A Report by

HEADWATERS ECONOMICS

Fiscal Impact of the Montana Legacy Project on Mineral County, Montana

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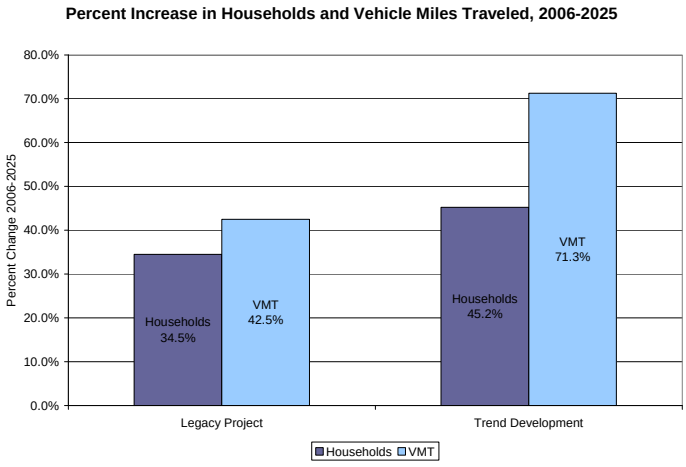
EXECUTIVE SUMMARY

The Montana Legacy Project is a proposal to purchase 310,000 acres of Plum Creek Timber Company land in western Montana for timber management, wildlife conservation, and public access. Forty-two thousand of these acres lie in Mineral County, mainly in the Fish Creek drainage in the southeastern portion of the county. Headwaters Economics partnered with Mineral County to examine the fiscal impact of the Montana Legacy Project on the county government and rural fire districts.

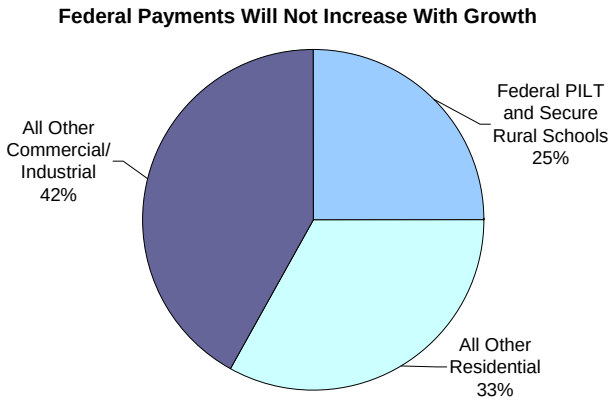
This study forecasts residential development and projects future revenue and service costs to 2025 under three scenarios: housing projected on all private land excluding the Plum Creek lands associated with the Montana Legacy Project, housing projected on all private land including the Plum Creek lands, and the final scenario that includes only housing projected on the Plum Creek lands. Results show that the Legacy Project will save Mineral County more than $165,000 in annual operations and maintenance costs, and will eliminate the need for more than $1 million in one-time capital facilities needs by 2025. The Legacy Project also offers opportunities to enhance the diversity of the county's tax base to the benefit of long-term fiscal health.



Longer Driving Distances Increase Service Costs

Residential development is projected to occur further from population and service centers on average than existing homes in Mineral County. Dispersed development generates more driving, measured as average "vehicle miles traveled" (VMT) per home. The remote nature of the new homes projected on the Plum Creek lands mean that these homes will yield particularly long commuting distances.

Driving patterns—and the associated road construction and maintenance costs, emergency services, and traffic enforcement—affect Mineral County's budget directly. Increases in traffic-related costs are a primary reason that projected homes will be more costly on average for the county to service than existing houses.



Increasing Costs Outpace Revenue Growth

A quarter of Mineral County's revenue comes from federal payments. Because these will not grow along with new residential development, budgetary capacity will lag behind budgetary demands. For example, the county's road

budget is entirely funded by payments from the Secure Rural Schools and Community Self Determination Act (U.S. Forest Reserve Payments). These federal subsidies have kept local taxes low but mean that new development will not cover all new costs.

Results: The Montana Working Forest Project Provides Substantial Fiscal Benefits When Compared to Development of Plum Creek Lands

To assess the fiscal impact of the Montana Legacy Project, we estimated the county's existing service costs (including annual operations and maintenance costs as well as one-time capital facilities investments). We then forecasted what maintaining the same level of service will cost in the future based on three alternative development scenarios:

2025 Legacy Project Scenario: Predicts new development on all private land in Mineral County, EXCLUDING those Plum Creek lands included in the Legacy Project (assumes these lands are transferred to public ownership and that no new development will occur).

2025 Trend Development Scenario: Predicts all new development on private land in Mineral County, INCLUDING development that is possible on the Plum Creek lands included in the Legacy Project.

2025 Plum Creek Development Scenario: Isolates future development predicted ONLY on the Plum Creek lands that are part of the Legacy Project.

Annual Operations and Maintenance Fiscal Impact

	Legacy Project	Trend Development	Plum Creek Only
Per-Household Cost	$1,368	$1,444	$1,690
Per-Household Revenue	$969	$969	$969
Per-Household Fiscal Impact	($399)	($475)	($721)
Number of Households	737	967	230
Total Fiscal Impact	**($293,784)**	**($459,538)**	**($165,754)**

One-Time Capital Facilities Fiscal Impact

	Legacy Project	Trend Development	Plum Creek Only
Per-Household Capital Facilities Cost	$3,499	$3,751	$4,557
Number of Households	737	967	230
Total One-Time Capital Facilities Cost	**($2,578,653)**	**($3,626,863)**	**($1,048,210)**

Conclusions

Results show that the character of projected growth combined with Mineral County's fiscal framework exposes the county to budget shortfalls if current development trends continue. The Montana Legacy Project does two significant things: holds costs down by $165,754 annually and eliminates $1 million in one-time capital facility costs by precluding expensive new development; and it maintains commercial and industrial activity important to local fiscal health. It is also possible that Mineral County can leverage the value of the Montana Legacy Project, and the county's proximity to Missoula into a more diverse and growing economy in sectors other than timber and manufacturing.

Mineral County's best option for maintaining future fiscal health is to grow and diversify its commercial and industrial tax base. Other options may include securing new grants from the federal and state government, imposing impact fees directly on new housing to help cover capital facilities costs, and land use planning that promotes development near existing services.

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INTRODUCTION

Headwaters Economics partnered with Mineral County, MT, to study the fiscal impact of the Montana Working Forest Project at the county level. The Montana Legacy Project is a proposal by The Nature Conservancy and Trust for Public Land to purchase 310,000 acres of Plum Creek Timber Company land in western Montana to maintain these lands as working forests, to continue public access, and preclude development in ecologically sensitive areas for wildlife conservation.[1]

Local officials in the five affected counties, including Mineral, Missoula, Powell, Lake, and Lincoln Counties, are of mixed feelings about the Legacy Project as it relates to fiscal health. Some believe the purchase agreement will harm local fiscal health by removing important private land from the tax rolls (Mineral County is 82% publicly owned today). Others see the alternative—residential development of these lands—as the real fiscal challenge.[2]

Despite Mineral County's proximity to Missoula (and its airport), the economy has not diversified to the same extent as its neighbor, and the local government is still largely dependent on federal payments to fund local services such as roads, public safety, and general government services. Property taxes are largely generated by commercial and industrial activity (56% of all property taxes), including timber and related businesses. In September of 2008, Tricon Timber Company reduced a shift at its mill in St. Regis, cutting 40 jobs and reducing an important part of the local tax base.[3] Plum Creek's transition from timber production to real estate development in Montana has raised concerns about the future of Montana's timber economy,[4] and the potential for wide-spread rural subdivision.[5]

Alternative Development Scenarios
This report compares the fiscal outcomes of three different development scenarios to isolate the fiscal impact of the Montana Legacy Project on Mineral County. The **Legacy Project** scenario assumes that the Plum Creek lands are transferred into public ownership, the majority of acres going to the State of Montana, and the balance to the U.S. Forest Service. The **Trend Development** scenario projects the fiscal impacts of all forecast development, including the homes that could be built on the Plum Creek lands in the absence of the Legacy Project. Comparing the two alternative development scenarios reveals the fiscal impact of residential development on only those Plum Creek lands that are part of the Montana Legacy Project in Mineral County.

Future ownership of the Plum Creek lands under the Legacy Project Scenario is still uncertain. In Mineral County, The Nature Conservancy is the current owner, but is seeking to transfer ownership of the bulk of these lands to the State of Montana. It is possible that either the Department of Natural Resources and Conservation, or Montana Fish, Wildlife, and Parks could own all or some of these lands. The DNRC often leases or sells land for development, but for the purposes of this study, we assume that these lands will not be available for development.

Alternative Development Scenarios

2006 Baseline
Assesses the cost of maintaining the current "level of service" for the existing 2,138 housing units in the County.

2025 Legacy Project Scenario
Predicts new development on all private land in Mineral County, EXCLUDING those Plum Creek lands included in the Legacy Project (assumes these lands are transferred to public ownership and that no new development will occur).

2025 Trend Development Scenario
Predicts all new development on private land in Mineral County, INCLUDING development that is possible on the Plum Creek lands included in the Legacy Project.

2025 Plum Creek Development Scenario
Isolates future development predicted ONLY on the Plum Creek lands that are part of the Legacy Project.

Fiscal Impact Analysis
The fiscal impact analysis has four basic steps:

1. Housing Forecast and Traffic Projections
This section forecasts development to 2025 in Mineral County using the Headwaters Economics housing forecast model and conversations with local elected officials, staff, and land appraisers familiar with Plum Creek's real estate activities. The Rural Planning Institute's rural traffic model projects Vehicle Miles Traveled (VMT)—a measure of the total amount of driving generated by an average household under the alternative development scenarios—and Average Daily Trips (ADT)—how this new traffic is distributed across the county's road network that allows for an analysis of road improvement needs generated by new driving patterns.

2. Level of Service and Cost Projections
Level of service is defined as the cost of providing the existing standard of services for an average household in Mineral County (*e.g.,* emergency response times, road maintenance standards, or the number of sheriff's deputies per capita). Level of service is calculated for both the ongoing operations and maintenance costs associated with running a local government and one-time capital facilities needs.

3. Revenue Projections
New development will generate new property taxes and other revenue. However, some current sources of revenue are unrelated to growth, including federal Payment in Lieu of Taxes (PILT) payments. This section forecasts new revenue that will be generated by each new home built in Mineral County.

4. Fiscal Impact Analysis
This section compares the level of service cost and revenue projections to assess the net fiscal impact of new residential development. If new revenue exceed projected level of service costs, the net fiscal impact is positive. If new costs exceed projected revenues, the fiscal impact is negative and new growth will not "pay its own way."

