

# Fiscal Impacts of New Houses on Vacant Rural Subdivision Lots

Teton County, Idaho  
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## **Abstract**

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The old way of evaluating decisions by forecasting the future as a linear projection of the past has become obsolete. Uncertainty reigns in the future of residential real estate in Teton County, Idaho. The county experienced unprecedented growth in housing units and platted lots during the past two decades, but in 2009 building activity has ground to a halt. A heavy inventory of unoccupied, for-sale houses, 7,000 vacant platted subdivision lots and 200 foreclosures in the past nine months demonstrate over-supply.

Even without the neatness of a future trend line, it is worth planning for the future based on current observable trends. Were the 7,000 vacant lots to build-out, they would strain the county government with a \$1.9 million annual shortfall for county operations and a \$15.5 million shortfall for county infrastructure and capital investments. Due to longer drives on county roads, new house on vacant lots farther than three miles out county roads would account for only 18% of the inventory, but disproportionately cause 50% of the shortfall. The revenue structures in place today are not adequate for accommodating the dispersed geography of platted subdivisions, signaling the need for a coordinated re-assessment of land use policies and revenue structures.

## **About the Author(s)**

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Gabe Preston, RPI Consulting co-founder and principal: Gabe is a community planner of extensive practical experience. In addition to experience as a lead consultant on several community planning efforts with intensive public participation, Gabe has a sound technical background. Gabe's technical planning expertise includes developing future land use scenarios and build out studies throughout Colorado, New Mexico, Idaho and Montana; establishing and evaluating fiscal impacts for over fifty communities, many of which adopted recommended development impact fees; evaluating market feasibility analysis for public projects, and submitting expert reports and testimony for use in decision making and land use and water court cases. Mr. Preston's educational background in mathematics (BA, St. John's College) and geography (Masters, CU) lend to a creative, analytical, and spatial planning style.

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## **Fiscal Impacts of New Houses on Vacant Subdivision Lots**

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Teton County, Idaho

### **Introduction**

Many rural counties throughout the West are over-stocked with vacant subdivision lots. In Teton County Idaho, the focus of this study, there are 7,000 vacant subdivision lots in the unincorporated county. In Colorado, Archuleta County has nearly ten thousand vacant lots near uptown Pagosa Springs and on the other side of the continental divide there are hundreds of even more rural, waterless, foothills subdivisions lying completely untouched near San Dunes National Monument and further up the San Luis Valley near Crestone. In focusing on subdivision lots only, this analysis concentrates on land uses and activities that are approved by county governments.

As amenity-driven rural development patterns have unfolded over the past few decades, it has become clear that rural settlement is pushing further and further from Towns and highways and reaching further into the county on county roads. Once quiet county roads are dangerous at rush-hour and it is common complaint among county commissioners that new residents build homes on gravel roads and then later want the county to pave the road.

The fiscal health of local governments is a required attribute of a successful and healthy community. In order to provide leadership, pay for infrastructure and adapt to challenges of the future, local governments will need the resources to do the job. Initiating economic growth from the standpoint of local government is even more challenging than accommodating and managing growth, and it requires even more money.

Recent studies and observations in the field of fiscal impact analysis have verified that compact development patterns, closer to towns and highways is far more efficient than the dispersed development patterns that are underway. As part of its 2005 Master Plan, Gunnison County, Colorado, evaluated fiscal impacts of accommodating a fixed number of residential units under 2 land use patterns: a business as usual future with 10-35 acre subdivisions accommodating future full and part-time residents and a compact alternative where most future development occurs near towns and economic activity centers. The sprawling business as usual land use pattern was found to cost \$2.3 million more annually for basic county services than the compact alternative, while capital improvement costs were \$17 million more under business as usual scenario. These differences were entirely attributed to longer commutes and more driving (vehicle miles traveled) associated with the business as usual land use pattern (RPI Consulting 2005).

Beaverhead County, MT has also undertaken a fiscal impact analysis of future land use pattern scenarios. Beginning with the Sonoran Institute's Growth Model, they developed an alternative scenario in which prime agricultural lands have limited residential density and the same number of residential units are accommodated near Towns and closer to infrastructure. This allowed RPI Consulting to

compare fiscal implications of the future development patterns under the status quo vs. the alternative scenario. The study found that the more scattered, status quo development pattern costs 46% more than the more compact, alternative scenario for roads and 14% more for law enforcement. Because of their commitments to provide ambulance and EMS for motor vehicle accidents, rural fire districts also stand to save 44% on annual operations costs due to less vehicle miles traveled in the more compact alternative scenario.

More recently, Headwaters Economics undertook a comprehensive study of the costs-benefits of conserving from development massive acreages of Plum Creek Timber Lands that were being liquidated and potentially sold for private development in Montana. This 2009 report found that residential development in the remote locations of those lands would lead to long drives on inadequate gravel and dirt county roads and upgrades and routine expenses that would not be covered by revenues it generates. Conservation of Plum Creek Land was shown to be a fiscal winner for county government.

### **Why Teton County Idaho?**

The studies mentioned above were based on sophisticated modeling of future growth patterns. In Teton County, there are so many vacant platted subdivision lots that the foreseeable future of residential development pattern is plainly visible on a county parcel map. It is also obvious that Teton County has a propensity to attract residents and residential building activity and is likely to do so in the future. So while the future is uncertain, it is clear that the decades of building and subdividing has platted-out a legacy for Teton County for the time. This study addresses the following questions for unincorporated Teton County:

1. How much residential building has occurred and how is that related to the rate of subdivision?
2. How much driving is occurring on county roads now and how much could occur if subdivision lots build-out?
3. How much does each residential unit cost for core county services?
4. How much does each residential unit generate in revenue and what is the county's cost-benefit?
5. What influence does the location of platted subdivision lots have on the cost-benefit of building homes on them?

### Rapid Rate of Subdivision and Building

Assessor records are the most reliable source of geographically specific land use inventory. According to the assessor's records the county contained 4,460 residential units at the end of 2008, 3,050 of which were located in unincorporated Teton County.

