653	\$0	\$7,653
34	Patrol	\$18,214	\$0	\$18,214
35	Records	\$0	\$0	\$0
38	Court Security	\$0	\$0	\$0
39	Emergency Services	\$0	\$0	\$0
41	Special Services	\$7,819	\$0	\$7,819
43	Training	\$0	\$132,266	\$132,266
75	911 General Operations	\$200,727	\$0	\$200,727
82	Adult Parole/Probation	\$152,855	\$70,222	\$223,077
45	Non-Departmental ⁽³⁾			
45(170002)	Sheriff's Office Building	\$3,863,921	\$0	\$3,863,921
45(170202)	Juvenile Community Justice Bldg	\$10,929,783	\$0	\$10,929,783
45(170302)	Regional Correctional Building	\$3,567,591	\$0	\$3,567,591
	Facilities Subtotals:	\$18,748,562	\$248,024	\$18,996,586
170***	Patrol Cars (V04) ⁽⁴⁾			\$1,688,946
170***	Sheriff Equipment (SE) ⁽⁴⁾			\$488,409
170100	Land for Public Safety Bldg (LA) ⁽⁴⁾			\$1,359,059
	Total Capital Value:			\$22,532,999

Notes:

(1) Three Sheriff's Substations were not included because they are rented or shared facilities. Other shared facilities also were not included.

(2) Total costs do not include the values of any shared facilities or facilities used for public safety purposes that are rented, such as the Terrebonne and Sisters Substations.

(3) Only public safety facilities were included from this department code.

(4) Cars, equipment and land costs adjusted for inflation to 2008 values using the Consumer Price Index.

To arrive at a per-capita cost for public safety facilities (not including jail cost), the total of facilities values of \$22.5 million (from Table 5-25) were distributed across the entire County population. The full County 2008 population of 156,733 persons

was used because most of the facilities serve the entire County.⁵² The per-capita cost for these public safety facilities is \$144. Based on the demand resulting from the assumed peak population of the Thornburgh Resort of 3,688 persons (Table 5-23), the incremental cost for expanding these facilities to serve the resort is \$531,072.

As shown in Table 5-26, the total public safety facility costs associated with the Thornburgh Resort is \$4,694,824. It is important to note that the cost value is understated due to the lack of data mentioned previously.

Total Public Safety Facility Costs for Thornburgh Resort			
	Per New	Ear Docort	
		¢4 162 750	
Other Public Safety Facilities	φ1,129 \$144	\$531 072	
Total Cost:	ΨΤΗ	\$4.694.824	

Table 5	-26
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To obtain net public safety facility costs, estimated future tax contribution by the Thornburgh Resort are deducted from the cost in Table 5-26. At full buildout, the resort would represent 2.2% of the County's tax base and would fund the same percentage of County facility costs. As shown in Table 5-27, the net cost for public safety facilities is \$4,591,181.

Table 5-27: Net public safety facility cost for Thornburgh Resort after deducting
future property tax contributions.

Net Public Safety Facilities Costs		
Total public safety facilities cost:	\$4,694,824	
Future property tax contribution (at 2.2%)	(\$103,643)	
Net public safety facilities cost:	\$4,591,181	

⁵² Exceptions are the patrol cars and patrol facility cost, which serve primarily the unincorporated area. These costs are relatively small, so the error is negligible, but the effect is to slightly lower public safety costs attributed to the resort.

Cost of Public Safety Services

The actual amount spent for the Sheriff's office for the budget year ending June 30, 2008 was \$26,844,500.53 This expenditure was allocated to countywide and rural service districts as shown in Table 5-28. The cost for each district was divided by the 2008 population for the district to arrive at per-capita costs. Rural unincorporated residents received service from both districts, so the total per-capita cost is \$295 per year. For the estimated 3,688 peak residents of Thornburgh Resort, the cost to provide public safety services is approximately \$1,087,960 per year.

Sheriff's Department 2008 Operations Costs ⁽¹⁾				
District	Expenditure	Population Served	Per-Capita Cost	
Countywide District	\$15,908,322	156,733	\$102	
Rural District	\$10,936,178	56,609	\$193	
			1	

Table 5-28

\$26.844.500 Total \$295 (1) Comprehensive Annual Financial Report, Deschutes County, Oregon, For the Fiscal Year

Ended June 30, 2008, pages 63 and 64.

As shown in Table 5-29, the total estimated annual public safety revenues from the proposed Thornburgh Resort are \$1,310,884. This is about \$223,000 more than the estimated costs to serve the resort. The surplus is due to the allocation of 73% of all room taxes to law enforcement, as described in the Revenues section.

Table 5-29

Estimated Public Safety Revenues from Thornburgh Resort

Revenue Source	Revenue ⁽¹⁾
Countywide Law Enforcement	\$345,368
Rural Law Enforcement	\$508,963
911 Service	142,437
Share of resort room taxes to law enforcement	\$314,116
Total:	\$1,310,884

(1) From Table 4-4 in Revenues section.

⁵³ Comprehensive Annual Financial Report, Deschutes County, Oregon, For the Fiscal Year Ended June 30, 2008, pages 63 and 64.

Parks & Rec. System Costs

The Thornburgh Resort is within the Boundaries of the Redmond Area Park and Recreation District (RAPRD). The District is supported through a combination of user fees and property taxes. The District operates the Cascade Swim Center, with a 25 meter indoor pool, the RAPRD Activity Center with indoor basketball, volley ball courts and batting cage; and multipurpose activity room; the High Desert Sports Center with 4 softball fields a BMX track and a Remote Control Airplane Landing field; Borden Beck Wildlife Preserve a 26-acre park and nature preserve located along the Deschutes River, and Historical Tetherow Crossing, an 11-acre Deschutes River-front park.

The recreational opportunities offered by RAPRD at its swim and activity centers directly duplicate those that would be available to Thornburgh residents and guests at Resort-owned and operated facilities. As those facilities are closer and should be available at little to no out-of-pocket expense, it is likely that Thornburgh residents and guests would use the resorts facilities rather then driving long distances to a similar RAPRD facility. Thus it is reasonable to conclude that the Thornburgh Resort would have no measurable impact on the operation of the RAPRD Aquatics and Activity Centers.

The facilities provided by the High Desert Sports Center are not duplicated at the Thornburgh Resort. But as the resort is intended to provide short term rentals, and vacation or second homes, it is not likely that many of the residents would be participating in local softball leagues or otherwise using these facilities. The one possible exception would be out of area teams renting a house or houses to stay in while participating at a tournament hosted by the High Desert Sports Center or Cascade swim Center. However, if that should occur, it would be more accurate to say that the sports complexes were utilizing the short term housing capacity of the Resort rather than Resort residents utilizing the capacity of the sports complexes. Thus it is reasonable to conclude that the Thornburgh Resort would have no significant impact on the operation of the High Desert Sports Center.

While the resort does intend to provide open space for the use of residents and guests these facilities do not duplicate those provided by Borden Beck Wildlife Preserve and Historical Tetherow Crossing Park. The Deschutes River is one of the significant tourist attractions in Central Oregon. The Thornburgh Resort does not have any river frontage and both of these parks include extensive Deschutes River frontage. For this reason it is reasonable to assume that residents and guests of the Thornburgh Resort would utilize these two parks.

Capital Costs

The flexible nature of park facilities such as the Borden Beck Wildlife Preserve and Historical Tetherow Crossing Park makes it difficult to determine the maximum number of users that could utilize them at a time. Thus making a determination of whether they are at, over, or below capacity difficult to impossible. It is however, relatively easy to determine what the current level of service that is being provided by these two parks to the 32,000 residents of the Redmond Area Park and Recreation District, and from that determine the amount of similar river front park acreage that would be needed to maintain that level of service.⁵⁴ Currently RAPRD provides 1.156 acres of open space per 1,000 residents.⁵⁵

Parks and Open Space Operated by RAPRD		
Facility	Acreage	
Borden Beck Wildlife Preserve	26	
Historical Tetherow Crossing Park	11	
Total Acreage	37	

Park and recreation facilities receive peak demand in the summer months, the same time that resort occupancy will peak. The limited data available for the proposed Thornburgh Resort does not contain any demographic or population figures, but it is possible to arrive at a peak population estimate for the resort by working from the number of planned housing units, as shown in Table 5-31. If the advertisements for vacation rentals in the greater Redmond area are any indicator of the occupancy rates, the estimate for the occupancy of residential overnight units of 2.7 persons may be low. Many of these ads indicate that rental homes sleep from 8 to 12 persons.

⁵⁴ Population figure was provided by RAPRD staff.

 $^{^{55}}$ (37 acres/(32000/1000) = 1.156 acres per thousand residents

Table	5-31
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Type of Housing Unit	Number of units	Persons per unit ⁽¹⁾	Peak Occupancy Rate ⁽²⁾	Persons per Type ⁽³⁾
Hotel	50	2	90%	90
Residential Overnight Units ⁽⁴⁾	425	2.7	90%	1,033
Houses	950	2.7	100%	2,565
Estimated Population:			3,688	

Thornburgh Peak Population Estimate for Park System Demand

(1)Hotel room occupancy figure is an estimate. The 2.7 figure used is for the residential occupancy rate for a new house in Deschutes County.