Level of Service

Suppose that you enter a restaurant with a small kitchen, two tables, and two waiters; you sit at one of the tables and begin dinner. You would expect, given the ratio of waiters to tables, that the service will be good. Consider entering the same restaurant a week later, with the same kitchen and the same two waiters, to discover that they have added one hundred additional tables and that the restaurant is packed with people. You might expect a significantly decreased level of service from the two waiters.

The same happens with provision of government services and infrastructure. For example, providing road infrastructure is one of the top expenses for rural county governments. General wear and tear on the roads system, the attendant maintenance requirements, and the need for expanding the capacity and safety of the system accompany increased traffic associated with new growth. If revenue does not increase at pace with new service demands from new development, the level of service will decline.

Fiscal impact analysis first establishes the existing level of service—defined as the cost of maintaining a specific standard of services and infrastructure—for an average home in Mineral County, then projects these costs into the future based on two alternative development scenarios. Level of service analysis consists of two main components:

Operations and Maintenance: the ongoing day-to-day expenses of running a county department, expressed annually (e.g., salaries, utilities, fuel).

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).

Fire District Dynamic Fiscal Impact Analysis

This report also includes fiscal impact analysis for the Frenchtown Fire District. The Frenchtown Fire District is an autonomous governmental district that provides fire and emergency response services to parts of Mineral and Missoula counties. The Fish Creek drainage, where most of the Plum Creek lands in the Legacy Project are located, is not currently in a rural fire district. We selected the Frenchtown Rural Fire District for analysis because it provides services to land in the same area, and is the most likely district that could expand to provide services to new development, or is the closest proxy for the costs associated with providing fire and emergency services to the Plum Creek lands if they were to be developed.

Other Government Agencies
The Legacy Project will affect future service costs for other state and federal agencies, not only local governments. For example, development of all Legacy Project lands (in all five counties, not only Mineral County) could increase the State's wildfire suppression "liability" by up to $215 million (in 2006 dollars). Wildfire suppression liability is the total cost associated with protecting homes in the Wildland Urban Interface if every acre of the Legacy Project lands were threatened by wildfire in a single year. This outcome is unlikely; some years will see few if any of these lands threatened (as in 2008), and other years will experience significant costs (the potential illustrated by the 2007 fires where more than 20,000 acres were threatened).

Level of Service Costs for Second Homes vs. Primary Residences
This study accounts for second homes because we calculate average level of service across all existing homes. To the extent that a portion of existing homes are second homes, the lower service demands are captured in the average household level of service. This is also true of the average trip generation and commuting patterns captured by the rural transportation model.

However, there is an assumption that second homes do not generate the same level of service costs as primary residences because of the itinerant pattern of use. If projected homes are likely to have a higher proportion of second homes than the existing housing stock, future level of service costs are expected to be lower. The cost savings associated with second homes, however, are not as substantial as may first be suspected. Public safety officials across the west, for example, often report higher average costs associated with second homes because of higher rates of crime and vandalism, and from incidents associated with false-alarms (for example, we have been told that storms can trigger security alarms on remote homes, and if the residents are not at home to disarm the system, the sheriff is often required to investigate). Local government also find that they must staff up to provide services at "peak" periods, and often incur costs at the same level as if all homes were permanently occupied.

HOUSING AND TRAFFIC PROJECTIONS TO 2025

This section describes the methods behind the housing and traffic forecasts and presents the results for each of the alternative development scenarios. The new homes forecasted and associated increases in traffic inform the cost and revenue projections described in later sections of this report.

Housing Forecasts

Housing forecasts are made using Headwaters Economics' 2025 Development Forecast Model, which is based on a continuation of recent growth rates and trends observed in western Montana.[6] The housing forecasts use housing data from Montana county assessors records which represent the most accurate and current data on the number and location of housing in Mineral County.[*]

Headwaters Economics facilitated a work session in Superior on October 6, 2008 with county elected officials, staff, and interested citizens to review the housing forecasts and alternative development scenarios. During the workshop, we learned that potential development of Plum Creek lands would likely be a different real estate market and different home buyers from the housing projected to be built in the rest of Mineral County, mainly along the Clark Fork River corridor. These observations were corroborated by conversations with land appraisers and real estate experts knowledgeable about the Montana Legacy Project and Plum Creek's land sales and development activities in Western Montana. This means that any development of Plum Creek lands would be in addition to development elsewhere in the county, increasing the total amount of development by 2025.

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[*] Mineral County's rural addressing system has 1,800 unique housing units, lower than the 2,138 structures counted by the tax assessor's records. The tax assessor's records include structures inside the town limits of Alberton and Superior. Eliminating these municipal homes reveals that the tax assessors records count only 1,656 units. The tax assessor's records do not count apartment units as individual structures, but the addressing system does, accounting for the lower number of records. Using the tax assessor records means total level of service costs are distributed across a lower number of units, resulting in a higher than average per-unit cost. When higher per unit costs are projected into the future, total cost could be overstated if the current proportion of single-family units to duplex/apartment units changes. We expect the current variance between the rural addressing system and the tax assessors records to remain constant, meaning total costs are still projected accurately using the tax assessor records.

The development potential of the Plum Creek lands associated with the Legacy Project was determined by first eliminating all lands with slopes of greater than 25 percent, and excluding a buffer of 150 feet on each side of Fish Creek. Development was allocated across the remaining "buildable" land at an average density of one unit per 15 acres (from discussion with local officials and land appraisers). A total of 230 homes could be built on Plum Creek lands based on these constraints. Even though these are expected to be "new" homes, in addition to current development trends, we expect that the average size, value, and residency will be similar to housing stock elsewhere in the county. In other words, we have no indication that the new homes are likely to be significantly larger or more expensive, as may be the case with other Plum Creek lands that are part of the Legacy Project (such as in the Swan Valley in Missoula and Lake Counties).

Figure 1: Current and Forecast Housing Units, Mineral County, Montana.

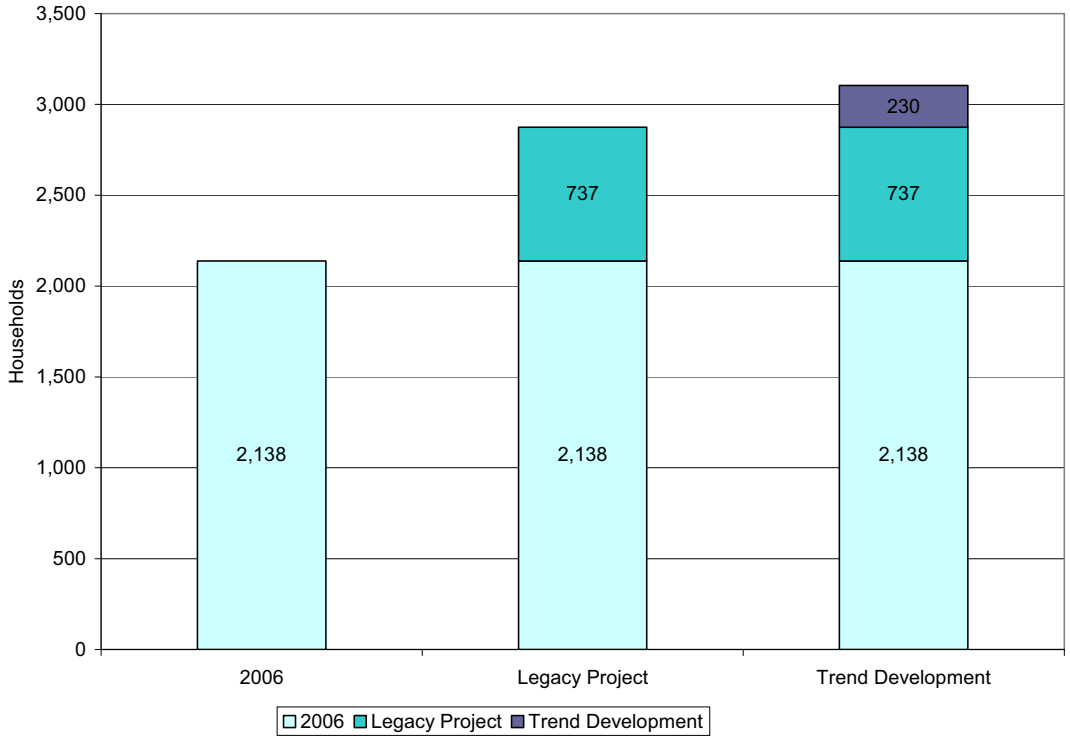


Figure 1 shows that there are 2,138 housing units in the county, our baseline for housing forecasts. The Legacy Project Scenario forecasts that 737 new houses will be built by 2025, a 35 percent increase over 2006 housing numbers. The Trend Development Scenario forecasts 967 new homes in the county, including the 230 possible on the Plum Creek lands associated with the Montana Legacy Project. The Trend Development Scenario represents a 45 percent increase over current housing numbers, with the portion of new homes projected for the Plum Creek lands making up about 24 percent of all new housing.

Map 1 on page 12 shows that many of these new homes, particularly those associated with the Plum Creek lands, will be constructed outside of population and service centers. These trends are consistent with development patterns over the last 20 to 30 years in Western Montana.[7]

Rural Traffic Modeling

Building and maintaining county roads are among the most expensive services Mineral County provides. In addition, the sheriff, fire district personnel, and emergency services are all responsible for traffic-related enforcement and public safety. In all cases, the makeup of the road network and driving patterns has a real impact on the cost of providing services and maintaining capital facilities. In short, more driving results in higher service costs.

Traffic modeling is based on a rural traffic demand model developed by the Rural Planning Institute and is described in detail in Appendix A. The model estimates both total Vehicle Miles Traveled (VMT)—a measure of total traffic generated by homes—and Average Daily Trips (ADT) on each road segment in the county. Maps 2 and 3 on pages 13 and 14 show the results for VMT projections for the alternative development scenarios. Maps 4 and 5 on pages 15 and 16 show the results for projected ADT associated with the alternative development scenarios.

Table 1: Existing and Forecast Vehicle Miles Traveled (VMT) on County Roads[8]

	2006	Legacy Project	Trend Development	Plum Creek Only
Housing Units	2,138	737	967	230
Total Daily VMT - County Roads	36,747	15,613	26,190	10,578
Per-Household Daily VMT - County Roads	17.2	21.2	27.1	46.0

Table 1 shows that the 737 new housing units forecast under the Legacy Project Scenario will result in an increase of more than 15,000 daily VMT on county roads, a 42 percent change from 2006. The 967 new housing units forecast under the Trend Development Scenario will result in more than 26,000 new daily VMT on county roads, or a 71 percent increase over 2006.