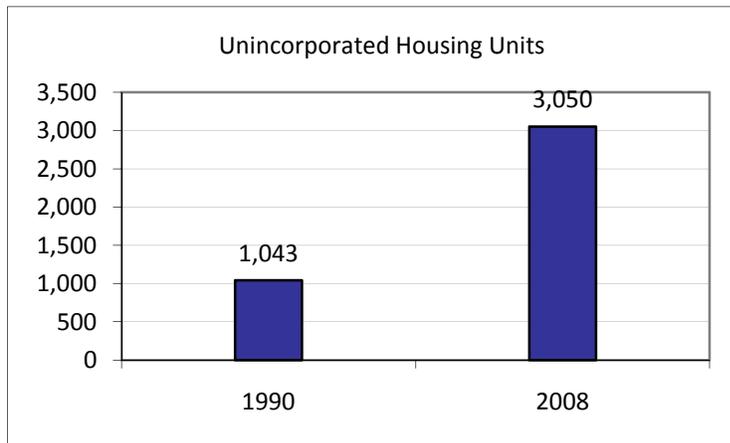
*Figure 1 - 2008 Development Inventory*

	Development Inventory
Entire County Residential Units	4,460
Residential Units in Municipalities	1,410
Unincorporated Residential Units	3,050

Source: Teton County Assessor Data

Residential units in the unincorporated county nearly tripled in just 18 years. These are among the highest growth rates for rural counties during this time period. Housing growth sent construction employment soaring and fueled construction suppliers and subcontractors, making for a prosperous run for those involved in the development, sales, finance, and servicing of residential development.

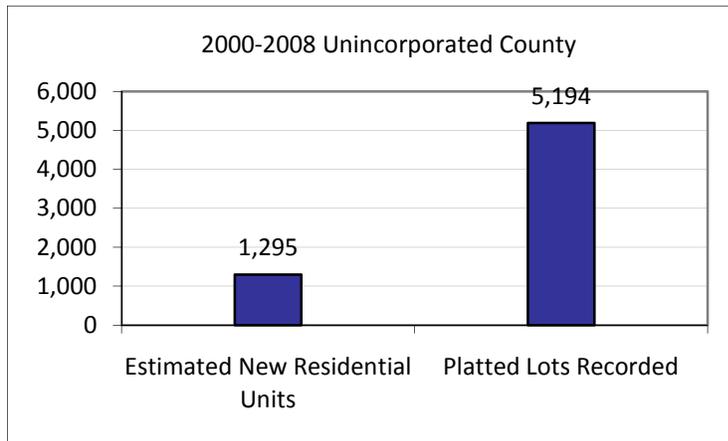
*Figure 2 - Housing Unit Growth*



Source: U.S. Census, Teton County Assessor Data

While housing units were certainly being built, they were not being built nearly as rapidly as lots were being platted. Just during this decade, lots were being platted at three times the rate dwelling units were being built in the county. Since 2000, there were four years during which over 500 lots were recorded in just one year, peaking in 2006 with almost 2000 lots recorded in just one year.

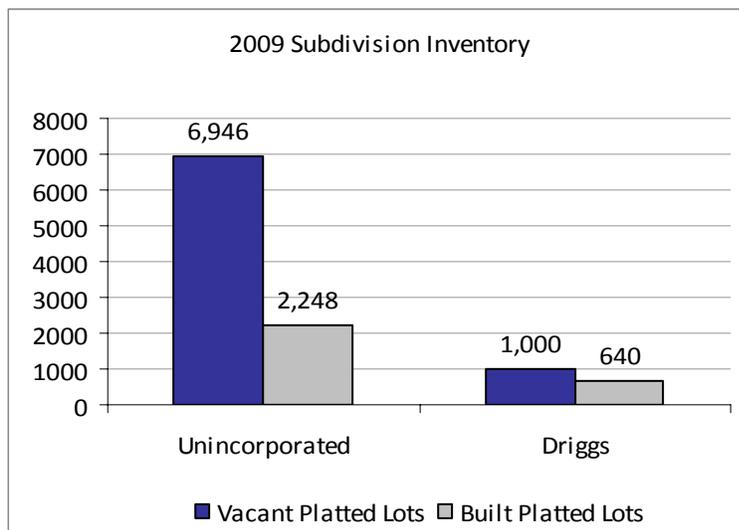
Figure 3 - New Units Vs. New Lots



Source: Teton County Subdivision Report, 2009; County Assessor Data, U.S. Census

Far more units were built in the municipalities of Driggs and Victor that were platted, a result of a better absorption rate than the unincorporated county and a stepwise approach to annexation. As of 2009 these two municipalities accounted for only about 7% of the vacant lots in the entire county.

Figure 4 - Platted Lot Inventory



Source: Teton County Subdivision Report; Driggs Planning

## How Much Driving Could Occur?

### Rural Travel Demand Modeling

A significant portion of Teton County’s budget is tied directly to driving patterns, including road construction and maintenance and traffic enforcement and accident response. Given the impact of driving on county government costs, it is essential to estimate the relationship of the quantity and spatial distribution of development in the county to the amount of driving. For the most part, off-the-shelf transportation models are designed for urban transportation systems and are extremely data intensive. To reflect the realities of rural transportation systems, RPI Consulting has developed and refined a rural transportation model specifically targeted at estimating impacts of development on county roads. See Appendix A for a description of the data and methodology.

### Travel Demand Results

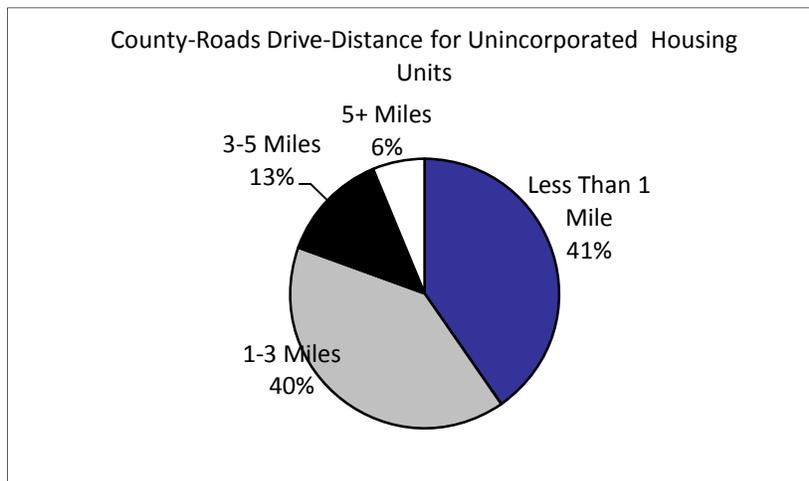
Residential development generates 99% of the driving on unincorporated county roads. The average daily driving caused per dwelling unit in the unincorporated county is 16.7 VMT, with an average trip length on county roads of 1.7 Miles.