(2) The peak occupancy rates used for the hotel and overnight units are the same as those used to generate the transient room tax data.

(3) Number of Units x Persons per Unit x Occupancy Rate.

(4) These are the housing units that would be subject to a deed restriction requiring that they be available for short term rental at least 38 weeks a year.

To meet the current standard of 1.156 acres per 1000 residents, the RAPRD would need to acquire an additional 4.26 Acres of parkland with river frontage for the estimated 3,688 new Thornburgh residents. At an acquisition cost of \$250,000 an acre,⁵⁶ that 4.26 acres would cost the district \$1,065,000.

As RAPRD does not impose a Systems Development Charge for Parks the money for this land acquisition would need to come from District Reserve Funds, operating revenues, a Parks Bond or some combination thereof. Given the current political climate and the funds available to the district it is unlikely that this land acquisition would happen. So rather than paying to meet this new demand for service, the existing residents would likely experience a reduction in the level of service. The new level of service would be lowered to 1.036 acres per 1000 residents.

Crediting the Thornburgh Resort for future property tax contributions (assuming full buildout), results in a net cost for parks and recreation facilities of \$463,562, as shown in Table 5-32.

⁵⁶ Replacement Land cost was provided by RAPRD staff.

Table 5-32: Net parks and recreation facility cost for Thornburgh Resort after deducting future property tax contributions.

Net Parks and Recreation Facilities Costs	
Total parks and recreation facilities cost:	\$1,065,000
Future property tax contribution (at 56%)	(\$601,438)
Net parks and recreation facilities cost:	\$463,562

Operating Costs

As it is unlikely (for the reasons provided above) that Thornburgh residents would be utilizing the Cascade Swim Center, the RAPRD Activity Center, or High Desert Sports Center, there should not be any additional operational costs caused by the resort's demand on the capacity.

As for the Borden Beck Wildlife Preserve and Historical Tetherow Crossing Park, which are more likely to be utilized by Thornburgh residents, they do not currently generate General Fund operating expenses. Historic Tetherow Crossing Park is in the public planning phase of development and the limited operations of the Wildlife Preserve are supported by gifts, donations and inter-fund transfers to a special fund. This year the fund's \$400-dollar beginning balance was supplemented by a transfer of \$500 from the District's General Fund. On the expenditure side, a total of \$500 dollars⁵⁷ has been budgeted for Materials and Services out of the fund's \$900-dollar balance. The salary and benefits for the minimal Groundskeeper labor are absorbed into that of the rest of the District's operations. This breaks down to \$15.63 per thousand residents.

Assuming that the per-capita cost generated by new users is equal to the current percapita cost, and no new acreage is provided, then the increased operating cost resulting from the 3688 peak Thornburgh residents is \$57.63.

If the additional 4.26 acres is added to the park so as to maintain current levels of service, then an additional \$81.91 would be needed to provide the same level of operations and maintenance expenditures that the Wildlife Preserve currently receives.

Conclusion

Thornburgh property owners will be paying taxes toward the Redmond Area Parks and Recreation District amounting to an estimated \$135,130 per year. This greatly

⁵⁷ The actual expenditure for FY 2006-07 was \$551 (RAPRD 08-09 Annual Budget).

exceeds the \$57.63 operating cost associated with meeting their demand on parks capacity.

In terms of level of service, District residents would likely see a small drop from 1.156 acres to 1.036 acres per 1000 residents. There is a limit to how many development projects similar to the Thornburgh Resort could be constructed within the District's boundaries before the cumulative negative impacts caused by reductions in the level of service are felt by the current population.

General Government Facilities

The costs for expanding Deschutes County's general government facilities to accommodate the Thornburgh resort are calculated in this section. None of the infrastructure or facility costs addressed on other sections of this report are included here, so there is no duplication of costs.

Deschutes County's Capital Asset Data File was used to identify the costs of all County facilities purchased or built since 1978 (Table 5-33). This database does not include the road system or facilities operated by independent districts, such as schools, fire, and parks. Note that the County rents some facilities, so these costs will not be included here. The costs for each of these facilities were adjusted to reflect 2008 replacement values using the ENR Construction Cost Index and the BLS Consumer Price Index. Facilities for the Sheriff's Office and the County Jail were removed from this list, as they were already included in the *Public Safety Impacts* section of this report.

Table 5	5-33
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Deschutes County General Government Facilities Costs ⁽¹⁾					
	(All	costs adjusted to	2008 values)		
	Buildings and	Land		Vehicles,	
	Improvements	Improvements		Equipment	
Facility	(BU, BI)	- (LI)	Land	and Other	Total Value
All County Facilities	\$120,614,699	\$34,384,960	\$18,388,936	\$115,653,683	\$289,042,278
Deduct Sheriff & Jail	(\$31,681,617)	(\$325,792)	(\$1,359,059)	(\$2,177,355)	(\$35,543,823)
County-(Sheriff & Jail)	\$88,933,082	\$34,059,169	\$17,029,877	\$113,476,328	\$253,498,455

(1) Includes all facilities and equipment purchased since 1978. Buildings and Land Improvement values adjusted with CCI. Land and Equipment values inflated with CPI. Sheriff and Jail facilities were addressed under Public Safety Impacts.

The new population added by the Thornburgh Resort that would require general county services was assumed to be limited to the occupants of primary residences. As previously describe in this report, primary residences were found to comprise 43% of the owner-occupied housing at the nearby Eagle Crest Resort, so this figure was applied to Thornburgh. Other property owners at Thornburgh who have second homes may also used County services and facilities, but this impact was considered to be relatively minor. As shown in Table 5-34, the estimated population in primary residences at Thornburgh is 1,103 persons.

Table 5	5-34
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Thornburgh Population Estimate for General Government Facilities Demand

	Number	Persons	Percent Primary	
Type of Housing Unit	of units	per unit ⁽¹⁾	Residences ⁽²⁾	Population ⁽³⁾
Owner-Occupied Houses	950	2.7	43%	1,103

Notes:

(1) The 2.7 occupancy rate is for a new houses in Deschutes County.

(2) Percent primary residences is based on an analysis of tax records for the Eagle Crest Resort.

(3) Number of Units x Persons per Unit x % Primary Residences.

Based on the per-capita value of existing County facilities of \$1,617 shown in Table 5-35, the cost of expanding general government facilities in Deschutes County to accommodate the Thornburgh Resort is estimated to be \$1,783,984.

Table 5-35

General Government Facilities Costs Associated with Thornburgh Resort

Countywide General Government Facilities	
Cost (Tbl 5-33)	\$253,498,455
2008 County Population(1)	156,733
Per-Capita Facilities Cost	\$1,617
Thornburgh Population Estimate (Tbl 5-34)	1,103
General Gov. Facil. Cost:	\$1,783,984

(1) From Coordinated Population Forecast.

Since the resort will make future tax payments to the County, those payments should be deducted from the facilities cost in Table 5-35. When fully built out, Thornburgh Resort will represent approximately 2.2% of the County's tax base and will therefore fund 2.2% of these facility costs. The net cost for general government facilities after deducting future tax revenues is \$1,744,601, as shown in Table 5-36.

Table 5-36: Net general government facility cost for Thornburgh Resort after deducting future property tax contributions.

Net General Government Facilities Costs	
Total general gov. facilities cost:	\$1,783,984
Future property tax contribution (at 2.2%)	(\$39,383)
Net general gov. facilities cost:	\$1,744,601

The costs and revenues associated with general government services were not estimated in this study, as there are many types of services and it would have been very difficult to determine how much demand for each of these services would be created by the Thornburgh Resort.

6. Fiscal Impact Summary

The section compares the costs and the revenues calculated in the previous sections to determine the net fiscal impacts for the proposed Thornburgh Resort.

Revenue Summary

Table 6-1 summarizes the total gross annual tax revenues that are estimated for the Thornburgh Resort. Combined property and room tax revenues total \$5,521,419 per year. These gross revenues go to pay for all of the services and facilities provided by local government to the resort and therefore do not represent a net windfall. As shown below, these revenues are more than offset by the infrastructure costs created by the resort.

Revenue Summary		
Revenue Category	Revenue	
Property Tax Revenue	\$5,091,123	
Total Room Tax Revenue	\$430,296	
Total Annual Revenues	\$5,521,419	

Table 6-1: Annual	revenue summary	for	Thorn	burgh	Resort.
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Costs of Facilities

As shown in Table 6-2, the total net cost for the five categories of infrastructure required by the Thornburgh Resort is estimated to be \$51,284,705. These are effectively one-time costs to local governments that are "due" upon completion of the resort. As noted previously in the text, some of the transportation system costs will be incurred by the State, so not all of these costs will accrue to Deschutes County and its various districts.

Table 6-2: Net cost summary for infrastructure required by Thornburgh Resort.