Figure 2: Forecast Housing and Vehicle Miles Traveled on County Roads, 2006-2025[9]

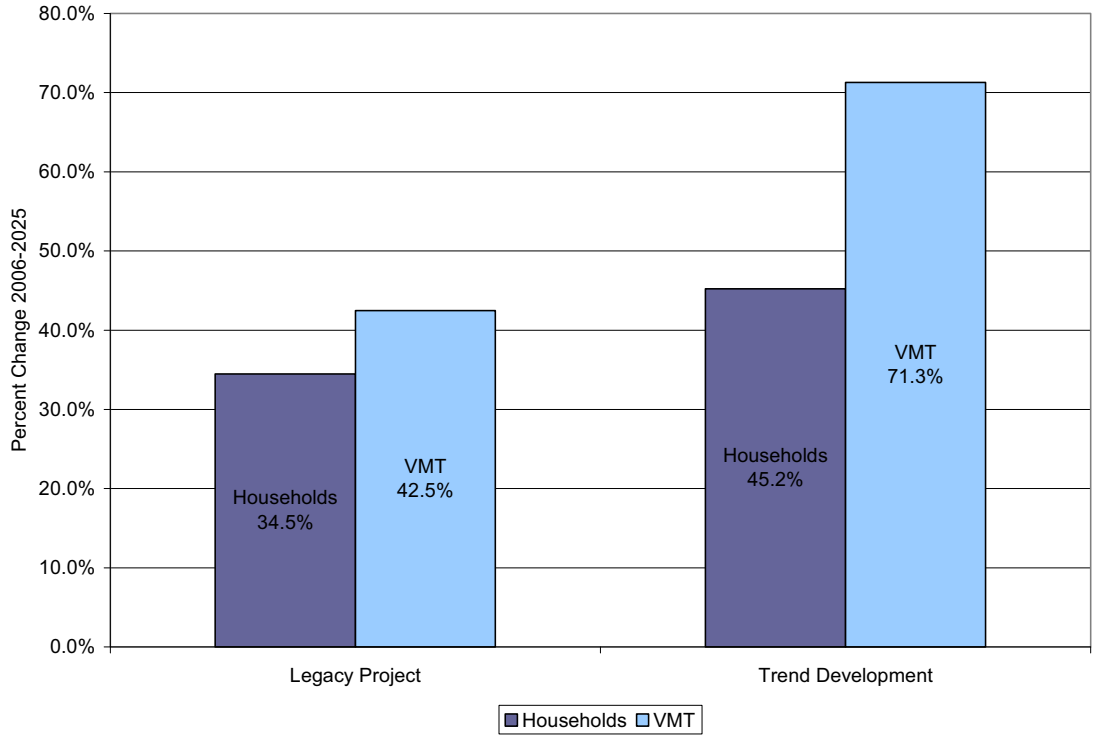
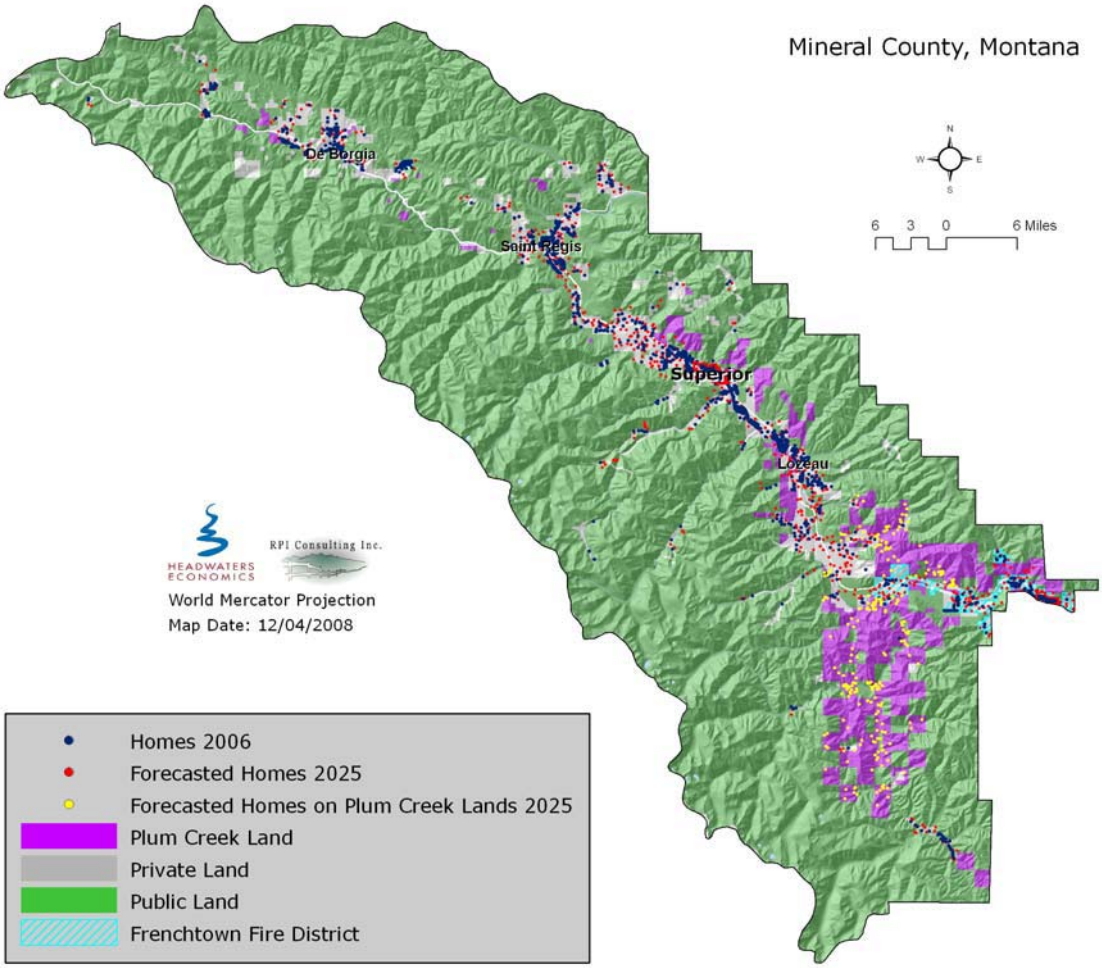


Figure 2 shows that VMT on county roads increase at a faster rate than housing development. The average household in 2006 generates 17.2 daily VMT. The daily VMT will be to 21.2 under the Legacy Project Scenario and 27.1 under the Trend Development Scenario. The larger relative increase in VMT under the Trend Development Scenario reflects the remote location of Plum Creek lands relative to population and service centers, and the resulting longer travel distances associated with trips to work or the grocery store. The average daily VMT of the 230 homes forecast on Plum Creek lands is 46 miles. In 2025, the 230 potential homes on Plum Creek lands would account for just 8 percent of all county housing units, but would be responsible for 29 percent of VMT on county roads.

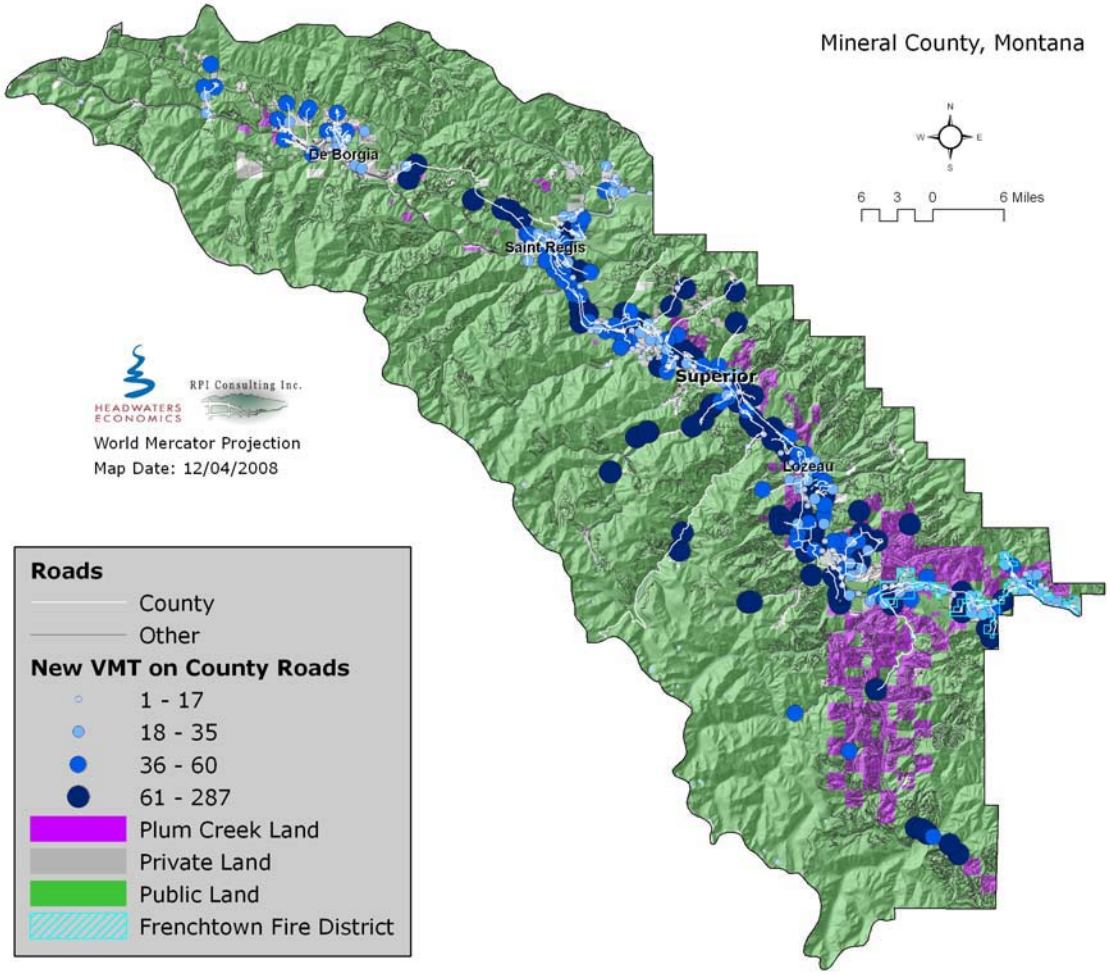
Map 4 also indicates that new development on Plum Creek lands in Fish Creek would generate ADTs that exceed the accepted threshold for gravel roads, triggering a paving requirement for 4.2 miles of county road.