Figure 5 - Vehicle Miles Traveled (VMT)

	Development Inventory	Daily VMT on County Roads
Unincorporated County Residential Units on County Roads	2,500	50,800
Non-Residential Square Feet on County Roads	48,500	570
<b>Total Average Daily Vehicle Miles Traveled on County Roads</b>		<b>51,370</b>

Source: Assessor Data, GIS Data, Rural Travel Demand Model (Appendix A)

Figure 6 - Housing Units by County Road Drive Distance

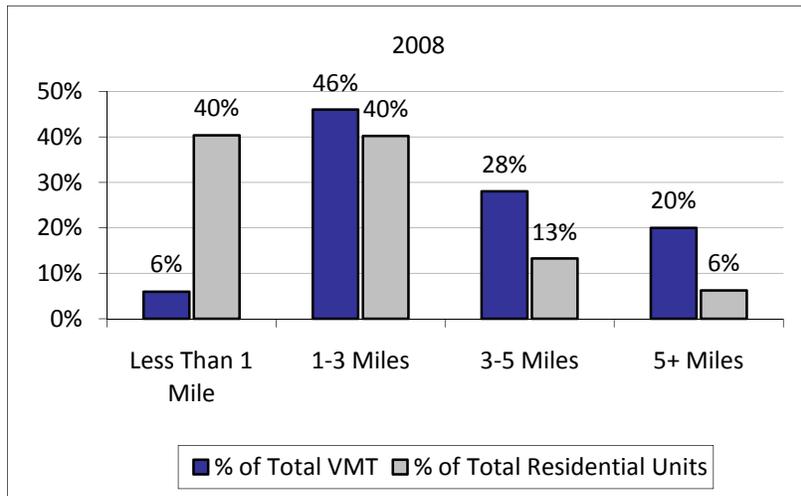


Source: Assessor Data, GIS Data, Rural Travel Demand Model (Appendix A)

Most of the driving that occurs on county roads is generated by residents that are 3 miles or less out a county road. However, units that are more than 5 miles out county roads make-up only 6% of the total

units, but generate 20% of the VMT on county roads. A disproportionate contribution to total travel holds true for houses between one and five miles out county roads as well. However, the reverse is true for homes that are less than one mile out county roads which amount to 40% of the total units but only 6% of the total travel on county roads.

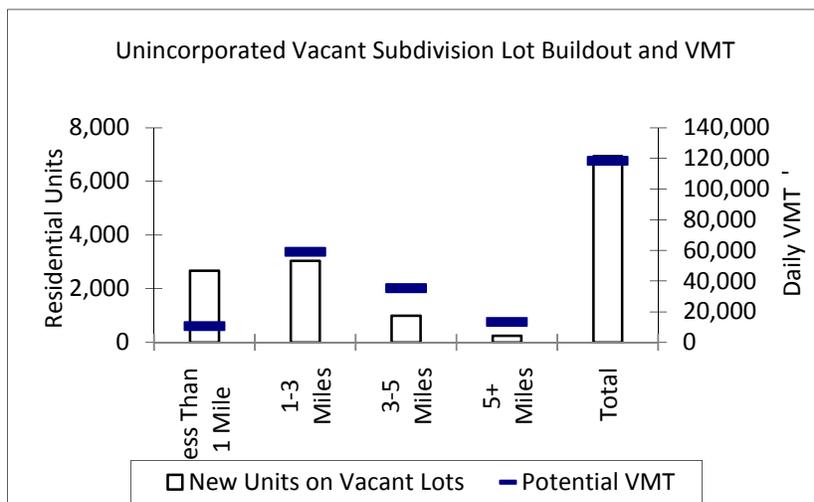
Figure 7 - Total VMT vs. Houses by County Road Drive Distance



Source: Assessor Data, GIS Data, Rural Travel Demand Model (Appendix A)

If the 7,000 vacant subdivision lots build out, it will result in about 120,000 additional VMT, over tripling the amount of travel occurring on county roads in 2008. Residences further out county roads will contribute significantly more to the total amount of driving than those that are less than a mile out county roads or those that directly access state highways.

Figure 8 - Subdivision Build Out and VMT



Source: Assessor /GIS Data, Rural Travel Demand Model (Appendix A); 2009 Subd. Report

## Level of Service

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### Road and Bridge Department Level of Service

Increased driving and traffic is one of the most noticeable effects of growth. The previous section examined projected VMT on county roads associated with new growth. This section, estimates the cost of maintaining the current level of service on county roads for new housing units.

The level of service is defined as the cost of maintaining a specific standard of services and infrastructure. The level of service for roads includes, for example, the amount of money expended each year to grade county roads, remove snow, and fill potholes. If the county chooses to provide these same services at the same standard in the future, it will have to increase its capacity in step with the rate of growth in VMT.

Level of service analysis consists of two main components:

1. Operations and Maintenance: the ongoing day-to-day expenses of running a county department, expressed annually (e.g. salaries, utilities, fuel...).
2. Capital Facilities: the one-time expenses associated with increasing the capacity of infrastructure and capital facilities to keep up with demand (e.g. land, buildings, vehicles...).

*Figure 9 - Road Department Level of Service Costs, 2008.*

Annual Operations and Maintenance Costs per Daily VMT	\$	17
Capital Facility Costs per Daily VMT	\$	63
Road Upgrade Cost per VMT	\$	120
Average Annual Operations and Maintenance Costs per Housing Unit	\$	280
Average Capital Facility Costs per Housing Unit	\$	1,053
Average Road Upgrade Costs per Housing Unit	\$	1,999

Source: Tables in this section, Travel Demand Model (Appendix A), Assessor Data

### Operations and Maintenance

Each home in Teton County generates more or less driving relative to its peers largely based on its location. Residents located further from towns drive further on average for each trip to work or to the grocery store. Houses that generate more VMT generate higher level of service costs.

*Figure 10 - Road Department Budget*

	2007	2008	Mean
Operations and Maintenance	\$932,120	\$792,315	\$862,218
Capital Outlay	\$579,131	\$741,624	\$660,378

Source: Teton County audit report and financial reports, in 2008 dollars

Figures 9 and 10 show that the \$862,218 in average spending on operations and maintenance on county roads generates a per household cost of \$280 in 2008 (using an average daily VMT of 16.7 per unit reported in the previous section).

## Capital Facilities

Capital facilities include the county road department's shop and garage, snowplows and maintenance vehicles, and office equipment. As traffic increases, maintenance schedules get full and improvement projects mount. The county will need to add capacity to its maintenance fleet and facilities to meet increased demand. Figure 11 shows the value of current capital facilities and the cost per daily VMT in 2008. The county also has a road impact fee study, based in large part on the county's 2002 Transportation Plan. This plan lays out improvement needs through the capital facility horizon 2020. Using the cost estimates and traffic projections in this plan, these planned improvements will cost about \$120 per VMT.