Category of Facility	Net Cost Estimate ⁽¹⁾
Transportation System	\$39,149,282
School Facilities ⁽²⁾	\$4,752,973
Fire & EMS Facilities	\$580,813
Public Safety Facilities	\$4,591,181
Parks & Rec. Facilities	\$463,562
Gen Gov. Facilities	\$1,744,601
Total Net Cost:	\$51,284,705

Net Facility Cost Summary

(1) Net costs are total gross costs, minus any payments or revenues from the resort that fund infrastructure, including future tax payments and SDCs.

(2) The school cost figure is for the lower estimate of student generation in Scenario #2.

Services Impacts

The costs to provide ongoing services were calculated for three of the six impact categories and compared with the tax revenues generated for that same category. It was not practical to calculate comparative values for schools, transportation and general government, as described previously. Table 6-3 summarizes the revenues and costs and gives a net impact for each category of service. The net impacts are positive for each category. The total net impact is a surplus of \$466,344 per year. This accrues to the County and its service districts, since each of these services is funded exclusively by either the County or the service district.

Net Annual Services Impacts for Thornburgh Resort						
Category of Service	Revenue Estimate	Cost Estimate	Net Impact			
Transportation System ⁽¹⁾	NA	NA	NA			
School Facilities ⁽¹⁾	NA	NA	NA			
Fire & EMS Facilities	\$637,731	(\$529,359)	\$108,372			
Public Safety Facilities	\$1,310,884	(\$1,087,960)	\$222,924			
Parks & Rec. Facilities	\$135,130	(\$82)	\$135,048			
Totals:	\$2,083,745	(\$1,617,401)	\$466,344			

Table 6-3: Net annual services impact for Thornburgh Resort.

(1) Direct revenue and service costs were not be calculated for these categories because they are funded from a combination of sources (Federal, State and County) and revenues from the resort could not be determined.

Fiscal Impact Conclusions

The net \$51.28 million in infrastructure costs associated with the Thornburgh Resort greatly overshadow the \$466,344 annual surplus for County services.

In order to consider the overall net fiscal impacts of the resort, the annual surplus for County services was converted to an equivalent amount of capital that could be financed with this cash flow. The \$466,344 surplus could service interest and principal payments on a 20-year loan at 6% interest for \$5.35 million. Assuming this surplus was used for this purpose, the \$51.28 million in infrastructure costs could be reduced to \$45.94 million, as shown in Table 6-4.

Table (5-4
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Net Fiscal Impact of Thornburgh Resort				
Net Infrastructure Cost Less Capital Equivalent of Revenue Surplus ⁽¹⁾	\$51,284,705 (\$5,348,967)			
Net Fiscal Impact:	\$45,935,738			

(1) This is the value of capital facilities that could be financed with a \$466,344 annual revenue stream at 6% interest over 20 years.

In conclusion, local governments and local taxpayers will be left with a net cost burden of \$45.94 million if the Thornburgh Resort is fully completed as proposed. This is a net cost after the resort has been credited for all known payments and tax revenues it will generate. The \$45.94 million cost will be externalized and will ultimately be borne by other taxpayers (not the resort) through some combination of higher taxes, reduced public services, and lower facility service standards.

7. Thornburgh Resort's Economic Impacts

This section provides a review and analysis of the jobs and housing issues resulting from destination resorts by examining the proposed Thornburgh Resort as a representative case study. The resort developer, Thornburgh Resort Company LLC, maintains that the resort will create many new construction and operations jobs and will have little impact on housing in the area. To support their position, they have submitted the following two reports as part of the required application materials:

- An Economic and Benefit Study for the Thornburgh Destination Resort in Deschutes County, Oregon, for Thornburgh Resort Company LLC, by Jon Peterson of Peterson Economics, January 21, 2005.
- An Employee Housing Analysis for the Thornburgh Destination Resort in Deschutes County, Oregon, for Thornburgh Resort Company LLC, by Jon Peterson of Peterson Economics, August 22, 2005.

These reports are referred to here respectively as the *Peterson Economic Report* and the *Peterson Housing Report* and collectively as the *Peterson Report*.

The Peterson Economic Report was prepared as part of the required application materials for the Thornburgh Resort. Deschutes County Code Chapter 18.113(B)(19) requires the destination resort applicant to provide:

An economic impact and feasibility analysis of the proposed development prepared by a qualified professional economist(s) or financial analyst(s) shall be provided which includes:

a. An analysis which addresses the economic viability of the proposed development;

b. <u>Fiscal impacts of the project</u> including changes in employment, increased tax revenue, <u>demands for new or increased levels of public services</u>, housing for employees and the effects of loss of resource lands during the life of the project. [Emphasis added.]

In spite of the Code requirement, the Peterson report lacks a complete analysis of the fiscal impacts of the project and instead focuses on the property tax revenues that may be generated if the resort is completed. Absent from the report is any analysis of the demands for new or increase levels of public services. The report also neglects to report transient room tax revenues from overnight lodging.

The Peterson study, like many economic impact studies provided by developers, portrays an unrealistically optimistic and beneficial picture of the development

project. Tax revenues, for example, are projected by Peterson to be three times greater than for comparable resorts located nearby. According to a separate study comparing projected tax revenues for commercial developments with actual tax revenues after the developments were completed, projected revenues were found to be overstated by an average of 39%.⁵⁸

The portrayal of resort development as beneficial is also achieved by ignoring the costs and negative impacts of the project. The Peterson Report ignores all external costs associate with the Thornburgh Resort development. While new jobs, employment compensation and property tax revenues are presented in explicit detail, there is little to no effort made to address the many costs associated with providing public services, public infrastructure, or any of the potential adverse impacts on the community and the environment. In this case, most of the costs are likely to be borne by the current and future residents of Deschutes County via increased taxes or declining services, or both. Costs that are externalized by the developer and shifted onto the local community improve the developer's profitability at the expense of local residents.

Job Creation and Employment Impacts

The employment and compensation data in the Peterson Economic Report (as Table II-1) was revised downward seven months later in the Peterson Housing Report (as Table 1), so the more-recent Housing Report data is used here. The Housing Report bases projected wages for the Thornburgh Resort on a past projection for an analysis the company did for the Suncadia Resort in Roslyn, WA in 2002 and inflated to 2005 values. By their own figures, almost half of employees (49%) will make less than \$21,000 per year and 67% will make less than \$26,000 per year. As shown in Table 7-1, Federal guidelines indicate that household incomes below \$21,200 represent the poverty level for a family of four. Such households may qualify for Federal aid from the Food Stamp Program, the National School Lunch Program, the Low-Income Home Energy Assistance Program, and the Children's Health Insurance Program.

⁵⁸ Commercial Development: Impact Analysis Before and After Construction, by C. Fred DeKay, Ph.D. and Barbara M. Yates, Ph.D., Economic Development Journal, fall 2005, p 7.
Persons in Family or Household	48 Contiguous States and D C
	States and D.C.
1	\$10,400
2	\$14,000
3	\$17,600
4	\$21,200
5	\$24,800
6	\$28,400
7	\$32,000
8	\$35,600
For each additional person, add:	\$3,600

Table 7-1: 2008 US Poverty Guidelines.

Source: Federal Register, Vol. 73, No. 15, January 23, 2008, pp. 3971–3972

Resorts are notoriously low-paying businesses. The "leisure and hospitality" sector, that includes destination resorts, pays the lowest of any employment sector in Deschutes County. This sector paid average annual wages of only \$16,096, about half as much as the average annual wage in Deschutes County of \$31,492 in 2006, according to the Oregon Employment Department.⁵⁹

The Peterson Report appears to be considerably overestimating wages for the proposed Thornburgh Resort. Peterson claims that only 7% of jobs will pay less than \$16,000 per year. This contrasts sharply with the \$16,096 <u>average</u> wage in this sector. Many more than 7% of the jobs created at the resort will likely pay minimum wage. Such jobs include maids, waitresses, dishwashers, groundskeepers, landscape maintenance workers, janitors, and laborers. Minimum wage in Oregon was \$7.25 per hour, or about \$14,500 in 2005 when the Peterson report was written. In 2008 the State's minimum wage was \$7.95 per hour, or approximately \$15,900 before taxes.

According to Oregon's Report on Poverty 2006⁶⁰ for Deschutes County:

The 2005 average [monthly] wage of \$2,624, however, proved inadequate for single parents. Deschutes County's 2005 average wage could not fund the basic family budget for a single adult and one child or more. The second largest industry in Deschutes County, leisure and hospitality, paid an average wage nearly half of the county average—\$1,342 a month. ... Families earning poverty level wages could afford no more than 40.2 percent of basic family expenses in Deschutes County.

⁵⁹ Oregon Employment Department, 2006, as quoted in 2007 Central Oregon Area Profile, by Economic Development for Central Oregon.

⁶⁰ Oregon Housing and Community Services.

Based on the Peterson Housing Report,⁶¹ the median wage offered at Thornburgh would be about \$21,000. Median household income in Deschutes County was \$45,894 in 2004⁶², more than twice as much as the resort will pay. Even if two members of a household worked full time at the Thornburgh Resort, they would still make less than the median County household income in 2004 and the effect of the resort will be to depress median wages in the County.