Increased traffic on county roads resulting from growth is associated with increasing demands for road construction, maintenance, and other services. However, the county is affected by increased VMT on *all* roads in the county, including state and federal highways and U.S. Forest Service roads. For example, I-90 transects the length of the county, and imposes service demands, particularly for emergency services and public safety provided by the sheriff's office. (See Appendix A for a description of new traffic forecast on all roads). This report only projects new county service costs associated with increased driving on county owned and maintained roads, so it may underestimate the full traffic-related costs associated with new development.

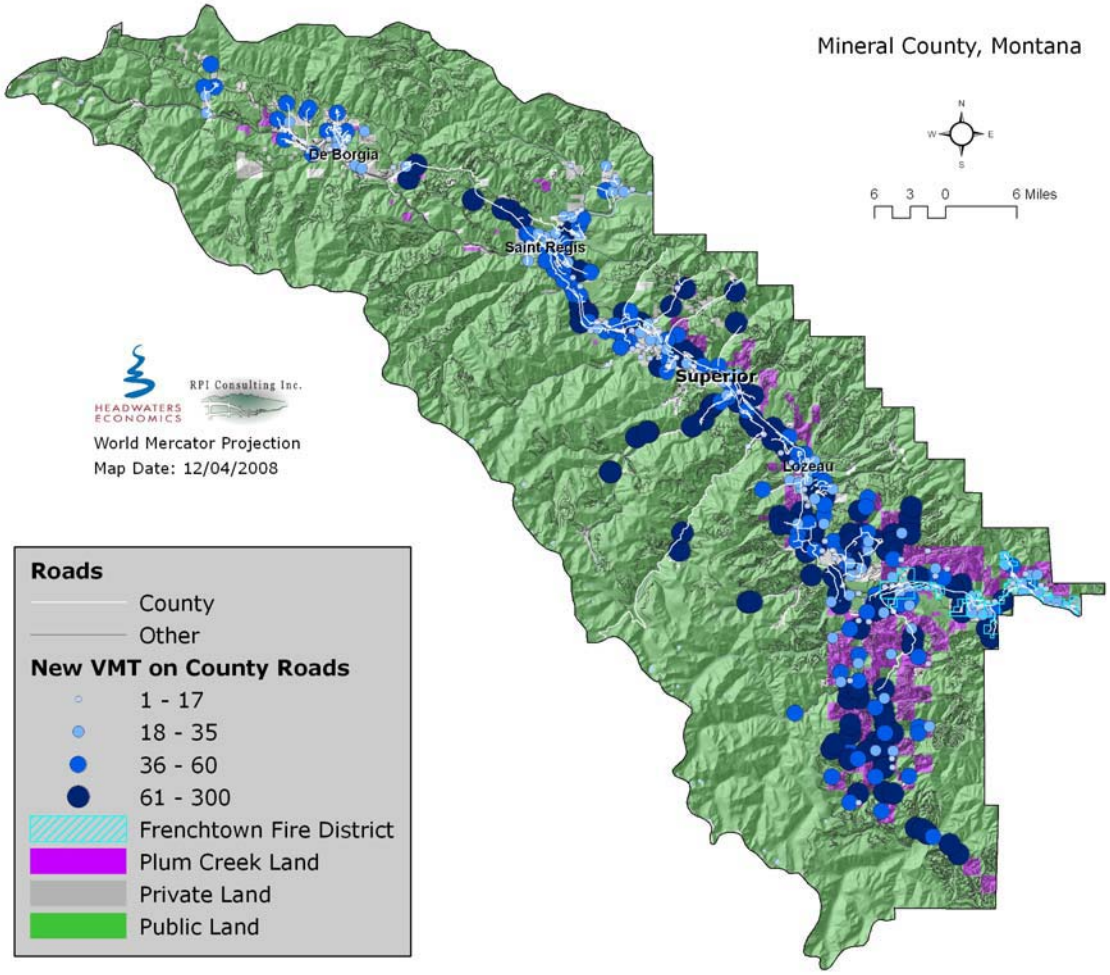
Map 1: Existing and Forecasted Housing 2006 - 2025, Mineral County, Montana



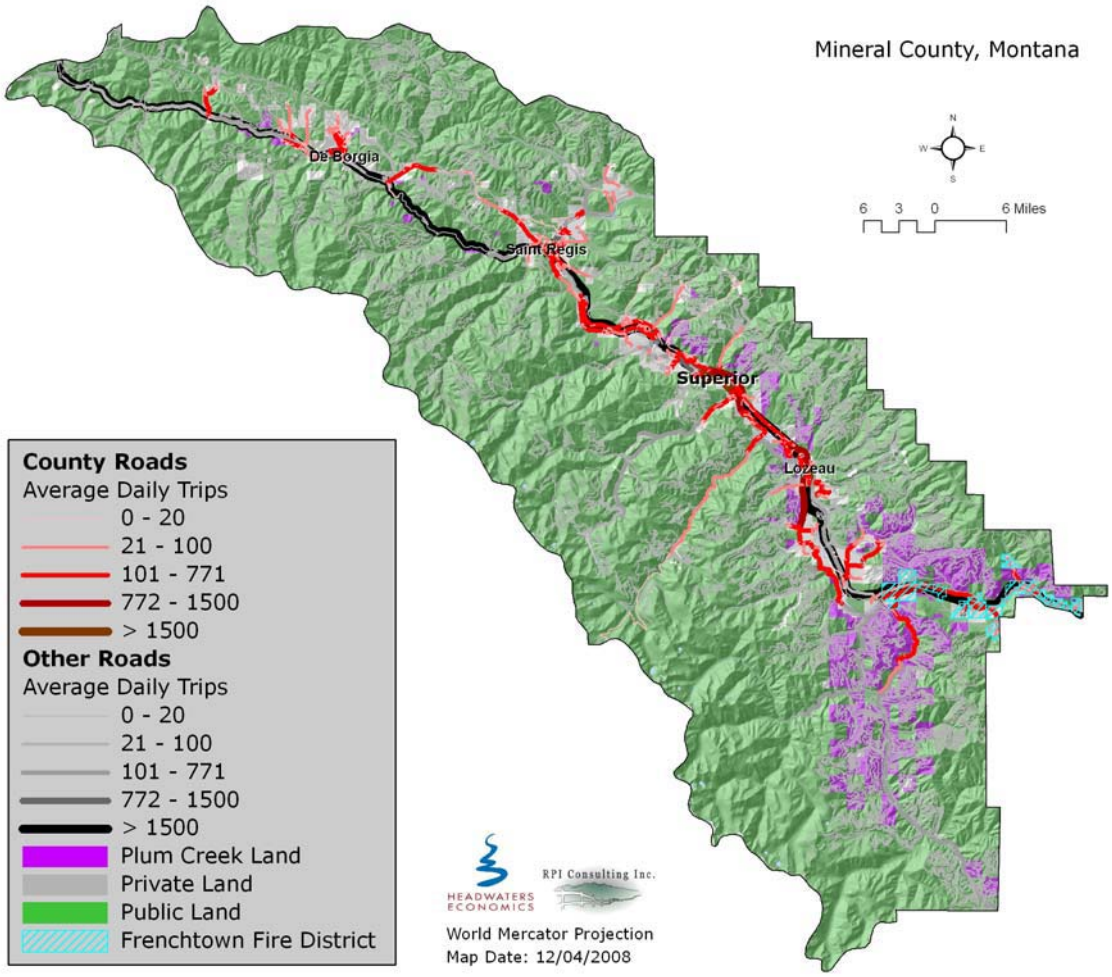
Map 2: Montana Legacy Project Scenario Traffic Model (Average VMT Per Housing Unit), Mineral County, Montana



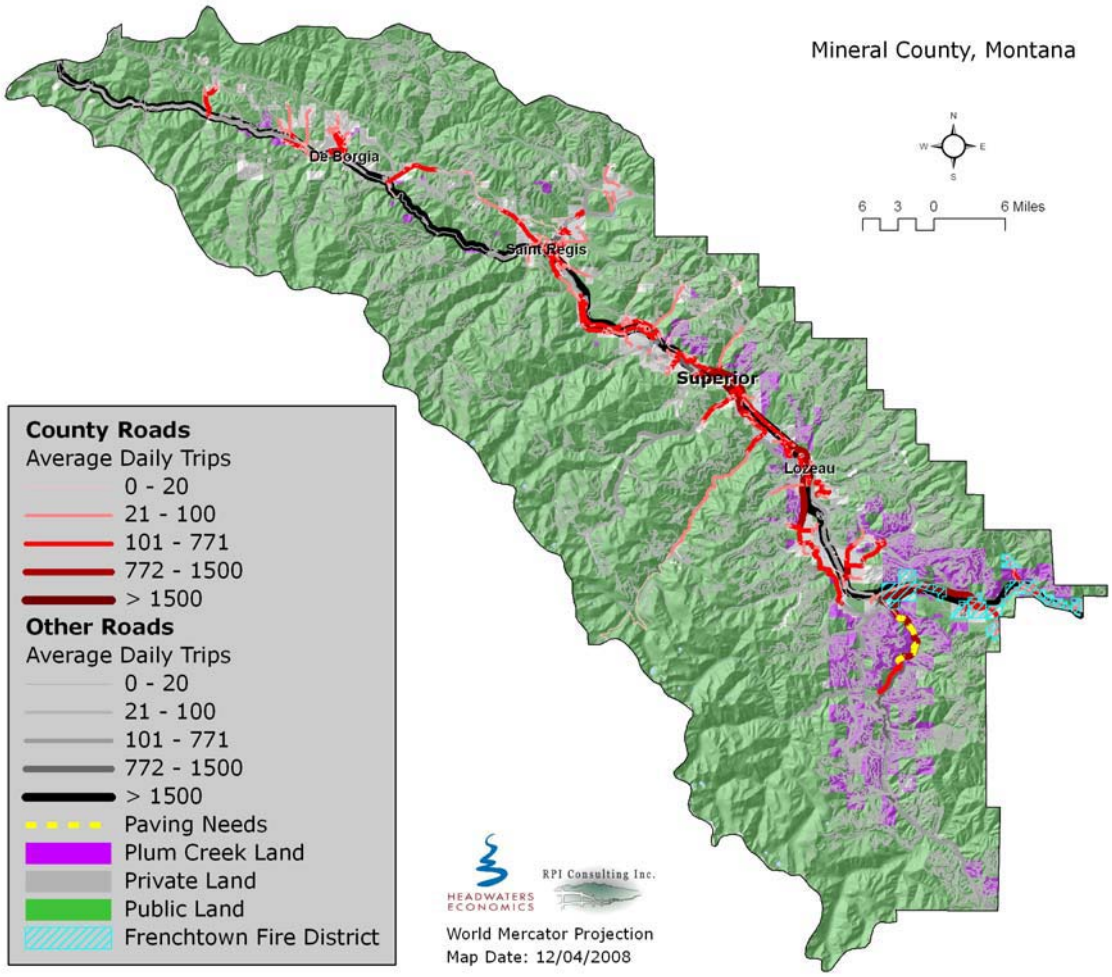
Map 3: Trend Development Scenario Traffic Model (Average VMT Per Housing Unit), Mineral County, Montana.