*Figure 11 - Roads Facilities and Improvements per VMT, 2008*

<b>Facilities and Equipment</b>	
Rd and Bridge Equipment	\$ 2,878,300
Rd and Bridge Facilities	\$ 360,500
Total	\$ 3,238,800
Cost per Daily VMT	\$ 64
<b>Planned Road Upgrades</b>	
Road Upgrades for Future Growth Only	\$ 2,542,600
Road Upgrades for Future Growth and Existing Development	\$ 3,441,100
Bridge Upgrades	\$ 5,679,100
Total	\$ 11,662,800
Cost per Daily VMT	\$ 120

Road upgrade costs obtained from the 2008 Teton County Impact Fee Study, Hoffman Planning and Engineering. Cost per VMT is base on the project traffic for 2020, also in the impact fee study.

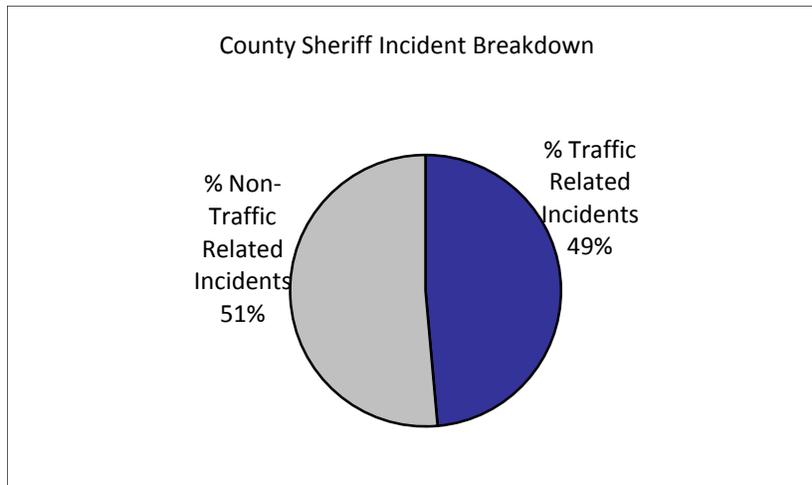
## Law Enforcement Level of Service

According the county's incident report, almost half of the activity at the Sheriff's department is related to traffic enforcement and safety, with more than half dedicated to non-traffic public safety. Because traffic influences demand for law enforcement, development patterns resulting in increased driving increased demand for traffic enforcement and accident response.

## Proportionate Share

The Teton County conducts annual event surveys that detail all the calls-response related activity of the Sheriff's Department. The year 2008 data show that 49% of the department's efforts are directed towards traffic enforcement with the remaining 51% dedicated to general law enforcement.

Figure 12 - Public Safety Traffic Proportionate Share: 2008 Citations Breakdown



For the non-traffic related incidents, a service demand analysis (Appendix C) shows that 90% of that demand originates from the residential sector and 10% from the commercial sector.

**Level of Service**

The level of service is defined as the cost of maintaining a specific standard of services and infrastructure. The level of service for public safety includes, for example, the cost of maintaining adequate response times and levels of traffic patrol and accident response times. If the county chooses to provide these same services at the same standard in the future, it will have to increase its capacity in step with the rate of growth in VMT and housing units.

Figure 13 - Law Enforcement Level of Service 2008

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<b>Traffic Enforcement</b>	
Annual O&M Costs per Daily VMT	\$ 10
Average Annual O & M Costs per Residential Unit	\$ 168
Capital Facility Costs per Daily VMT	\$ 8
Average Capital Facility Costs per Residential Unit	\$ 134
<b>Non-Traffic Public Safety</b>	
Annual O & M Costs Per Residential Unit	\$ 111
Capital Improvement Costs per Residential Unit	\$ 88
<b>Total Law Enforcement</b>	
Average Annual O & M Cost per Residential Unit	\$ 279
Average Capital Improvement Costs per Residential Unit	\$ 222

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**Operations and Maintenance**

The mean annual sheriff’s budget is just over one million dollars averaged across FY 2007 and FY 2008. Figure 13 shows that given the proportionate share factors cited above, it costs \$279 annually to maintain the current level of service for a typical household accounting for both traffic and non-traffic public safety. The traffic related portion of these costs are \$168 annually.

*Figure 14 Law Enforcement Operations and Maintenance Level of Service Costs, 2006*

	2007	2008	Mean
Operations and Maintenance	\$1,060,643	\$1,071,116	\$1,065,880

Sources: Teton County audit reports and financial reports, in 2008 Dollars

### Capital Facilities

The sheriff's department has nearly 400k invested in vehicles and equipment and has plans to retrofit a new facility for nearly one-half million dollars. Currently the department occupies a leased space. Figure 13 shows that the current value of capital facilities and planned improvements averages to \$222 per residential unit, of which the traffic related portion is \$134.

*Figure 15 - Capital Inventory and Planned Improvements*

<b>Equipment</b>	
Vehicles	\$322,500
Equipment	\$44,500
<b>Planned Facility Improvements</b>	
Planned Retrofit of Emergency Services Building	\$479,492
Traffic Enforcement	

Source: Chandler Agency Insurance 2009, County Vehicle Inventory 2009; Impact Fee Study, Hoffman Planning, 2008

### General Government and Administration - Centrally Located Services

Not all local government services are sensitive to the location of development or traffic patterns. For example, the county commissioners, county assessor, and public health nurse all work in centrally located offices, and are not affected by the location of their constituents. Citizens come to public meetings in the courthouse. These services are called "Centrally Located" services.

Some demand for general government services is not generated by households in the county, but rather by businesses and industrial facilities (e.g. planning review for a commercial development project). As a result, fiscal impact analysis for centrally located services demands a land-use based proportionate share analysis.

### Proportionate Share

Fundamentally, demand for centrally located services, including general government, health and social services, increases with the quantity of activity in Teton County. The demand for general government services is split between activities associated with residential land uses vs. non-residential land uses. This split varies widely between communities, depending on the relative quantities of commercial, residential, and governmental activity located in a particular county, and commuting patterns. For example, employment centers like Teton County, WY, where many workers may live outside the county and commute in to work during the day, will tend to have higher demand for services that stem from commercial land uses in the county. Places like Teton County, ID where a sizable proportion of residents commute out of the county to work in adjacent population centers will have relatively more demand from residential land uses.