Peterson uses "induced jobs" to enhance the total employment-related compensation associated with the resort. However, this induced employment works both ways: increasing jobs when hiring, but decreasing jobs in a similar proportion when firing. Using Peterson's assumption of 0.5 induced jobs per construction job and 0.2 induced jobs per operations job, total employment associated with the resort will peak at 2,015 jobs in the sixth year of development. However, when construction is completed, 1,471 of these jobs will be lost.

The loss of 1,471 jobs is roughly equivalent to the closing of Central Oregon's second largest employer, Les Schwab Tire Centers (1500 employees). It will have an even greater impact due to the relatively higher salaries paid to construction workers. The loss of these jobs will have a profound impact on the region as these households struggle to pay bills and seek to relocate to other areas in search of employment. The lost jobs are likely to increase local demand for social services and public assistance and may result in evictions, foreclosures and bankruptcies. The magnitude of these job losses could negatively impact the local economy for years after the resort is completed.

⁶¹ Peterson Housing Report, Table 2.

⁶² According to the US Census Bureau.

Figure 7-1: Direct employment at the proposed Thornburgh Resort estimated by Peterson (based on Peterson Housing Report, Table 1).





Figure 7-2: Total direct and induced employment at the proposed Thornburgh Resort estimated by Peterson (based on Peterson Housing Report, Table 1).

Figure 7-3: Employment changes resulting from the Thornburgh Resort development (based on Peterson Housing Report).



Theoretically, the only way to prevent such employment shocks from impacting the local economy (other than not building the resort in the first place) is to continually and indefinitely build more resorts at a steady and even pace in Deschutes County. However, this approach is completely impractical as the County could not sustain such development over the long term, and it would be impossible to transition seamlessly from one development to the next for employment purposes.

Who Will Fill New Resort Jobs: Locals or Newcomers?

The Peterson Report claims that "in excess of 90%" of employees will live in Deschutes County. To support this, they cite anecdotal evidence from conversations with the management of Black Butte and Eagle Crest Resorts that a "vast majority" of employees live within the County. Without additional evidence, Peterson claims that these employees were also local County residents before their employment at these resorts.⁶³ This apparently forms the bases for Peterson's conclusion that only 8% to 10% of jobs created at Thornburgh Resort will be filled by newcomers. However, empirical data and studies indicated that the percentage of newcomers moving into Deschutes County to fill resort jobs will be much higher.

Recently it came to light in a *Bend Bulletin* article that not only are resorts filling some of their jobs from out of the area, they are actively recruiting foreigners.⁶⁴ The Sunriver Resort filled 85 jobs last year with people from as far away as Lithuania, Brazil and Mexico.

People may move to a new county for a variety of reasons. Deschutes County has outstanding recreational opportunities and natural amenities that attract people from all over the country. A limiting factor to County in-migration is employment. While there may be a large number of people who would like to live there, most will need employment to make such a move successful. Thus, the more jobs created in the County, the more people will be able to move there.

To a large extent this same phenomenon applies statewide in Oregon. The State is viewed as offering attractive natural amenities and a desirable quality of life that act to stimulate in-migration. But the limiting factor to in-migration is the lack of employment opportunities. As a result of this "pent up" demand, new jobs created in the State are rapidly absorbed by newcomers and unemployment levels tend to remain consistently above the national average. This was the case even during the 1990s, a decade of the most rapid economic expansion and job creation in the State's history.

⁶³ Job seekers who move to a new location seeking work often obtain a local address to use for job applications, so employers may not know if they are hiring new arrivals.

⁶⁴ "Unemployment might be high, but resorts still struggle to fill some jobs," *The Bulletin*, May 11, 2008.

As shown in Figure 7-4, the US Census found that "work-related" reasons accounted for 31.1% of all intercounty moves.⁶⁵ More specifically, 24% of all moves were either for new jobs/transfers or to look for work. "New jobs and job transfers" accounted for the most moves of any category in the Census survey. Clearly, employment is a major motivational factor in migration. This factor is amplified when a region offers additional amenities and quality-of-life benefits as found in Central Oregon.



Figure 7-4: Reasons for moving to another county (US Census).

When new jobs are created in a community by a development project, its proponents often claim that the jobs will go to local workers. However, studies show that in the near term, 40% to 60% of new jobs go to newcomers and in the longer term, 60% to 90% of these jobs are filled by newcomers.⁶⁶ Applying the midpoint estimates to the Thornburgh Resort, we can assume that construction jobs are shorter-term jobs that are filled by 50% newcomers and operations jobs are longer-term and are filled by 75% newcomers. As shown in Table 7-2, at peak employment, the resort will generate an estimated net in-migration of 1,150 workers to fill the jobs. This is considerably more than the 133 newcomers identified in the Peterson report.

⁶⁵ Why People Move: Exploring the March 2000 Current Population Survey, Special Studies, US Census Bureau, March 2001.

⁶⁶ See: Who Benefits from Local Job Growth, Migrants or the Original Residents, by Timothy J. Bartik, <u>Regional Studies</u>, vol. 27, No. 4, 1993.

Job Source	Peak Employment ⁽¹⁾	Percent Jobs to Newcomers ⁽²⁾	Jobs to Newcomers
Construction	964	50%	482
Const. Induced	482	50%	241
Operations	474	75%	356
Oper. Induced	95	75%	71
Total:	2,015	-	1,150

Table 7-2: Peak In-Migration to Deschutes County Due to Direct and InducedJobs at Proposed Thornburgh Resort.

(1) Based on Peterson Housing Report; (2) From Bartik, 1993.

Housing Impacts of Thornburgh Resort

Increased demand for housing will tend to increase prices, especially when there is a relatively fixed supply of housing and a marked increase in demand. Unless housing is expanded to meet the new demand, prices will increase and housing will become less affordable in the County. The loss of housing affordability becomes a regional cost associated with the resort.

The Peterson Housing Report states that, due to the vacancy rate in Deschutes County, all housing needs generated by construction and ongoing operations at the resort will not "pose a problem." This conclusion seems to imply that the resort will have no significant impacts on the local housing demand or supply in Deschutes County. To the contrary, we find that the resort will have substantial impacts on the needs and demands for local housing.

Peterson indicates that additional offsite job creation will be induced by the onsite jobs at the resort. However, no consideration is given to the housing demand created by the induced employment. Peterson reports that induced jobs peak in year six of the development at 577 jobs. Total jobs are estimated to peak at 2,015 at that time, including construction, operations and induced employment. The addition of more than 2000 new jobs to Deschutes County, many of which are temporary and low-paying, will have a very significant impact on the local housing market.

This effect on the housing market is aggravated by the fact that most of these jobs (985 by Peterson's estimate) will be temporary. Temporary demands for a significant quantity of local housing can create multiple problems. As the demand grows rapidly, housing prices go up, housing availability and affordability decline, and additional home construction may be stimulated. As the temporary demand comes to an end, there is a glut of housing with a sharp increase in vacancies and unsold homes that may leave the housing market in worse shape than before the resort started.

Most ongoing jobs will be low-paying groundskeepers, maids, and maintenance positions. Such jobs may attract workers who will require low income housing assistance and will increase demand for affordable housing in the County. Furthermore, many of the lower-paying jobs will be seasonal, or have significant seasonal variations in employment. Seasonal jobs will further stress households that are struggling to afford market-rate housing as their employment varies from season to season. Lower-paid workers will have more difficulty finding affordable housing near the resort and they will need to travel farther to meet their housing needs. The additional commuting requirements will further exacerbate their financial stress.

Renters in Deschutes County are currently struggling to meet housing costs. According to the US Census, 41% of the County's renters are paying more than 30% of their income for rent.⁶⁷ New destination resorts will increase local housing demand and push up rental prices forcing more local residents to spend a greater share of their incomes on housing.

Peterson estimates that during the 11-year period of resort construction, between 37 and 133 housing units will be required to supply the new workers (both construction and resort operations) and that all of these units can be met from the current inventory of vacant housing. However, this conclusion is based partly on the unrealistic assumption that more than 90% of jobs will be filled by local residents and that only 8-10% will be filled by people moving into the county.

As shown previously, the Thornburgh Resort is likely to attract newcomers to fill 1,150 of the peak jobs generated by the resort. Most of these newcomers will create new households in the County. However, some may live with others or have a spouse that is also employed by the resort. To estimate new households it was assumed that 30% of the newcomers will either live with others who work at the resort or have a spouse also working at the resort. These cohabitating workers would reduce demand for new housing by 15% (half of 30%). The newcomers will therefore generate a peak demand for 978 housing units in Deschutes County (Table 7-3).

⁶⁷ Source: U.S. Census Bureau, 2005 American Community Survey, Deschutes County.

Jobs & Households Generated	Number
Peak jobs at Thornburgh	2,015
Peak jobs to newcomers (from Table 7-2)	1,150
Newcomers cohabitating (30% assumed)	345
Households by new cohabitating workers	173
Households by other new workers	805
Total new households by newcomers:	978

Table 7-3: Estimated new households created by peak employment atThornburgh Resort.