Map 4: Montana Legacy Project Scenario Traffic Model (ADT Projections for County Roads), Mineral County, Montana.



Map 5: Trend Development Scenario Traffic Model (ADT Projections for County Roads), Mineral County, Montana.



LEVEL OF SERVICE AND COST PROJECTIONS

ROAD DEPARTMENT LEVEL OF SERVICE PROJECTIONS

Increased driving and traffic are among the most noticeable and most costly effects of growth. The county road department is responsible for construction, resurfacing, and maintenance activities on all county roads, including snowplowing and grading county gravel roads.

This section reviews the current level of service and its cost for county roads in 2006. What follows are projections of the cost of maintaining the current level of service under each future development scenario.

Proportionate Share
The traffic model estimates total travel for all residential traffic. There are other kinds of travel on county roads, including industrial and commercial travel (e.g., logging trucks traveling between U.S. Forest Service and private timberlands to the interstate, or whitewater rafting companies access the Clark Fork river), and recreation travel (out-of-county traffic crossing county roads to access public lands). The proportionate share analysis estimates that 30 percent of all travel on county roads is of a commercial nature, and 30 percent is for recreation purposes. The remaining 40 percent if residential in nature.

Of the 60 percent of traffic on county roads that is commercial or recreational, more than half is associated with travel that is initiated outside Mineral County (e.g., hunters from adjacent counties using Mineral county roads to access public land, or logging trucks servicing a mill outside Mineral County. Because there is significant use of county roads that are not associated with local residents or businesses, it would be inappropriate to allocate the entire road budget only to residential traffic projected by the traffic mode. Only the proportion of road costs associated with local traffic is used to make cost projections.

Operations and Maintenance
Each home in Mineral County generates more or less driving largely based on its location. Residents located further from towns drive further on average for each trip to work or to the grocery store. It follows that houses that generate more traffic, measured as daily VMT, generate higher level of service costs.

To establish the existing level of service, the road department's average annual expenditures are divided by the total daily VMT established from the rural traffic model to establish an average cost per daily VMT on an annual basis (the service cost associated with one mile driven on county roads every day for a year). This cost can then be used to estimate the cost for an average household under the alternative development scenarios based on the average household daily VMT projections from the traffic model.[†]

[†] The tax assessor's records we use for housing data include homes inside the town limits of Alberton and Superior. The traffic model assumes that the destination of each vehicle trip generated by a home is either a local municipality or the interstate (when the destination is a city outside the county). As a result, the model calculates a VMT and ADT value of zero for existing and projected homes inside the two town boundaries. In effect, only rural homes are included in the calculation of road operations and maintenance and capital facilities costs.

Table 2 shows that the county's road budget, adjusted by the proportionate share of local traffic, is just under $280,000 averaged for fiscal years 2006 and 2007, or $131 for each existing home in the county (using an average household daily VMT of 17.2 reported in the previous section). Two years of the county's budget are averaged to control for one year having unusual expenditures.

Table 2: Road Department Operations and Maintenance Expenditures[10]

	2006	2007	Average
Annual Operations and Maintenance Expenditures	$396,699	$463,864	$279,253
Total Daily VMT - County Roads			$36,747
Average Annual VMT Cost			$8
Average Household Daily VMT			$17
Average Household Annual Cost			$131

Because the average home forecast in the alternative development scenarios generates higher average daily VMT than the average existing home, the cost of maintaining the current level of service under each future development scenario will rise.

Table 3 shows that the cost of maintaining the current level of service for a new home forecast under the 2025 Legacy Project Scenario is $161, generating total operations and maintenance costs of $118,645 annually.

The cost of maintaining the current level of service for a new home forecast under the 2025 Trend Development Scenario is $206, generating total operations and maintenance costs of $199,029 annually.

Considering only the 230 homes possible on the Plum Creek lands, the average household cost of maintaining the current level of service is $349, generating total operations and maintenance costs of $80,384. The 230 new homes represent 23 percent of the total new development forecast by 2025, but account for 40 percent of the projected costs. This reflects the fact that on average, a housing unit on Plum Creek land will generate twice the daily VMT on county roads than the average new home elsewhere in the county (46 average daily VMT vs. 21 average daily VMT respectively). The remote location of the Plum Creek lands relative to population and service centers lends to longer trips on county roads.

Table 3: Road Department Operations and Maintenance Cost Projections

	Legacy Project	Trend Development	Plum Creek Only
Average Daily VMT	21.2	27.1	46.0
Housing Units	737	967	230
Average Household Cost	$161	$206	$349
Total Cost	$118,645	$199,029	$80,384

Capital Facilities

Existing capital facilities include the county road department's shop and garage, maintenance vehicles, and other 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. Table 4 shows the value of the road department's current capital facilities averaged across all current homes in 2006. This represents the one-time replacement value of capital facilities.

Table 4: Road Department Capital Facilities Level of Service Costs, 2006[11]

	Buildings Value	Equipment Value	Land Value	Total Assets/Cost
County Shop, County Garage	$824,112	$1,002,131	$37,061	$1,863,304
Housing Units - 2006				2,138
Average Household Capital Facilities Replacement Value				$565.61

Table 5 shows that the cost of maintaining the current level of service for a new home forecast under the 2025 Legacy Project Scenario is $697, generating total one-time capital facilities costs of $513,783.

The cost of maintaining the current level of service for a new home forecast under the 2025 Trend Development Scenario is $891, generating total one-time capital facilities costs of $861,881.

Considering only the 230 new homes possible on Plum Creek lands, the average one-time capital facilities cost is $1,513, generating total one-time capital facilities costs of $348,099.

The cost projections in Table 5 only consider increases in residential traffic. It is possible that the Legacy Project scenario will generate additional recreational traffic as people access the Legacy Project lands across county roads. Depending on future management goals and activities, it is also possible that industrial traffic from logging trucks could increase or decrease over time. These activities will also have an impact on county roads, but this analysis does not attempt to project changes in these uses, and the resulting costs for to the county road department.

Table 5: Road Department Capital Facilities Level of Service Cost Projections, 2006-2025

	Legacy Project	Trend Development	Plum Creek Only
Average Daily VMT	21.2	27.1	46.0
Housing Units	737	967	230
Per Household Capital Facility Costs	$697	$891	$1,513
Total Capital Facility Costs	$513,783	$861,881	$348,099

Road Paving Requirements

Paving gravel roads is a major expense as the county grows and traffic levels trigger the need for an upgrade from an aggregate/gravel to an asphalt surface. The rural traffic model is programmed to distribute traffic volumes onto individual road segments (measured as Average Daily Trips, or ADTs) to allow a planning level evaluation of future paving needs.

There are no outstanding or immediate needs for paving projects in 2006 given the current VMT and associated ADTs associated with the existing 2,138 homes in Mineral County. Projecting the cost of potential future paving needs involves determining the incremental increase in ADTs on individual road segments compared to accepted thresholds for gravel and paved roads.

New development possible under the Trend Development Scenario does trigger one paving requirement on a 4.2 mile segment of gravel road at the mouth of the Fish Creek drainage.[‡] Most of the projected development in Fish Creek will use Forest Service roads, or private subdivision roads to access their homes. Mineral County requires developers to construct and maintain their own roads within subdivisions, and we do not project any new costs associated with increased traffic on these existing or new private and Forest Service roads. However, each vehicle leaving a home in Fish Creek will ultimately be funneled onto the main road at the mouth of the Fish Creek drainage. Because this one short road segment will essentially be carrying all new traffic generated by projected development, it will be the most heavily impacted segment of road.

Recent impact fee support studies cite a range of rural road rebuilding and paving projects that range from $1.6 million to $2.5 million per mile.[12] Using the lower end of this range, we find that the total cost of rebuilding the road segment is just over $6.7 million. Conversations with Tim Read (Mineral County Planner) indicate that the County does not have any ownership or maintenance agreements on the road at present, and the entire section requiring pavement is owned by the Forest Service. Table 6 reports the total paving costs, and presents the per-household figure to provide another assessment of the cost.

Mineral County and the U.S. Forest Service do have an agreement under-which the county will accept dedicated roads from the Forest Service if half of the traffic on the road is generated by residential development. Mineral County has accepted four "Schedule A" roads—maintained by the county, easements owned by the Forest Service—in the past (Little Joe, Flat Creek Rd., Pardee Rd, and Keystone Rd.). The county also accepted an easement for a road from the Forest Service (meaning the county effectively took ownership of the road) in a subdivision up Dry Creek. It is possible that the county will accept maintenance requirements on the 4.2 miles of road currently owned by the Forest Service. However, the most likely scenario is that the county will only accept maintenance after the road is brought up to county standards. So, the county could be in the position of maintaining a paved road, but will likely not pay for upfront paving costs.

The Forest Service and/or the county could also require new landowners and developers to bring the road up to county standards before any new subdivision could occur, or the county may deny new subdivision up Fish Creek based on the public safety issues involved with the road if no funds are available to complete necessary paving needs.

The cost associated with road paving are based on projected trends. However, if the Plum Creek lands that are part of the Montana Legacy Project are purchased by the state, we are assuming that no new development will take place and the road paving need is effectively eliminated.

Table 6: Road Paving Costs

Rebuilding Roads and Paving Gravel Roads	
Miles Needing Paving	4.2
Cost per Mile	$1,600,000
Total Cost	$6,720,000

[‡] Chapter 4 of the 1993 American Association of State Highway Officials Guide for Design of Pavement Structures includes a Flexible Pavement—Aggregate Surface Catalogue, which indicates that for Montana's climate, roads with average daily trip (ADT) volumes in excess of 771 ADT should be paved. Volumes below this level will function with aggregate, or gravel/dirt surfaces.