One reliable way to establish a planning level ratio between residential and non-residential demand is to evaluate the how much time people spend at home (residential) vs. at work (non-residential) and assign proportionate share accordingly. See Appendix C for detail on service-hour methodology.

This proportionate share methodology suggests that residents living in the county demand about 90 percent of general government services, while commercial and industrial land uses measured by time spent at work and commuting patterns, demand about 10 percent of all centrally located services.

**Centralized County Services Level of Service**

*Figure 16 - Centralized County Services Level of Service*

	Average Annual O&M Costs per Housing Unit	Average Capital Facility Costs per Housing Unit
General Government and Administration	\$832	\$1,008
Special Revenue Funds	\$185	\$373
Total	\$1,017	\$1,381

Calculated Using Previously Cited Data in 2008 Dollars

**Operations and Maintenance**

Because operations and maintenance costs for centrally located services are not sensitive to the pattern of new development, cost projections are made using a straight line projection based only on the number of forecast housing units. To calculate the average household level of service, annual operations and maintenance costs and capital facilities costs are multiplied by the residential proportionate share (90%) and then divided by the 4,460 housing units in the county in 2008. Overall it costs \$1,017 per housing unit in 2008 to provide annual operations and maintenance for centrally located services. The bulk of this cost is born by the administration and general government functions of the county that include services such as clerk and recorder, treasurer, courts, and the county commission.

*Figure 17 - Annual Operations and Maintenance Expenditures*

	2007	2008	Mean
General Government and Administration O & M	\$3,559,894	\$4,689,890	\$4,124,892
County Special Revenue Funds O & M*	\$684,944	\$1,144,671	\$914,808

\*Includes: District Court, Juvenile Probation, Tort, Prosecuting Atty fund, legal fund, Domestic Violence, Youth Indigent and Charity, OVAW, Interlocking, Valley Arena, Fair Board, Waterways, Revaluation Fund, Planning Capacity Fund

**Capital Facilities**

Expanding capital facilities is not an incremental process. Instead, new costs increase step-wise in large and infrequent increments. For example, the county may be able to accommodate some new growth without expanding the new courthouse. But when a critical threshold is met, a significant investment must be made to add a new addition or renovate existing space to increases its capacity. In order to keep facility capacity in line with demand, the county will need to ensure new development is building reserves that can be used to pay for improvements when they become necessary.

The approach for calculating level of service for capital facilities is an incremental expansion approach that assumes that the current value of assets per housing unit must be maintained in the future or service levels will decline over the long-term. Maintaining the incremental expansion of centralized county facilities to meet future demands totals \$1,381 per residential unit. As might be expected, expanding the courthouse for administration and general government is the most costly incremental expansion.

*Figure 18- Central County Facilities Assets*

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<b>Equipment</b>	
Vehicles	\$ 157,500
Equipment	\$ 169,000
<b>Facilities</b>	
New Courthouse	\$ 6,000,000
Fairgrounds	\$ 141,500
Other Buildings	\$ 374,400
<b>Total Assets</b>	<b>\$ 6,842,400</b>

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Source: Chandler Agency Insurance 2009, County Vehicle Inventory 2009; Impact Fee Study, Hoffman Planning, 2008

## Revenues

Teton County's revenue comes from a variety of sources, including local taxes, fees and charges for services, interest on investments, and state and federal government grants and distributions. Teton County is relatively dependent on intergovernmental disbursements, with more than a quarter (25%) of the county's entire budget coming from intergovernmental revenue, including PILT payments to counties, state gas tax and state sales disbursements, and federal disbursements.

Intergovernmental disbursements will generally increase with population and commerce but will do so according to generic state and federal disbursement formulas, not in a manner that reflects values or the level of contribution each type of land use to the tax treasury. Therefore, these revenues are projected to accrue in proportion to the increase in housing units regardless of their characteristics.

*Figure 19 - Revenues per Average Dwelling Unit*

	Home Only	Lot Only	Home and Lot
<b>General Fund</b>			
Property Tax	\$311	\$123	\$434
State Disbursements	\$125		\$125
Federal Disbursements	\$35		\$35
License/Permit Fees	\$243		\$243
Misc	\$51		\$51
Total	\$766	\$123	\$889
<b>Road and Bridge</b>			
Highway Users Fund	\$212		\$212
State Disbursements	\$17		\$17
Federal Disbursements	\$14		\$14
License/Permit Fees	\$1		\$1
Misc	\$6		\$6
Total	\$250		\$250
<b>Special Revenue Funds</b>			
Property Tax	\$59	\$23	\$82
Federal Disbursements	\$23		\$23
License/Permit Fees	\$13		\$13
Misc	\$58		\$58
Total	\$152	\$23	\$175

Source: '07-'08 county audits, county clerk, county assessor data, county budget '07-'08

On the other spectrum is property tax, which is entirely based upon the locations, characteristics, and value of private land and improvements. The primary tax revenue in Teton County is property tax. According to the Assessor's records, the mean assessed value of residential structures built in the county since 1999 is about \$270k and a vacant subdivision lot out in the county is about \$106k.

*Figure 20 - Average Values*

Average Value of a Residential Structure Built Since 1999	\$ 269,284
Average Value of an Unincorporated Vacant Subdivision Lot	\$ 105,951

Source: County Assessor Data

Applying these values to the 2009 Mill Levies, a home and lot tallies up to \$434 in annual revenue for general government and administration and \$82 for the special revenue funds.

*Figure 21 - 2009 Mill Levy*

	2009 Mill Levy
County General Fund Mill Levy	0.001156720
Department-Specific Mill Levies	0.000218247
Buildings	0.000070100
Total Mill Levy	0.001445067

## Spatially Dynamic Cost-Benefit

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### Geography of Cost-Benefit

The level of service analysis showed that driving on county roads has been demonstrated to carry significant expenses for the average single family unit, which is on average 1.7 miles out a county road. Since county levels of service are expressed both in terms of residential units and vehicle miles traveled (VMT), it was also possible to estimate the cost-benefit of houses on the 7,000 vacant subdivision lots in the unincorporated county by the distance out county roads.