The Peterson Housing Report states that there was "an existing vacancy inventory of more than 320 rental units in Deschutes County" in order to show that the County can absorb the modest demand they predict from resort employees without generating any need for additional housing. However, the Peterson data does not appear to be accurate and there is no source cited. The *Central Oregon Rental Survey Results* for 2004 showed 411 vacant units for all of Central Oregon. The most recent *Central Oregon Rental Survey Results* for 2007 (1st Quarter) showed 270 vacancies for all of Central Oregon with a 6.86% vacancy rate. However, this survey provides only a partial account of vacancies, since the US Census *2005 American Community Survey* shows there were 18,552 rental units in Deschutes County in 2005 with a vacancy rate of 6.4%, or about 1,187 vacant units.

Vacancies always exist in the rental housing market and don't necessarily represent housing availability. Vacancies are a natural part of the rental housing business. Turnover of rental units typically requires a period of vacancy between tenants so that the unit can be cleaned, marketed and leased. Rental units also require repairs and improvements during unoccupied periods. Less-desirable, substandard, or overpriced units may take longer to rent. Rental vacancy rates in 2005 were 9.8% nationally and 8.3% in Oregon, much higher than the 6.4% rate in Deschutes County.

The likely demand for housing resulting from resort employment will be much greater than Peterson has estimated. Peterson estimated a peak demand of 133 housing units, compared with the estimate here of 978 housing units. It is unrealistic for the Thornburgh Resort to rely on local rental vacancy rates to meet the housing needs for the estimated 1,150 peak jobs filled by newcomers.

As shown in Table 7-4, the Thornburgh Resort is projected to create direct and induced long-term employment of 544 persons from year 12 of the project onwards. An estimated 75% of these jobs will be filled by newcomers. Of the 408 permanent jobs filled by newcomers, an estimated 347 new households will be created by these

employees.⁶⁸ This will result in a permanent demand for 347 new housing units in the County.

Job Source	Permanent Employment ⁽¹⁾	Percent Jobs to Newcomers ⁽²⁾	Jobs to Newcomers
Operations	453	75%	340
Oper. Induced	91	75%	68
Total:	544		408

Table 7-4: Newcomers to Deschutes County Filling Permanent Direct and Induced Jobs at Proposed Thornburgh Resort (year 12 of project and onwards).

(1) Based on Peterson Housing Report.

(2) From Bartik, 1993.

Spending by Destination Resorts

The typical economic analysis presented by a developer estimates the total gross spending in connection with the development as a net benefit to the local community. The spending estimate is often magnified by use of multiplier-effects to show even greater benefit to the local community as direct spending ripples through the local economy. Thus, spending figures typically include both direct and induced (secondary) spending for wages, construction materials and services.

Such spending figures tend to greatly overstate local benefits. For example, assumptions are made that 100% of spending for construction, including materials and supplies, will stay in the local county. However, construction materials such as lumber, cement, appliances, cabinets, flooring, plumbing fixtures, lighting, doors, windows, plaster and paint are obtained through a national and international supply network. It is highly unlikely that a significant portion of these construction materials will be produced within the county. Therefore, most of this spending quickly leaves the county.

Many economic studies also assume that other construction-related spending, such as design, engineering, and construction labor, will stay in the local county. However, many of the design firms and construction companies are likely to be based out of the area, or even out of state. Most of the expenditures to firms and employees based out of the area will leave the local county.

⁶⁸ Estimate assumes that 30% of employees will share housing with another employee, reducing household generation by 15 percent.

Use of "multiplier effects" is a common practice in economic analysis. Multipliers are used to show how money can be recycled in a community or region and can significantly inflate the apparent economic benefits. In contrast, empirical studies show that local growth does not result in real benefits to the community in terms of increased per-capita income.⁶⁹ Therefore, it must be assumed that much of the direct and indirect economic activity flows out of the community and does not significantly benefit local residents. In this case, "multiplier effects" are likely to be offset by national builders, national building materials suppliers, and non-local workers who will take much of the money out of the community. If multipliers are to be used in impact analysis, they should be applied to cost as well as revenues (see sidebar on this topic).

Use of multipliers

An increasingly common method among the building industry and some governments for projecting fiscal impacts involves the use of multipliers derived from economic models. Using data from the models, an analyst might take the estimated direct economic activity in dollars associated with a project and "multiply" it by a given amount to account also for indirect, secondary impacts. The total measure of economic activity is then used to estimate revenues for the purpose of determining fiscal impacts.

Such multiplier approaches to fiscal impact analysis suffer from several shortcomings. First, the multipliers are usually obtained from economic models of large regions or states. But they are applied at the level of an individual local jurisdiction that is usually only a fraction of a region's or state's economy. The smaller the jurisdiction relative to the economic region for which the multipliers have been derived, the less reliable the multipliers will be for that jurisdiction.

Furthermore, while the multipliers are applied to the revenue side of the budget, few such analyses ever apply a multiplier to the cost side of the local budget. The implicit (but often wrong) assumption is that local governments can generate revenue from secondary, induced, or indirect development without incurring increased costs in providing services to that development. Another shortcoming of the multiplier approach is its tendency to "double-count" revenues. A multiplier-based fiscal analysis of a project might credit it with the additional revenue impacts as derived from 1,000 new jobs elsewhere in the jurisdiction. But, when the separate fiscal impact analysis of the development where these jobs are located is (or was) prepared by its developer, the revenues would also be claimed on behalf of that development.

Source: *Developments and Dollars: An Introduction to Fiscal Impact Analysis in Land Use Planning*, by Michael L. Siegel, May 2000, Natural Resources Defense Council.

In the case of the Peterson Economic Report for the proposed Thornburgh Resort, compensation is estimated for both direct and induced jobs. While totaling all the wages paid for direct and induced employees is straightforward, it is far less clear how this spending should be counted in terms of net benefits to Deschutes County.

⁶⁹ Gottlieb, Paul D., Growth Without Growth: An Alternative Economic Development Goal For Metropolitan Areas, Center for Regional Economic Issues, Weatherhead School of Management, Case Western Reserve University, A Discussion Paper Prepared for The Brookings Institution Center on Urban and Metropolitan Policy, February 2002.

Wages benefit the individual employee, but he or she must exchange their time and labor for the wage. Employment is therefore an economic transaction exchanging labor for money. From the local perspective, existing residents of Deschutes County will benefit from resort employment if:

- 1. They are currently unemployed and obtain employment at the resort, or
- 2. They are working part-time and obtain full-time employment at the resort, or
- 3. They are currently employed, but are able to obtain higher wages at the resort.

On the other hand, existing residents of Deschutes County will not benefit from resort employment if newcomers move into the County to fill the jobs. Only the incremental increase in the incomes of existing local residents resulting from resort employment can be counted as a clear economic benefit. This incremental increase in income is a fraction of the total compensation figure estimated for the resort and does not include the 40% to 90% of new jobs likely to go to newcomers.

Economic Risks

In addition to considering the likely economic impacts of a successful and completed resort, there are emerging risks associated with resort development that could dramatically affect local homebuyers, local government investments, and the local economy.

The national economic downturn has revealed structural weaknesses in the real estate markets. Property values became over-inflated and banking institutions lent too much money to unqualified buyers. The supply of homes grew at record levels until supply greatly exceeded demand. It may take several years before the real estate market stabilizes. In the mean time, foreclosures and bankruptcies are at levels not seen since the Great Depression.

In the past, California provided many of the second home and investment home buyers in Oregon. Many were able to transfer equity from their California homes to make these purchases. But California's real estate market has suffered greatly. The median price of a home in that state dropped 38% in December from a year earlier.⁷⁰

Under any circumstances, a destination resort is a risky business venture. If it goes well, it is a potential bonanza to investors. But a great deal of investment is required up front. Typically a hundred million dollars or more must be borrowed and spent to build these resorts. The Thornburgh Resort estimates the total project cost at \$160 million.⁷¹ What happens if revenue streams don't match projections? What if

⁷⁰ December median home prices in California dropped to \$249,000 from \$402,000 a year earlier the Associated Press reported January 22, 2009.

⁷¹ Peterson Economic Report, Table IV-1.

lots don't sell, or prices drop? If one resort fails, how will other resorts in the area be impacted?

In Deschutes County the Tetherow Resort's golf course was heralded as the "Best New Course of 2008" by *Golf Magazine*. However, lot sales have stalled, investors are unable to make loan payments, and the bank is foreclosing on properties.⁷²

The large, upscale Tamarack Resort in Idaho made the *Wall Street Journal* last year when investor money dried up and the resort went into default on loans.⁷³ Construction of resort facilities stopped and the bank filed for foreclosure. Homebuyers had already committed more than \$500 million for fancy homes, condos and building sites. The resort village remains unfinished, home sales have withered and the local economy is suffering. The resort closed on March 4, 2009 and 250 employees were fired. Of 2,100 planned chalets, condos and town homes, only 250 are completed.⁷⁴

The Vineyards Resort in Yakima, WA declared bankruptcy last year.⁷⁵ It was to be a destination resort in wine country designed as a Tuscan-themed village with 500 acres, 600 homes, an 18-hole golf course, clubhouse, hotel, and recreation center. They were unable to obtain financing for the \$100 million investment needed. The posh Yellowstone Club resort in Montana is also declaring bankruptcy.⁷⁶

According to the Wall Street Journal article on the Tamarack Resort,

A resort's success was often staked to real-estate sales: As a Tamarack lender recounted in recent court filings, the resort had a business model in which "operating expenses would exceed revenues and the primary source of profit would be generated by the sale of real estate."