PUBLIC SAFETY LEVEL OF SERVICE PROJECTIONS

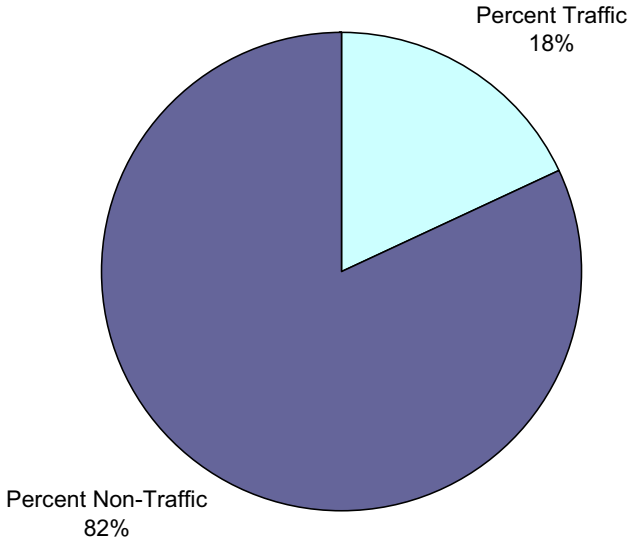
Public safety services include a range of traffic and law enforcement activities, emergency response, and a wide range of other programs, including education, and drug and alcohol prevention.

This section reviews the current level of service and its cost for public safety services in 2006. What follows are projections of the cost of maintaining the current level of service under each future development scenario.

Proportionate Share
Only a small portion of the wide range of public safety services Mineral County provides are tangibly affected by traffic patterns. Because of this, the level of service is expressed on a per-daily VMT basis for the proportion of public safety services that are directly related to traffic, and on a per-household basis for the portion of services unrelated to traffic.

To estimate the impact of increased traffic on the sheriff's department, the Mineral County Sheriff conducted a hand count of citations for the majority of the year 2008. Figure 3 shows that 18 percent of the department's efforts are directed towards traffic enforcement with the remaining 82 percent dedicated to general law enforcement.

Figure 3: Sheriff's Department Citations Breakdown by Traffic and Non-Traffic-related Incidents, 2008[13]



Operations and Maintenance Level of Service.
The level of service for public safety services includes, for example, the cost of maintaining adequate response times and levels of patrol, and current prevention programs. Table 7 shows that the mean annual sheriff's budget for 2006 and 2007 is nearly $1.1 million. Applying the proportionate share factors cited above, it costs $503 annually to maintain the current level of service for the average household in Mineral County in 2006. The traffic-related portion of these costs is $91 annually, and the non-traffic-related portion is $413.

Table 7: Public Safety Operations and Maintenance Level of Service Costs, 2006[14]

	FY 2006	FY 2007	Mean
Operations and Maintenance Expenditures	$1,037,102	$1,114,264	$1,075,683
Housing Units			2,138
Average Household Costs			$503

Because the average home forecast in the alternative development scenarios generates higher average daily VMT than the average existing home, the cost of maintaining the current level of service under each future development scenario will rise.

The cost of maintaining the current level of service for new development will increase as the number of units grows, and because of the higher average daily VMT of new homes under the alternative development scenarios. Level of service cost projections include both a projection of the traffic-related costs associated with increasing daily VMT, and the non-traffic-related costs associated with the increase in the number of housing units.

Table 8: Public Safety Operations and Maintenance Level of Service Cost Projections

	Legacy Project	Development	Plum Creek Only
Per Household Costs	$525	$556	$658
Total Costs	$386,323	$536,948	$151,380

Table 8 shows that maintaining the current public safety level of service for development forecast under the 2025 Legacy Project Scenario will cost $525 per household, generating total additional operations and maintenance costs of $386,323.

Under the 2025 Trend Development Scenario, it will cost $556 to maintain the current level of service for the average new home, generating total additional public safety operations and maintenance costs of $536,948.

Considering only the 230 new homes possible on Plum Creek lands, the cost of maintaining the current level of service will be $658 per household, generating total additional costs of $151,380. Development on Plum Creek lands would account for 28 percent of additional public safety operations and maintenance costs, but represent only 23 percent of the forecast development. The higher proportionate cost increase for new housing on Plum Creek lands reflects the unusually high VMT that would be generated by development there, and the additional traffic enforcement associated with the increased driving.

This study projects the cost of maintaining the current level of service for traffic-related services by forecasting changes to VMT on county roads. However, the interstate (I-90) also represents a major cost for the county sheriff's department. Without specific grants from the federal government, the public safety budget already operates at a deficit each year. New "commuter" traffic on the interstate will add to this cost, with no additional source of revenue. Because this study does not project cost increases associated with federal and state highways, or Forest Service roads, it is likely to underestimate all new costs associated with forecast development.

Capital Facilities

The sheriff's department has invested nearly $2 million in buildings (law enforcement center side of the courthouse), land and equipment. If the county chooses to provide these same services at the same standard in the future, it will have to increase its capital facilities in step with the rate of growth in VMT and population. Table 9 shows that the current value of capital facilities averages $913 per residential unit, of which the traffic-related portion is $164 and the non-traffic-related portion is $748.

Table 9: Public Safety Capital Facilities Level of Service Costs, 2006[15]

Buildings	Buildings Value	Equipment Value	Land	Total Assets
Law Enforcement Center	$1,313,652	$578,621	$59,076	$1,951,349
Housing Units				2,138
Average Household Costs				$913

Required investments in capital facilities tend not to be incremental, but step-wise. For example, the county may continue to function efficiently in the law enforcement center for some time. Eventually, a threshold will be reached where expansion is required, and the one-time cost may be substantial. Planning for infrequent, but large capital facilities needs requires incremental increases in revenue as the county grows. Projecting the cost of maintaining the current level of service for future development involves forecasting the incremental need generated by each new housing unit.

Table 10: Public Safety Capital Facilities Level of Service Cost Projections, 2006-2025

	Legacy Project	Development	Plum Creek Only
Per Household Costs	$952	$1,009	$1,194
Total Cost	$701,420	$976,031	$274,612

Table 10 shows that maintaining the current level of service for development forecast under the 2025 Legacy Project Scenario will cost $952 per household, generating total additional one-time capital facilities costs of $701,420.

Under the 2025 Trend Development Scenario, it will cost $1,009 to maintain the current level of service for the average new home, generating total additional public safety capital facilities costs of $976,031.

Considering only the 230 new homes possible on Plum Creek lands, the cost of maintaining the current level of service will be $1,194 per household, generated total additional costs of $274,612. Similar to new operations and maintenance costs, development on Plum Creek land that represents 23 percent of forecast growth would contribute 28% of new capital facilities cost.

CENTRALLY LOCATED SERVICE COST PROJECTIONS

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.

This section reviews the current level of service and its cost for all centrally located county services in 2006. What follows are projections of the cost of maintaining the current level of service under each future development scenario.

Proportionate Share
Fundamentally, demand for centrally located services, including general government, health and social services, increases with the quantity of activity in Mineral County. However, demand for general government services in particular is split between activities associated with residential, commercial, industrial, agricultural and timber-related land use and businesses. This split varies widely between communities, depending on the relative quantities of commercial, residential, and government activity located in a particular county, and commuting patterns. For example, employment centers like Missoula, 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. So-called "bedroom communities," where a high 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 how much time people spend at home (residential) vs. at work (non-residential) and assign proportionate share accordingly. Table 11 illustrates the methodology and reveals that residents in Mineral County demand 92 percent of all general government services, with businesses and other land uses accounting for the other 8 percent of service demand.

Table 11: Proportionate Share for Centralized County Services[16]

	Demand Units in 2000	Demand Hours/Week	Person Hours/Week
Total Residents***	3,884		
Residents Not Working	2,255	168	378,840
Workers Living in County*	1,629		
Residents Working in County*	1,220	128	156,160
Residents Working Outside the County*	409	128	52,352
Residential Subtotal			482,648
Residential Share			92%
Jobs Located in County**	1,850		
Residents Working in County*	1,220	40	32,088
Non-Residents Working in County****	462	40	12,146
NonResidential Subtotal			44,234
NonResidential Share			8%
Total			526,882

Operations and Maintenance Level of Service
Because of the wide variety of services captured by the centrally located services category, the level of service is determined by summing the total expenditures of a number of county departments and programs. Table 12 shows that expenditures for all centrally located services were over $1.5 million on average for 2006 and 2007. Nearly two thirds of these expenditures were for administration and general government services (*e.g.,* county commissioners, clerk and recorder, and treasurer).

The average household level of service cost is revealed by multiplying the total costs by the residential proportionate share (92%) and dividing by 2,138, the total number of homes in Mineral County in 2006. The average expenditure per-household is $682 for all centrally located services.

Table 12: Current Level of Service, Centrally Located Services Operations and Maintenance[17]

	FY 2006	FY 2007	Mean
Administration and General Govt.	$1,005,789	$992,300	$999,045
Public Health	$231,539	$238,456	$234,998
Social and Economic Services	$21,439	$21,212	$21,326
Library, Parks, Museum, County Fair	$94,428	$104,269	$99,349
Weed Program & Extension Agent	$116,661	$110,852	$113,757
Airports	$3,257	$53,509	$28,383
Junk Vehicle and Misc	$73,294	$102,370	$87,832
Total	$1,546,407	$1,622,968	$1,584,688
Housing Units			2,138
Residential Proportionate Share			92%
Average Household Costs			$682

The cost of maintaining the current level of service is assumed to be the same for all new development. Table 13 shows the additional operations and maintenance expenditures that will be required under the alternative development scenarios.

Table 13: Level of Service Projections, Centrally Located Services Operations and Maintenance

	Legacy Project	Trend Development	Plum Creek Only
Average Household Costs	$682	$682	$682
Total Costs	$502,564	$659,402	$156,838

Table 13 shows that operations and maintenance costs will increase by $502,564 under the Legacy Project Scenario, and by $659,402 under the Trend Development Scenario. The 230 new homes possible on Plum Creek land will create new operations and maintenance costs of $156,838, or 23 percent of new costs associated with all new development.

Capital Facilities Level of Service

Capital facilities for the wide array of centrally located services include a large share of the county courthouse, the library, fairgrounds, and a portion of the county hospital, in addition to land, vehicles and equipment. The current value of capital facilities is displayed in Table 14.