Analysts employed RPI's rural travel demand model (Appendix A) to calculate the average VMT by distance out county roads:

*Figure 22 - VMT by Distance out County Roads*

Distance Out County Roads	Average Daily VMT per Unit
Less Than 1 Mile	4
1-3 Miles	19
3-5 Miles	35
5+ Miles	54
Unincorporated Average	17

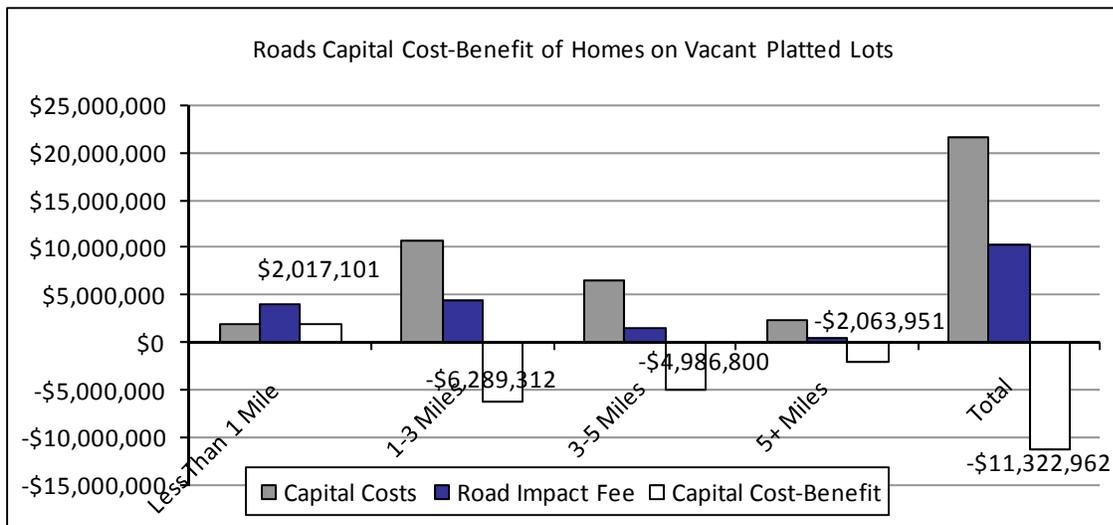
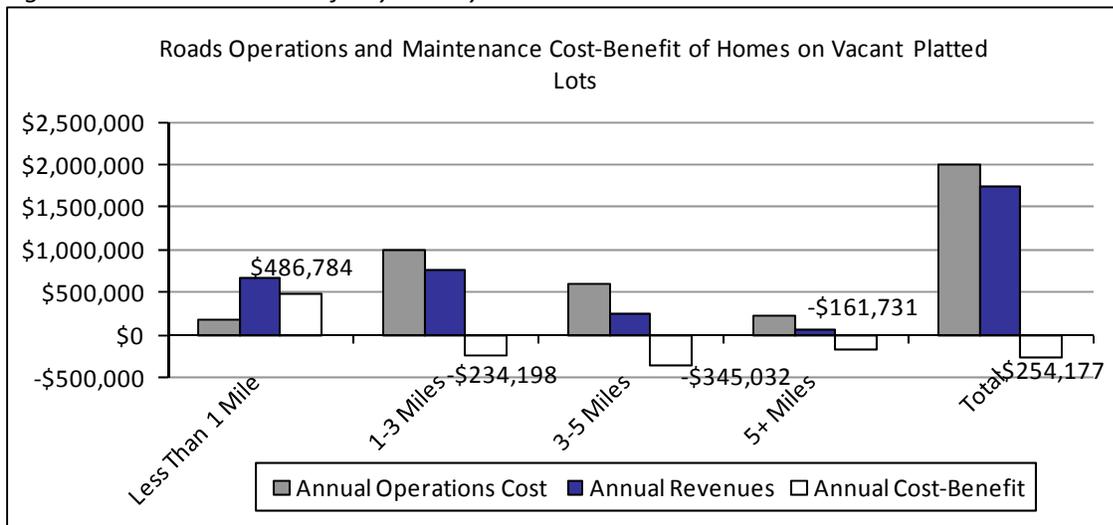
Source: Rural Travel Demand Model Appendix A

In order to estimate the cost-benefit of housing units according to the driving on county roads that they will cause, it was first necessary to calculate a spatially dynamic level of service analysis. This analysis is summarized in Appendix D.

## Roads Fund Cost Benefit

Because VMT varies by the distance out county roads, so do the costs, and thus the balance of costs vs. benefits. For roads operations and capital revenues outweigh costs for homes that are less than one mile out county roads. Homes less than one mile out county roads includes homes that access directly onto state highways and have negligible impacts on county roads. The residences that are closer to state highways almost make-up the revenue lost by homes that are more than one mile out county roads, but fall short of covering annual operations costs by one-quarter million dollars. The revenue generated full build out of vacant subdivision lots in the unincorporated county will ultimately fall short of paying to maintain the level of service for capital facilities and road improvements by \$11.3 million. This includes the projected revenues from the adopted county impact fee of \$1,489 per residential unit.