Destination resorts are following the same business model as the rural subdivision: buy large tracts of cheap rural land to make hundreds, or thousands, of buildable residential lots for a large profit. The resort elements are often unprofitable, but make the residential subdivision possible. The Tetherow and Pronghorn Resorts in Deschutes County have been unable to build the required amount of overnight housing, which is intended to support tourism. According articles in the *Bend Bulletin*, Pronghorn was to have completed a hotel by 2006.⁷⁷ It has received four time extension from the County and cut its planned hotel expenditure in half.

⁷² "Tetherow housing lots are entering foreclosure," *The Bend Bulletin*, January 15, 2009.

⁷³ Wall Street Journal, "In Idaho, Ski Resort's Promise Fades," 7/7/2008.

⁷⁴ "Tamarack Resort closes; employees cut loose," *Seattle Post-Intelligencer*, March 4, 2009.

⁷⁵ Reported by the Associated Press, November 23, 2008 in the Seattle Post-Intelligencer.

⁷⁶ See <u>http://www.bloomberg.com/apps/news?pid=20601103&sid=ai_WwtVGzHrY&refer=news</u>.

⁷⁷ "Without financing, Tetherow on hold indefinitely: Hotel won't open in spring 2009 as planned," *The Bend Bulletin*, October 15, 2008.

If Thornburgh Resort is successful, its developer could make \$300 million on lot sales, almost doubling its investment. The lucrative profit potential for developers creates a formidable incentive for them to pursue resort projects on Oregon's cheap rural lands in beautiful natural settings. They can afford to spend liberally to make their resort projects possible.

Economic Impact Conclusions

- Many of the economic impact studies provided by developers portray an overly optimistic picture of the development project's benefits by ignoring the costs associated with providing public services, public infrastructure, and the potential adverse impacts on the community and the environment.
- The "leisure and hospitality" sector (that includes destination resorts) paid average annual wages of only \$16,096, the lowest of any employment sector in Deschutes County and about half as much as the average annual wage in the County of \$31,492 in 2006.
- Even if two members of a household worked full time at the Thornburgh Resort, they would still make less than the median household income in 2004 and the effect of the resort will be to depress median wages in the County.
- Household incomes below \$21,200 represent the Federal poverty level for a family of four.
- Most jobs created by the resort will be temporary and when construction is completed, 1,471 jobs will be lost, causing ripple effects in the local economy.
- The addition of more than 2000 peak new jobs to Deschutes County will have a very significant impact on the local housing market, especially when the temporary jobs are lost.
- Low-wage jobs created by the resort will increase demand for affordable housing.
- While the Peterson Housing Report estimates a peak of only 133 new households generated by the resort, it is more realistic that a peak of 978 new households will need to find housing in Deschutes County.
- After the resort is completed, there will be an estimated permanent demand for 347 new housing units in the County.

8. Implications for Impacts of Destination Resorts in Oregon

This section considers the potential statewide and regional impacts that may result from the resorts that are currently under construction and those that are proposed. In order to examine the potential statewide impacts of destination resorts in Oregon, total figures for the number of residential units were calculated for all resorts that are currently planned or under construction. The total number of residential units was then used as an index for gauging statewide impacts. The impact per residential unit is based on the impact analysis for the Thornburgh Resort.

As described previously, the Thornburgh Resort is fairly typical of destination resorts in Oregon in terms of its overall profile (land area, mix of homes and overnight units, and recreational facilities). Some factors affecting impact will vary from place to place. For example, sewage treatment, water supply, and stormwater management may involve offsite public expenses for some resorts, but did not in the case of Thornburgh. Such cost factors may be governed by county policies and individual siting issues. The transportation system impacts of the Thornburgh Resort were partially mitigated by the transportation SDC implemented recently by Deschutes County. Total estimated transportation SDC payments for the resort were deducted from the transportation system costs. Most counties in Oregon have no transportation SDC, so the costs will be higher in those counties. It should also be noted that no impacts were calculated for Thornburgh Resort for libraries. As a result of these factors, Thornburgh's fiscal cost impacts may be somewhat less than for the typical new resort. None-the-less, it serves as the best available gauge at this time. The net fiscal impact per residential unit for the Thornburgh Resort is a cost of \$33,408.⁷⁸

Based on the 22,374 residential units in destination resorts that are either under construction or proposed in Oregon, the total fiscal impact is estimated to be a net cost of \$747 million. As shown graphically in Figure 8-1, almost two-thirds of this cost will come from the resorts that are proposed. Note that these net infrastructure costs are the externalized costs from the resorts after all payments and contributions are deducted.

⁷⁸ This net cost incorporates the projected revenue surplus from services in the form of the capital cost that could be financed with the same annual revenue stream, as described in the *Fiscal Impact Conclusions* section.

Figure 8-1



Destination resorts have regional impacts that often receive little or no consideration in the resort planning and siting process. Resorts located near cities tend to create a fundamental fiscal inequity. The counties receive all the tax revenues, and the nearby cities receive much of the impacts, especially from increased traffic. Resort residents and visitors will avail themselves of the urban services and amenities of the city. They may travel to the cities to purchase necessities, for entertainment, or to commute to work in these cities. They may also travel through these cities going to and from the resort and to visit other attractions in the area. Resort employees are likely to find housing in the nearby cities and will create additional traffic.

The City of Redmond will be especially impacted by new resort development, as four new destination resorts are planned nearby: Remington Ranch, Hidden Canyon, Brasada Ranch, and Thornburg Resort. The Remington Ranch Resort is just 5 miles from Redmond and it is estimated that 75% of the trips generated by the resort will use the city's road network. An estimate 35% of the trips from the proposed Hidden Canyon Resort will be to, or through, Redmond.

According to City of Redmond Public Works Director, Chris Doty, the city's growth is currently constrained by road capacity and by requirements of the State's

Transportation Planning Rule.⁷⁹ Yet resort development can continue to burden these transportation facilities without having to mitigate their impacts.

Housing needs for resort employees put added pressure on nearby cities to provide additional affordable housing, as resort workers are among the lowest-paid in the State.

Impacts of resorts on nearby cities are beyond the cities' control and occur outside of the cities' planning processes. Redmond, for example, collects a Transportation System Development Charge on new development within the city, but is unable to collect such charges from resort development.

Resorts have the potential to function like suburban subdivisions or bedroom communities, taking advantage of a nearby city's urban amenities, but paying no taxes to the city. Revenue sharing by the county, or mitigation requirements from the resort developers, could offset some of these impacts.

⁷⁹ Letter from Chris Doty regarding Remington Ranch Resort to Bill Zelenka, Crook County Planning Department, September 7, 2006.

Appendices

A-I. Property Tax Explanation

The single largest revenue source for local governments, school districts and agencies in Oregon is the property tax. Property subject to taxation includes all privately owned real property (land, buildings, and improvements). This tax is collected by the county tax collector for all agencies within the county. As the boundaries of the various taxing districts do not align the county is divided into Code Areas. Each Code Area represents a unique combination of taxing districts. For the 2008/09 tax year, the proposed Thornburgh Resort was located in two different Code Areas: 2-003, with a total tax rate of \$12.2499 per thousand dollars of Assessed Value; and, 2-004 with a total tax rate of \$14.0041 thousand dollars of Assessed Value. The difference being that property in 2-004 is subject to a tax from Deschutes County Rural Fire Protection District #1.

Table A-1

ld	District	Total Rate	Education	Government	Non-Limited
001	Deschutes County	1.2783		1.2783	
007	Jail Bond	0.1335			0.1335
010	Fairgrounds Bond,	0.1410			0.1410
011	County Library	0.5500		0.5500	
020	Countywide Law Enforcement	0.9500		0.9500	
021	Rural Law Enforcement	1.4000		1.4000	
070	Redmond Library	0.0567			0.0567
090	County Extension/4h	0.0224		0.0224	
093	911	0.1618		0.1618	
095	911 Local Option 2008	0.2300		0.2300	
351	Redmond Area Park & Rec District	0.3717		0.3717	
620	School District #2j	5.0251	5.0251		
626	School #2j Bond 92 & 93	0.8307			0.8307
628	School #2j Bond 2004	0.2930			0.2930
651	High Desert Esd	0.0964	0.0964		
670	C O C C,	0.6204	0.6204		
671	C O C C Bond	0.0889			0.0889
	Total	12.2499	5.7419	4.9642	1.5438

Tax Code Area 2-003⁸⁰

⁸⁰ Data from Deschutes County 2008-09 Summary of Assessment and Tax Roll page 80.