Table 14: Central County Facilities Asset Use and Value Allocations[18]

Function	Buildings	Buildings Value	Land	Total Assets
Administration and General Govt.	Courthouse & Library (extension)	$1,821,827	$81,929	$1,903,756
Health and Human Services	Hospital & Courthouse	$145,961	$6,564	$152,525
Social and Economic Services	Community Center	$268,995	$12,097	$281,092
Library, County Fair, Parks	Library, Fairgrounds	$1,623,551	$73,012	$1,696,563
Weed Program	Library	$70,291	$3,161	$73,453
Airport	Runway, Fuel Tank	$184,000	$8,275	$192,275
Total		$4,114,626	$185,038	$4,299,664
Housing Units				2,138
Residential Proportionate Share				92%
Average Household Costs				$1,850

Where buildings were shared by multiple uses (for example, the library hosts the weed and extension departments), the value of the building was allocated based on employees or square footages where they were available. Land values were based on the asset inventories in the FY 2007 Mineral County audit report. 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 of $1,850 must be maintained in the future or service levels will decline.

As might be expected, expanding the courthouse for administration and general government is the most costly capital facilities need, followed by the library. Planning for the incremental increase in costs does not reflect the reality that expanding capital facilities is not an incremental process, but rather occurs in a step-wise fashion. For example, the county may be able to accommodate some new growth without expanding the courthouse. But when a critical threshold is met, a significant investment must be made to add a new addition or renovate existing space to increase the building's capacity. In order to keep facility capacity in line with demand, the county will need to ensure new development is paying in an incremental way to plan for infrequent but large capital facilities needs.

Table 15: Centrally Located Services Capital Facilities Level of Service Cost Projections, 2006-2025

	Legacy Project	Trend Development	Plum Creek Only
Average Household Costs	$1,850	$1,850	$1,850
Total Costs	$1,363,585	$1,789,127	$425,542

Table 15 shows that new growth under the Legacy Project Scenario will generate new capital facilities needs of $1,363,585. New growth associated with the Trend Development Scenario will generate new capital facilities needs of $1,789,127.

Maintaining the current capital facilities level of service for the 230 additional homes possible on just the Plum Creek lands will require new capital facilities costs of $425,542.

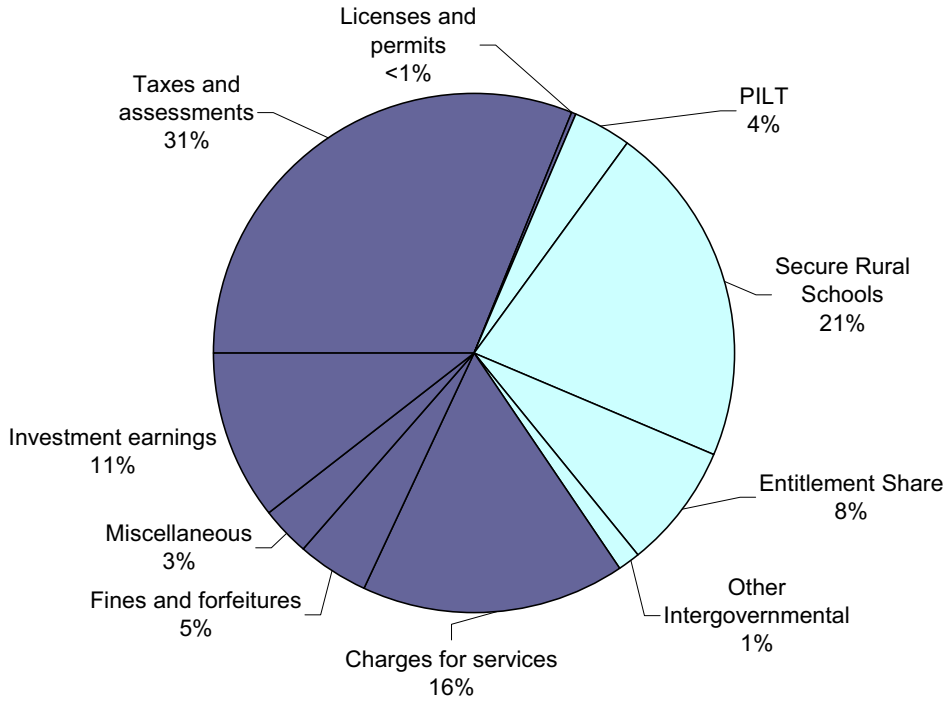
REVENUE PROJECTIONS

Mineral 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. Mineral County is relatively dependent on intergovernmental transfers, with more than a third (36%) of the county's entire budget coming from intergovernmental revenue, including PILT payments to counties, revenue from national forest payments (through the Secure Rural Schools and Community Self Determination Act), and the Montana Entitlement Share program.

Table 16: Total County Revenue[19]

Revenue	FY 2006	FY 2007	Average
Taxes and assessments	1,130,028	1,102,029	1,116,029
Licenses and permits	3,340	7,590	5,465
Intergovernmental	1,323,624	1,274,012	1,298,818
Charges for services	663,272	508,582	585,927
Fines and forfeitures	172,391	162,465	167,428
Miscellaneous	122,097	80,559	101,328
Investment earnings	412,172	349,927	381,050
Total	3,826,924	3,485,164	3,656,044

Figure 4: Intergovernmental Revenue as a Portion of All Mineral County Revenue, 2007.[20]



Proportionate Share

Some intergovernmental revenue, and much of Mineral County's own-source revenue (revenue generated by local taxes, fees, and charges) is directly or indirectly related to residential land uses and more generally will increase as the county grows. For example, 44 percent of property taxes are collected from residential property. However, a majority of revenues come from sources unrelated to residential development, and will not increase as the county grows. For example, the majority of property taxes are generated by commercial, industrial, agriculture, and timber land uses in the county. PILT and Secure Rural Schools payments to counties will not grow unless additional federal ownership occurs or changes in national politics increase distributions.

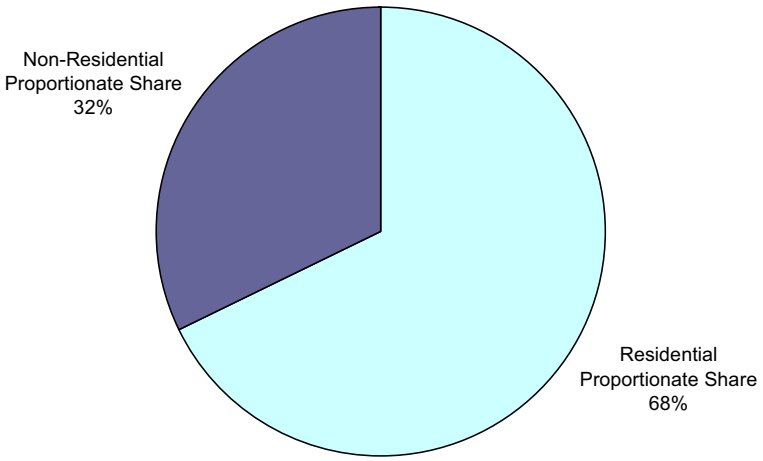
The proportionate share analysis breaks out that portion of revenue that can reasonably be expected to increase along with new housing development. We include all own-source revenue except for property taxes generated directly from non-residential land uses. Federal intergovernmental revenue is not included in the residential proportionate share, but state and other sources of intergovernmental revenue are. The residential proportionate share is likely to be overestimated for intergovernmental revenues and most own-source revenue, but perhaps will be underestimated for property taxes. Table 17 shows total revenue and proportionate share for the General Fund, Road and Bridge Funds, and funds related to Public Safety (including the Public Safety Fund, D.U.I. Task Force, Emergency 911, and Drug Forfeiture Funds).

Table 17: Residential Proportionate Share for General Fund, Road and Public Safety Services, 2007.[21]

	Cenrally Located Services	Road	Public Safety	Total
Taxes and assessments	366,520	$938	$228,410	$595,868
Licenses and permits	3,726	$0	$1,273	$4,999
Intergovernmental	274,375	$443,906	$41,038	$759,319
Charges for services	140,147	$3,981	$369,953	$514,080
Fines and forfeitures	246,059	$0	$0	$246,059
Miscellaneous	258,455	$44,200	$12,937	$315,592
Investment earnings	296,341	$0	$2	$296,342
Total	1,585,624	$493,024	978,554.70	$3,057,203
Residential Proportionate Share	69.8%	17.3%	90.0%	67.8%
Non-Residential Proportionate Share	30.2%	82.7%	10.0%	32.2%
Average Household Revenue	$517	$40	$412	$969

Table 17 shows that the road fund receives only 17 percent of its revenue from residential or growth-related sources. Federal forest payments (through the Secure Rural Schools and Community Self Determination Act) make up 82 percent of the road department's total budget. These revenues are not tied to local growth, so as new homes are built and service demands increase, the road department's budget will not increase in concert. The general fund and public safety funds budgets are more responsive to growth, and more closely tied to residential development. A large share of all revenue comes from local taxes, charges for services, and fines and forfeitures. Because of the large own-source component of revenue, we expect the public safety budget to grow most closely with population and new housing.

Figure 5: Residential Proportionate Share[22]



FISCAL IMPACT ANALYSIS RESULTS

Tables 18 and 19 present the results of the fiscal impact analysis.

Table 18: Annual Operations and Maintenance Fiscal Impact Analysis

	Legacy Project	Trend Development	Plum Creek Only
Per-Household Cost	$1,368	$1,444	$1,690
Per-Household Revenue	$969	$969	$969
Per Household Fiscal Impact	($399)	($475)	($721)
Number of Households	737	967	230
Total Fiscal Impact	**($293,784)**	**($459,538)**	**($165,754)**

Table 19: One-Time Capital Facilities Fiscal Impact Analysis

	Legacy Project	Trend Development	Plum Creek Only
Per Household Capital Facilities Cost	$3,499	$3,751	$4,557
Number of Households	737	967	230
Total One-Time Capital Facilities Cost	**($2,578,653)**	**($3,626,863)**	**($1,048,210)**

2025 Legacy Scenario

Operations and Maintenance:

Under the 2025 Legacy Scenario, revenue is expected to increase by $969 for each new housing unit. Annual operations and maintenance costs are expected to increase to $1,368 per housing unit. This represents a loss of $399 annually per new housing unit. By 2025, new growth is expected to create an annual deficit of $293,784.

Capital Facilities:

Incremental demand for new capital facilities will go unfunded because new development is not even expected to cover all new annual operations and maintenance costs, and no new revenue can be saved for capital facilities needs. The one-time expense generated by each new housing unit in the 2025 Legacy Scenario is $3,499, or a total one-time cost of more than $2.5 million by 2025.

2025 Trend Development Scenario

Operations and Maintenance:

Under the 2025 Trend Development Scenario, revenue is expected to increase by $969 per housing unit. Annual operations and maintenance costs are expected to increase by $1,444 per housing unit. This represents an annual loss of $475 per new housing unit. By 2025, new housing on all private land is expected to generate an annual loss of $459,538.