Figure 23 - Roads Cost Benefit by County Road Drive Distance

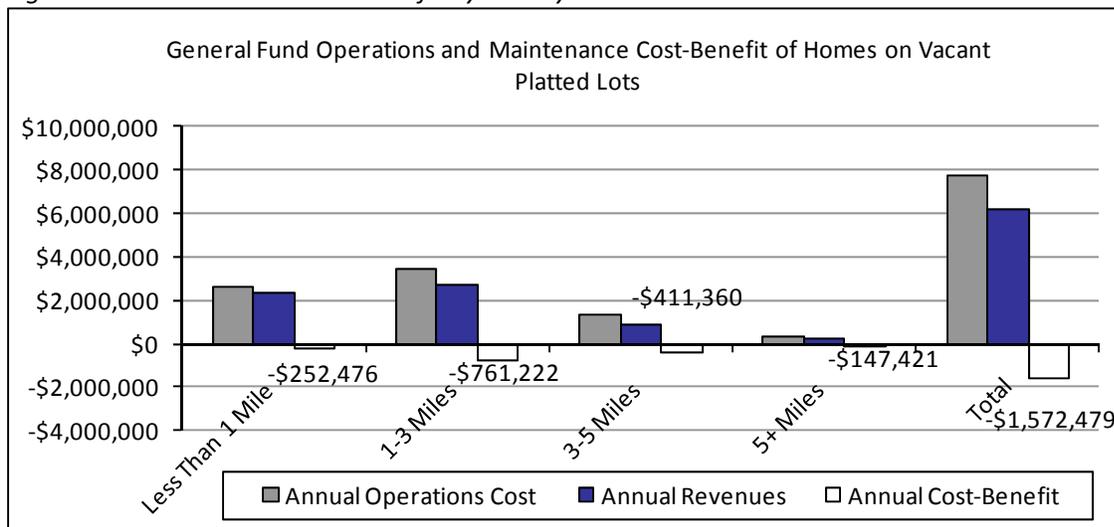


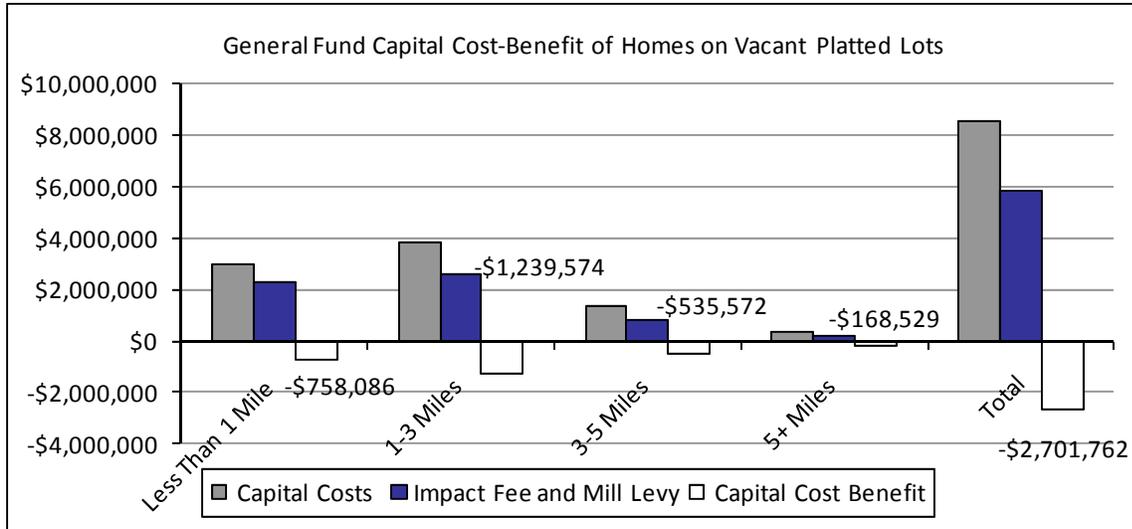
## General Fund Cost Benefit

Because the general fund includes law enforcement, which has been shown to be affected by development patterns, the general fund cost benefit can also be evaluated according to the geographic location of development. Unlike the roads fund, overall housing units cost more than they generate in revenue annually for O&M. This reflects a general trend to subsidize residential land uses with other revenues derived from commercial development or increased reliance on intergovernmental disbursements. Still, units on the 7,000 platted vacant lots that are further out county roads cost more than units that are closer to the highway, with unit further than a mile out county roads accounting for over 85% of the total annual shortfall.

Although the county has impact fees for the fairgrounds and sheriff's department and a mill levy for buildings, the revenues generated by residential units do not cover the costs of maintaining the current level of service. It may be acceptable to lose level of service at this point because of the new courthouse and the extra capacity it may allow, but all declines in level of service should be evaluated carefully.

Figure 24 - General Fund Cost Benefit by County Road Drive Distance

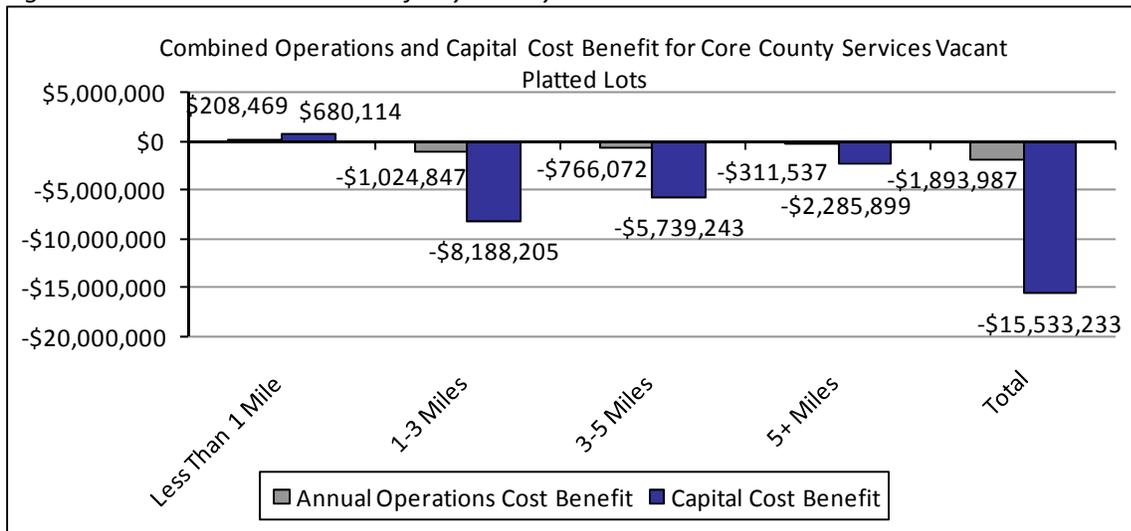




## County Core Services Total Cost Benefit

When all the core funds are combined, build out of vacant lots within less than a mile of county roads would result in an annual gain of \$200k+ under today's revenue structures and a gain of nearly \$680k for capital improvements. Due to the long drives on county roads to dispersed lots, the development of fewer of these home results in greater costs as drive distances increase.

Figure 25 - Core Service Cost-Benefit by County Road Drive Distance



The potential capital improvements deficits are daunting. It must be kept in the forefront that significant population growth cannot occur without significant job growth and prosperity in the area. One way to make-up these deficits is to grow the Teton County economy to support the development pattern with economic vitality.

## Will Vacant Lot Revenues Fill Deficits?

Since vacant lots generate property tax revenue, but almost no annual expenses or impacts on capital facilities, a full cost benefit analysis would be remiss not to examine the degree to which tax collections on vacant lots can cover some of the deficits presented above.

It would require the accumulation of property taxes from 3 to 4 average vacant lots over ten years to cover the county deficit generated by one house built and occupied for ten years. Given that there are about 2 vacant lots for each home in the unincorporated county in 2009, it appears at first glance that the existing inventory of vacant lots will not cover the costs of new homes.

*Figure 26 - Vacant Lot Subsidy Analysis Average County Road Drive Length*

10 Year Operations Cost-Benefit, (1 home)	-\$2,628
Capital Cost-Benefit (one-time, 1 home)	-\$2,166
Annual Property Tax for 1 Vacant Lot (10 yrs)	\$1,457
# of Vacant Lots That Would Fill the Deficit with 10 Yrs property tax collections	3.3

In contrast to an average lot, 1.7 miles out county roads shown above, a lot that is 3-5 miles out county roads would require the accumulation of property taxes from 9-10 average vacant lots over ten years to cover the county deficit generated by one house built and occupied for ten years. The further out a county road a house lies, the less that revenues from vacant lots will be able to subsidize its costs.