Table A-2

Tax Code Area 2-004⁸¹

ld	District	Total Rate	Education	Government	Non-Limited
001	Deschutes County	1.2783		1.2783	
007	Jail Bond	0.1335			0.1335
010	Fairgrounds Bond,	0.1410			0.1410
011	County Library	0.5500		0.5500	
020	Countywide Law Enforcement	0.9500		0.9500	
021	Rural Law Enforcement	1.4000		1.4000	
070	Redmond Library	0.0567			0.0567
090	County Extension/4h	0.0224		0.0224	
093	911	0.1618		0.1618	
095	911 Local Option 2008	0.2300		0.2300	
202	Rural Fire District #1	1.7542		1.7542	
351	Redmond Area Park & Rec District	0.3717		0.3717	
620	School District #2j	5.0251	5.0251		
626	School #2j Bond 92 & 93	0.8307			0.8307
628	School #2j Bond 2004	0.2930			0.2930
651	High Desert Esd	0.0964	0.0964		
670	COCC,	0.6204	0.6204		
671	C O C C Bond	0.0889			0.0889
	Total	14.0041	5.7419	6.7184	1.5438

Since 1997⁸² the assessed value (AV) of a property, and not its real market value (RMV), is used to calculate the amount of property tax due. This assessed value was initially established in 1997 by rolling back the RMV of a property to 90% of its 1995 level. As long as the resulting AV is less then the current RMV this value is allowed to increase by 3% annually. For new properties, like the proposed Thornburgh Resort, the County Tax Assessor's Office appraises the property and sets a RMV for the land and its improvements. Then, an Exception Value Ratio is applied for the "property class" of the parcel to arrive at the properties initial RMV. For example, the AV of a parcel in a property class with a ratio of 0.46 and a RMV of \$100,000 would be \$46,000. The Exception Value Ratio is calculated annually and is the ratio between AV and RMV for properties of the same property class. The Current Exception Value Ratio for resort properties is 0.491.⁸³

Property tax is levied on July 1 and due on November 15 each year. It can be paid either in a single payment on or before November 15, in which case a 3% discount can be taken, or in three payments due on the 15th of November, February and May. If taxes are not paid within three years the property is subject to foreclosure.

⁸¹ Data from Deschutes County 2008-09 Summary of Assessment and Tax Roll page 80.

⁸² A relatively detailed history of the Oregon Property Tax system can be found as Appendix B of Oregon Property Tax Statistics an annual publication of the Oregon Department of Revenue.
83 Deschutes County 2008-09 Summary of Assessment and Tax Roll, page 9.

Property Tax Revenue Methodology

The basic formula for calculating the initial property tax⁸⁴ on a new development such as Thornburgh is simple and straight forward. It is:

Property Tax = ((RMV x Exception Value Ratio)/1000) x Tax Rate

The (RMV x Exception Ratio) establishes the initial AV for a new property. All that is necessary is to supply values for the RMV, Exception Ratio and Tax Rate. The "Property Class" for the Thornburgh Resort is "#8 Resort," and the Exception Value for all properties in the Resort for 2008-09 is 0.491 which was the value used.

As pointed out earlier, the Thornburgh Resort was located in two different Code Areas (2-003 and 2-004) with different tax rates. But, as those parcels not in Code Area 2-004 are to be annexed into the Deschutes County Rural Fire Prevention District #1,⁸⁵ it was assumed that the \$14.0041 tax rate of Code Area 2-004 would apply to all properties in the resort.

Establishing a RMV for each type of property was difficult as only the briefest of descriptions was provided in the Thornburgh Resort Application. These descriptions lacked information as to parcel or lot size, building size, construction materials to be used, amenities or expected or proposed costs. Three different methodologies were used to establish a RMV for the various types of properties.

For the 1,375 residential properties⁸⁶ proposed for the Thornburgh Resort a single methodology was used. The land-use application for the resort contained very little information on the characteristics of the residential development, so for calculation purposes, it was assumed that all the residential units and lot sizes would be similar. To arrive at a value for these properties, a sample of 49 residential properties located in the nearby Eagle Crest Resort⁸⁷ was obtained by selecting a number of parcels from each of the tax maps containing part of Eagle Crest. The current RMV for the land and improvements for each of these parcels was obtained from Deschutes County's D.I.A.L system.⁸⁸ Townhouses were excluded from the sample. Average values were calculated for a sample of 38 lots and 35 houses.

⁸⁴ In subsequent years the formula is the same as all other property, (AV/1000)*Tax Rate.

⁸⁵ Letter from Fire Chief Tim Moor of DCRFPD#1 to Deschutes County Commissioners dated 25 March 2008.

⁸⁶ The total includes 425 with deed restrictions that they be available for short term rental and 950 without the deed restrictions.

⁸⁷ Eagle Crest Resort is an existing Destination Resort similar in concept to and located in close proximity to the proposed Thornburgh Resort for which property tax records were available. 88 This is an online tax record system.

The County RMV data from 2008 reflects the peak prices of the real estate bubble should be adjusted downward to reflect current market conditions. The Standard and Poor's/Case-Shiller 20-city housing price index fell 18% in October of 2008 from a year earlier.⁸⁹ It appears that this downward trend in real estate values is likely to continue through 2009 and possibly longer. To reflect the decline in values, average values from the Eagle Crest sample were reduced by 20% to obtain the RMV of the residential land and improvements in our calculations.

For Commercial and resort-owned properties,⁹⁰ total building square footage was provided in the application. A \$200 per square foot construction cost was used to establish an RMV for the commercial improvements. To determine the RMV of the land it was assumed that the lot associated with a building would be twice the square footage of the building (i.e. 50% lot coverage). To reflect declining real estate values, the value of comparable developed commercial parcels at Eagle Crest were reduce by 20 percent in the same manner as residential property.

For the Golf Courses it was assumed that they would be 150 acres each and would cost \$3 million dollars each to construct.⁹¹ The land value was obtained by averaging the cost per acre of 5 Eagle Crest parcels identified as containing significant parts of a golf course.

⁸⁹ Year-over-year declines in property values were reported in the Standard and Poor's/Case-Shiller 20-city housing price index. See *Home Prices post 18 percent annual drop in October*, by J.W Elphinstone, AP, December 30, 2008.

⁹⁰ Hotel, Recreation Centers, Golf Club Houses, SPA and Retail Center

⁹¹ The web sites for the United States Golf Association and American Society of Golf Course Architects both contain a \$1.6 to 4.5 million range for the construction cost of a Golf Course, \$3 million is roughly the midpoint in that range.

A-2. Transient Room Tax Explanation

Deschutes County imposes a Transient Room Tax on the guest of any Hotel or short term rental housing⁹² located in an unincorporated part of the county. This tax is in the amount of 7% of the full rent charged by the rental manager for the occupancy of a room. The room tax is not imposed on items separate and independent from the use of the room⁹³ nor is it imposed on recreational fees⁹⁴. If the room is rented as part of a package deal that includes food and or recreational activities the Hotel operator is permitted to exclude from the rent the cost of providing the food or activities.

The hotel operator collects this tax on behalf of Deschutes County at the time the room rate is paid. Monthly, the hotel or rental operator remits the amount of taxes collected minus a 5% "Collection Reimbursement Charge."

Revenues from the Transient Room Tax are currently being used to fund services provided by the Sheriff's Office and for tourism through the Central Oregon Visitors Association.⁹⁵ By state law the minimum proportion spent on tourism promotion and tourism-related facilities can not be less then that allocated on 1 July 2003. The current division is about 73%/27% with the majority going to the Sheriff's Office.⁹⁶ In the FY 2008-09 Annual Budget \$2,435,020 or about 19.6% of the operating funds devoted to Rural Law Enforcement came from Transient Room Taxes.⁹⁷

Room Tax Methodology

In its most basic form estimating the amount of revenue raised by the Deschutes County Room Tax from a hotel is a very straight forward process. The revenue equals the room rate, times the occupancy rate, times .07, times 365 days, minus 5% of the total. Making an estimate of a proposed hotel where the only information is

93 Items such as Food service, Room Service, Pay for view movies long distance telephone.

⁹² The Deschutes County Code (DCC) defines "Hotel" as "...any structure or space, or any portion of any structure or space which is or intended or designed for Transient Occupancy for 30 days or less, for dwelling, lodging or sleeping purposes, and includes, but is not limited to any Hotel, inn, tourist home, tourist accommodation, condominium, motel, studio Hotel, hostel, bachelor Hotel, lodging house, bed and breakfast, vacation home, vacation rental home, rooming house, apartment house, public or private dormitory, fraternity, sorority, public or private club, mobile home, R.V. or trailer park, campgrounds private home, or similar structure or portions thereof so occupied. [DCC 4.08.045]

^{94 &}quot;Recreation Fee" means a fee charged, assessed, or allocated by a Hotel to a Hotel occupant or occupants for use of Destination Resort recreation facilities, whether the Hotel charging the Recreation Fee is a Destination Resort or has a contract or agreement with a Destination Resort for use by the Hotel's guests of the recreation facilities of the Destination Resort. [DCC4.08.065] 95 Deschutes County Annual Budget for Fiscal Year 2008-09 page iii.

⁹⁶ Deschutes County Annual Budget for Fiscal Year 2008-09 pages 332 and 370

⁹⁷ Deschutes County Annual Budget for Fiscal Year 2008-09 page 370

the number of rooms, as is the case here, requires a number of assumptions to be made.

In order to estimate the average room rate, it was assumed that the Hotel and other rental units would meet the American Automobile Association's Three-Diamond Rating⁹⁸ criteria. This rating is the middle of a 5 level scale and is typical of the ratings held by other resorts in Oregon⁹⁹. There are 14 Three-Diamond Hotels operating in Deschutes County of which rate information is available for 12 of them. The rates range from a low of \$89 to a high of \$439 per night. Based on the number of distribution of room types in the AAA Guide, it was assumed that there are four times as many inexpensive rooms as there are expensive rooms. The weighted average room rate is \$121 per night.

Just as there is little information on the configuration of the hotel there is little information on the configuration of the 450 houses that will be available for short-term rental. In order to estimate vacation home rental rates, the assumption was made that they would resemble those currently on the short term rental market for the Greater Redmond area. The Vacation Rentals by Owner web site listed 39 vacation homes available for vacation rental in Redmond, Oregon.¹⁰⁰ Twenty-eight of these listings were for rentals in Eagle Crest Resort. The rates for these houses run from \$100 to \$300 a night, with an average rate of \$162.

The last variable is the occupancy rates for each type of unit. While the total monthly Transient Room tax receipts paid by all operations subject to Transient Room Taxes are available, actual occupancy data is extremely difficult to come by. To develop an annual occupancy rate estimate, a peak occupancy rate of 90% was assumed for the month of August and then an adjusted occupancy rates for each of the other months was calculated based on the actual monthly Transient Room Taxes paid to the County for that month. From this an average annual occupancy rate for all rental types was derived, as described below.

Occupancy Rates for Room Tax Revenues

Room tax revenues are difficult to estimate for a planned, but unbuilt resort such as Thornburgh. Occupancy rates and reporting rates (the percent of private rentals for which room taxes are paid) must be estimated. To estimate occupancy rates, Countywide room tax revenues¹⁰¹ were examined and adjusted to reflect the likely seasonal

⁹⁸ According to AAA, "Three diamond lodgings offer a distinguished style. Properties are multifaceted with marked upgrades in physical attributes, amenities and guest comforts." (AAA Oregon and Washington Tour Book, AAA Publishing, Heathrow, Florida, 2008, page 21)

⁹⁹ The 2008 AAA Oregon and Washington Tour book lists 7 Oregon Resorts, one Two-Diamond, five Three-Diamond and one Four-Diamond.

¹⁰⁰ Data collected on 21 December 2008 from http://www.vrhbo.com/vacation-rentals/region/usa/Oregon/central-oregon.

¹⁰¹ Data from Deschutes County Treasurer Marty Wynn.

nature of this resort. The County-wide vacancy rate was estimated based on the assumption that a peak occupancy rate of 90% is achieved during the peak month of August. This may be overly optimistic, as many private rentals will be occupied by owners during this month. However, this peak occupancy rate was used as a reference to estimate occupancy rates for the rest of the year (see Figure A-1). Average annual occupancy for the County was estimated to be 33% based on this method.

Hotels and lodging in Bend, and resorts such as Sunriver and Inn of the Seventh Mountain, are close to Mt. Bachelor and can maintain modest winter occupancy rates. However, resorts such as Thornburgh are located too far away to benefit from skiing. Since Thornburgh would lack off-season appeal, it was assumed that rental occupancy would drop to an average of 10% from November through April. For the remainder of the season, County-wide vacancy rates are applied (see Figure A-2). This results in an average annual occupancy rate at Thornburgh of 29%.

Figure A-1: Deschutes County occupancy rates based on monthly room tax revenues.





Figure A-2: Occupancy rates used for Thornburgh Resort.

Resort vacation homes that are managed by a property management firm will tend to fully report room taxes, as the room tax revenues provides compensation to these firms to offset administrative and collection costs. However, privately-owned vacation homes that are owner-managed may not fully report room taxes to the County. This situation may occur at Eagle Crest Resort, where a recent property owner survey conducted by Jen-Weld specifically mentioned that survey respondents would not be reported to the County if they were renting their house. For Thornburgh, it was assumed that 80% of privately-owned rental homes are fully reporting room taxes, and that 100% of hotel room rentals are reported.

A-3. Population Projection Used in Study

The population figures used throughout this study are from the Deschutes County 2000-2025 Coordinated Population Forecast. The forecast data for each of the 5-year increments was interpolated using exponential growth rates to create data for each year in between, making it possible to examine population changes over any period of time. In order to create a 20-year forecast through 2028, the projection data was expanded beyond 2025 to 2028 using the same growth rate as in the final 5-year period (2020-2025).

Based on Deschutes County 2000-2025 Coordinated Population Forecast					
Year	Bend UGB	Redmond UGB	Sisters UGB	Unincorp. County	Total County
2005	69,004	19,249	1,768	53,032	143,053
2006	71,294	20,100	1,864	54,199	147,475
2007	73,661	20,989	1,966	55,391	152,033
2008	76,106	21,916	2,074	56,609	156,733
2009	78,632	22,885	2,187	57,854	161,578
2010	81,242	23,897	2,306	59,127	166,572
2011	83,135	24,953	2,379	60,428	170,914
2012	85,072	26,056	2,454	61,757	175,369
2013	87,054	27,208	2,532	63,116	179,940
2014	89,082	28,411	2,611	64,505	184,630
2015	91,158	29,667	2,694	65,924	189,443
2016	92,981	30,979	2,782	67,374	194,144
2017	94,841	32,348	2,874	68,857	198,962
2018	96,738	33,778	2,968	70,372	203,900
2019	98,673	35,272	3,065	71,920	208,959
2020	100,646	36,831	3,166	73,502	214,145
2021	102,337	38,459	3,275	75,119	219,231
2022	104,056	40,159	3,387	76,772	224,437
2023	105,804	41,935	3,503	78,461	229,768
2024	107,582	43,788	3,623	80,187	235,225
2025	109,389	45,724	3,747	81,951	240,811
2026	111,227	47,745	3,875	83,754	246,530
2027	113,095	49,856	4,008	85,597	252,385
2028	114,995	52,060	4,146	87,480	258,379

Table	A-3
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Interpolated Population Data for Every Year to 2028

Data from County (population for intermediate years are added).

Added projections based on previous 5-year growth rates.

A-4. Tax Bases for Jurisdictions Used in Study

The total assessed values of the tax base for each of the local jurisdictions used in this study are provide in Table A-4. The final column of the table shows the percentage of each tax base that would be represented by the Thornburgh Resort if fully developed. This percentage was treated as the potential future contribution by the resort towards repayment of bonds associated with the infrastructures costs generated.

Table A	\- 4
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Potential Contribution to Infrastructure Costs Through Future Tax Payments

Category of Infrastructure	Jurisdiction	Assessed Value of Tax Base ⁽¹⁾	Percent of Future Taxes Paid by Thornburgh ⁽²⁾
Transportation System ⁽³⁾	Deschutes County	NA	NA
School Facilities	Redmond School Dist.	\$4,937,455,942	7.1%
Fire & EMS Facilities	DCRFPD#1	\$1,295,518,889	22.4%
Public Safety Facilities	Deschutes County	\$16,602,476,500	2.2%
Parks and Rec. Facilities	RAPRD	\$288,870,875	56.5%
Gen Gov. Facilities	Deschutes County	\$16,602,476,500	2.2%

(1) Data from the 2008-09 District Summary Table on page 16 of the 2008-09 Summary of Assessment and Tax Roll published by the Deschutes County Assessors Office. Assessed value of school district from Redmond School District.

(2) The percent of the total future tax base represented by the resort based on a fully-developed resort with a total assessed tax value of \$374,788,817.

(3) Transportation system is not funded by property taxes.

A-5. About the Authors

Eben Fodor, Principal Author

Mr. Fodor is Founder and Principal of Fodor & Associates, a consulting firm based in Eugene, Oregon since 1993. The firm specializes in community planning and land use consulting, including fiscal impact analysis, growth management, land-use planning, economic forecasting, and research and analysis. He is an expert in development impact analysis. He created a development impact model for the City of San Diego that quickly estimates infrastructure and service costs for new developments of any size and mix of uses. He has examined the fiscal impacts of development proposals in Washington, Oregon, Maryland and Wyoming for various clients. He conducted statewide assessments of infrastructure impacts of residential development in Oregon and Washington.

Mr. Fodor holds a Masters in Urban and Regional Planning and a M.S. degree in Environmental Studies, both from the University of Oregon. He holds a B.S. degree in Mechanical Engineering from the University of Wisconsin - Madison.

David Hinkley, Research and Analysis

Mr. Hinkley has worked since 1996 providing public policy research, analysis and advocacy services to lobbyists, candidates, businesses and individuals. Areas of expertise include land use codes, government budgeting, tax increment financing, development impacts, state land use programs, systems development charges, transportation issues, disability issues, bottle bills, campaign contributions, and liquor laws. He served 8 years on the City of Eugene's Public Works Rates Advisory Committee helping to revise the City's System Development Charge methodologies for transportation, waste water and parks systems.

Mr. Hinkley holds a Bachelors of Arts degree in History from the University of San Francisco and a B.S. degree with Honors in Criminal Justice Administration from San Jose State University.