*Figure 27 - Vacant Lot Subsidy Analysis 3-5 Mile County Road Drive Length*

10 Year Operations Cost-Benefit, (1 home)	-\$7,672
Capital Cost-Benefit (one-time, 1 home)	-\$5,747
Annual Property Tax for 1 Vacant Lot (10 yrs)	\$1,457
# of Vacant Lots That Would Fill the Deficit with 10 Yrs property tax collections	9.2

Market conditions are also headed in a direction that can also hamper subsidies derived from vacant lot property taxes. Lots that are vacant for too many years may be vacated for other plans or become severely devalued. Delinquent property taxes on troubled or foreclosed properties, and the decline in prices for the over- stocked inventory of vacant lots could reduce revenue collections and further hamper the ability of vacant lots to cover the difference.

## **Appendix A - Travel Demand Model Data & Methodology**

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For the most part, off-the-shelf transportation models are designed for urban transportation systems and are extremely data intensive. Therefore, RPI produced a custom rural travel demand model. Creating the county travel demand model (using ESRI products) involved 2 the use of Spatial Analyst and Community Viz extensions.

GIS Data Sources: Teton County GIS, Teton County Assessor, Idaho Department of Transportation, Idaho Tax Commission

Programming Steps/Rules:

1. Parcels or lots (and their daily trips) were associated with nearest point on a county road, which was attributed with the distance from highway using Spatial Analyst. This results in a known trip-distance for each parcel or lot along county roads to the nearest highway intersection.
2. Traffic from existing or projected housing units initially accesses county roads if closer than but traffic will access state highways if adjacent to them.

Mathematics: The key result from the analysis process is that it calculates the length of trip on county and/or state roads needed to get to the nearest highway, and onto the nearest exit or municipality. Based on 350 traffic studies summarized in the Institute of Transportation Engineers Trip Generation 7th Edition, single family dwelling units produce a daily average of 9.6 trips (in + out).

Thus VMT per quarter parcel = (parcel trip length) X (average daily trips)

## Appendix B - Road Department Capital Facility Inventories

Buildings	Buildings Value	Equipment	Total Assets
Quonset	\$103,000	\$21,000	\$124,000
Main Shop	\$206,000	\$103,000	\$309,000
Tire Shop	\$51,500	\$51,500	\$103,000
Heavy Equipment		\$2,702,782	\$2,702,782
Total	\$360,500	\$2,878,282	\$3,238,782

Source: Asset Information from Chandler Agency Insurance, replacement cost from dump trucks from 2008 Impact Fee study, Hoffman Planning

## Appendix C - Service Demand-Hour Proportionate Share

	Demand Units in 2000	Demand Hours/Week	Person Hours/Week
Total Residents***	5,999		
Residents Not Working	3,061	168	514,248
Workers Living in County*	2,938		
Residents Working in County*	1,742	128	222,976
Residents Working Outside the County*	1,196	128	153,088
		Residential Subtotal	584,136
		Residential Share	90.0%
Jobs Located in County**	2,702		
Residents Working in County*	1,742	40	45,817
Non-Residents Working in County****	714	40	18,789
		NonResidential Subtotal	64,606
		NonResidential Share	10.0%
		Total	648,742

\* Table p26 from SF3, Census 2000

\*\* Bureau of Economic Analysis REIS

\*\*\* EPS, Headwaters Economics

\*\*\*\* Multiple Job Holding of 1.1 Jobs/Person

\* Table p26 from SF3, Census 2000

\*\* Bureau of Economic Analysis REIS

\*\*\* EPS, Headwaters Economics

\*\*\*\* Multiple Job Holding of 1.1 Jobs/Person

## Appendix D - Spatially Dynamic Level of Service

### Road Fund

Distance Out County Roads	Average Daily VMT	Annual Operations Cost	Annual Revenues	Annual Cost-Benefit
Less Than 1 Mile	4	\$67	\$250	\$183
1-3 Miles	19	\$327	\$250	-\$77
3-5 Miles	35	\$595	\$250	-\$346
5+ Miles	54	\$907	\$250	-\$658
Unincorporated Average	17	\$280	\$250	-\$30

### Road Fund

Distance Out County Roads	Average Daily VMT	Capital Costs	Road Impact Fee	Capital Cost-Benefit
Less Than 1 Mile	4	\$732	\$1,489	\$757
1-3 Miles	19	\$3,561	\$1,489	-\$2,072
3-5 Miles	35	\$6,483	\$1,489	-\$4,994
5+ Miles	54	\$9,880	\$1,489	-\$8,391
Unincorporated Average	4460	\$3,052	\$1,489	-\$1,563

### General Fund

#### Sheriff

Distance Out County Roads	Average Daily VMT	Annual Operations Cost	Capital Costs
Less Than 1 Mile	4	\$151	\$120
1-3 Miles	19	\$307	\$244
3-5 Miles	35	\$468	\$372
5+ Miles	54	\$656	\$521
Average Unit	17	\$279	\$222

#### General Government and Administration

Distance Out County Roads	Annual Operations Cost	Capital Costs
Less Than 1 Mile	\$832	\$1,008
1-3 Miles	\$832	\$1,008
3-5 Miles	\$832	\$1,008
5+ Miles	\$832	\$1,008
Average Unit	\$832	\$1,008

### General Fund Combined-Operations

Distance Out County Roads	Annual Operations Cost	Annual Revenues	Annual Cost-Benefit
Less Than 1 Mile	\$983	\$889	-\$95
1-3 Miles	\$1,139	\$889	-\$251
3-5 Miles	\$1,301	\$889	-\$412
5+ Miles	\$1,488	\$889	-\$599
Average Unit	\$1,111	\$889	-\$223

### General Fund Combined-Capital

Distance Out County Roads	Capital Costs	Sheriff Impact Fee	Buildings Mill Levy (Collected 20 Yrs)	Capital Cost Benefit
Less Than 1 Mile	\$1,127	\$317	\$526	-\$284
1-3 Miles	\$1,251	\$317	\$526	-\$408
3-5 Miles	\$1,379	\$317	\$526	-\$536
5+ Miles	\$1,528	\$317	\$526	-\$685
Average Unit	\$1,229	\$317	\$526	-\$386

<b>Special Revenue Funds</b>	Costs	Revenues	Balance
Annual Operations	\$ 185	\$ 175	\$ (10)
Capital Costs*	\$ 373	\$ 156	\$ (217)

\*Capital Revenue is the Recreation Impact Fee