Capital Facilities:

Incremental demand for new capital facilities will go unfunded because new development is not even expected to cover all new annual operations and maintenance costs. The one-time expense generated by each new housing unit in the 2025 Trend Development Scenario is $3,751. This represents a one-time cost of $3.6 million by 2025 that will go unfunded by the new growth generating the demand.

2025 Plum Creek Development Scenario

Operations and Maintenance:
The 2025 Plum Creek Development Scenario isolates only the costs associated with new development on the Plum Creek lands proposed for purchase. Because of the remote location of many of these lands relative to population and service centers, the average home will cost significantly more to provide county services to, totaling $1,690 annually. The required expenditures exceed projected revenue by $721, and add up to a total loss to the county of $165,754 annually.

Capital Facilities:
Development projected for the Plum Creek lands would creates an average capital facilities need of $4,557 for each new home, or total capital facilities needs of just more than $1 million.

Changes in Federal and State Payments to Counties
The previous section shows the difference in net revenue to the county between the Legacy Project and development of the Plum Creek lands. This section illustrates the net revenue the county receives currently, under two likely ownership scenarios for the Plum Creek lands assuming that the Legacy Project is successful, and the Trend Development Scenario. Table 20 illustrates the net revenue comparison.

Montana's Private Forest Tax Structure
Montana's forest lands are taxed at a preferential rate based on the productivity class of the timber, not the market value of the land. This helps keep the state's working lands in business, but also means local governments receive a smaller tax payment from timber than from developed land. Tax receipts on the Plum Creek land in the five counties affected by the Legacy Project average $0.76 to $1.47 per acre depending on the local mill levy and productivity class. In addition, Plum Creek pays a fire protection fee of $0.22 per acre. The fee provides funding for the Montana Department of Natural Resources and Conservation (DNRC) to suppress wildfires on these private forestlands. Table 20 shows that the Plum Creek lands currently pay about $51,000 annually in property taxes to Mineral County.

The Nature Conservancy, as a private landowner, will be required to pay property taxes on these lands, and will likely qualify for the preferential timber rate if they continue to manage these lands for timber production.

Montana State Lands Payments to Counties
This study assumes that any Plum Creek lands conveyed to the State of Montana, DNRC Trust Land Division, would remain in active timber production, providing jobs in communities and revenue to schools. We also assume that no new development will be permitted on these state-owned lands. Counties would not receive any new revenue from additional DNRC ownership under current law. Based on current public ownership proposals, Mineral County would see lower revenue from the Montana Legacy Project because DNRC does not pay equivalent property taxes.[§]

If Legacy Project lands are transferred to MT Fish, Wildlife and Parks, Mineral County will see very little change in overall revenue. MT FWP does pay equivalent property taxes on most of their land ownership, and we assume that this would be the case for the Plum Creek lands. Mineral County would see a slight increase in revenue (of about $460) because of the small portion of lands transferred to the Forest Service (see Table 20).

Federal Payments to Counties
The lands proposed to be transferred to the U.S. Forest Service in Mineral County will pay PILT and Secure Rural Schools payments to the County at a higher per-acre rate than current Plum Creek property taxes. However, these payments are highly uncertain over the long-term.

Table 20: Comparison of Net Revenue, Including State and Federal Payments to Counties.

	Current	DNRC Ownership	MT FWP Ownership	Development
Net Revenue	$50,604	$1,776	$51,074	($165,754)
Annual Fiscal Impact		($48,838)	$460	($165,754)
Capital Facilities Fiscal Impact				($1,048,210)

[§] It is possible that a bill could be introduced in the 2009 legislative session that would require DNRC to pay equivalent property taxes if state ownership exceeds 6 percent of any county's land area. Such a bill would affect Mineral County if DNRC does purchase all the Plum Creek land currently identified for possible state ownership. If this happens, the DNRC ownership scenario will be equivalent to the MT FWP ownership scenario from a revenue perspective (roughly a $460 net revenue gain to Mineral County).

MINERAL COUNTY CONCLUSION

The Montana Legacy Project does two important things: holds costs down by precluding expensive new residential development; and maintains commercial and industrial activity important to local fiscal health. It is also possible that Mineral County can leverage the Legacy value of the Montana Legacy Project, and the county's proximity to Missoula, into a more diverse and growing economy in sectors other than timber and manufacturing.

Mineral County's best option for maintaining future fiscal health is to grow and diversify the commercial base. Other options include securing new grants from federal and state government, imposing impact fees directly on new housing to help cover capital facilities costs (Frenchtown Fire District already has these), land use planning that promotes development near existing services, raising all taxes to cover new costs, or allowing the current level of service to decline.

FRENCHTOWN FIRE DISTRICT FISCAL ANALYSIS RESULTS

This section presents results of the fiscal impact analysis of the Montana Legacy Project on the Frenchtown Fire District. The District provides fire protection and emergency medical services to residents and businesses inside the district boundaries, and only these land uses pay property taxes that support District services.

The Frenchtown Fire District was chosen for inclusion in this study because it encompasses some of the Plum Creek lands that are proposed for purchase by the Legacy Project, and is the most likely service provider if new development occurs on the Plum Creek lands. The District also includes a significant amount of land in Missoula County. For the purposes of this report, the level of service is established for all housing units currently in the district, and projects these costs based for all development on the Plum Creek lands.

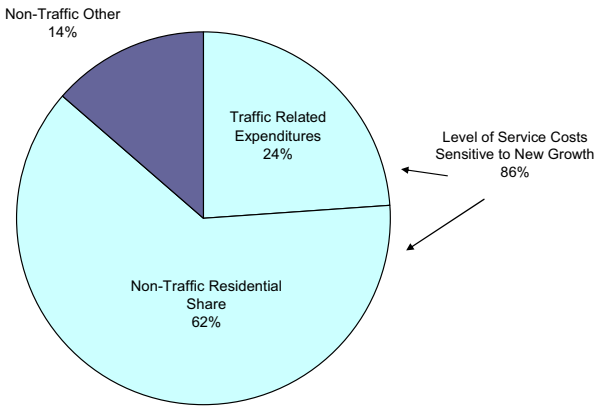
Map 1 shows the boundaries of the Frenchtown Fire District relative to Mineral County and the Montana Working Forest Project.

Proportionate Share
The proportionate share analysis determines both the service demand generated by traffic-related fire and medical emergencies and, for the non-traffic-related responses, the residential and non-residential share.

The traffic and non-traffic portions of total demand for fire district services are established by review of incident records. Traffic-oriented responses (motor vehicle, fire, and medical incidents) were isolated from wildland and structure fire protection responses and other medical responses. Of all 2007 incidents, 24 percent were directly related to traffic (200 of 840 total incidents). Providing emergency medical services (EMS) and fire protection to non-traffic incidents makes up the most fire district demand. These range from good intent calls resulting in equipment mobilization but no actions at the site, to full-scale structure and wildland fires. However, because motor vehicle accidents often require both ambulance service and fire personnel to respond, the multi-tasking Frenchtown Fire District is more affected by growth in traffic than is obvious at first glance.

The Frenchtown Fire District recently contracted an Impact Fee Support Study by Tischler Consulting[23] which includes a land use proportionate share analysis. It reports that 82% of district services are dedicated to residential land uses, with the remaining 18% serving non-residential land uses.

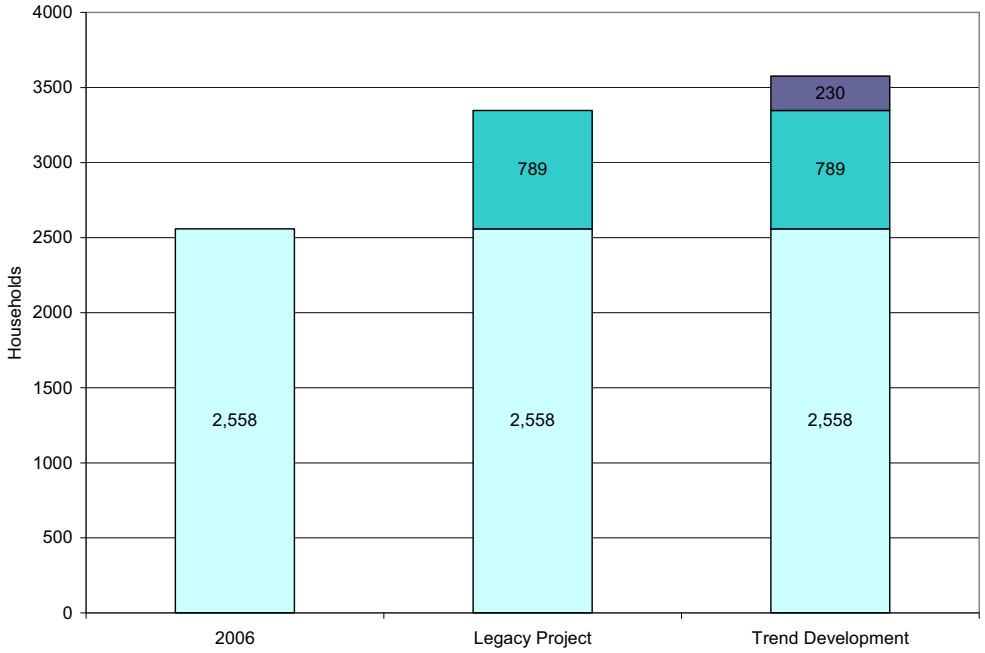
Figure 6: Level of Service Proportionate Share Analysis[24]



Existing-Projected Residential

Housing forecasts were based on both the 2008 Frenchtown Fire District Impact Fee support study and the Headwaters Economics residential forecast model. Housing units are predicted to grow by 31 percent under the Legacy Project Scenario (from 2,558 to 3,347), and by 40 percent under the Trend Development Scenario (from 2,558 to 3,577).

Figure 7: Existing and Forecast Housing Units, Frenchtown Fire District[25]



Existing and Projected Traffic

Vehicle Miles Traveled (VMT) directly relates to demand for fire operations, maintenance, and capital facilities because of the demand arising from traffic-related incidents, mostly motor vehicle accidents. District personnel respond to incidents on state and federal highways in addition to county roads, so this analysis includes traffic on all roads within the District. The rural travel demand model was designed to allow analysis by road owner (county, city, state), providing the ability to isolate county road traffic for the county fiscal impact analysis and include state highway and interstate traffic for the fire district assessment. (For a description of the traffic model, see Appendix A.)

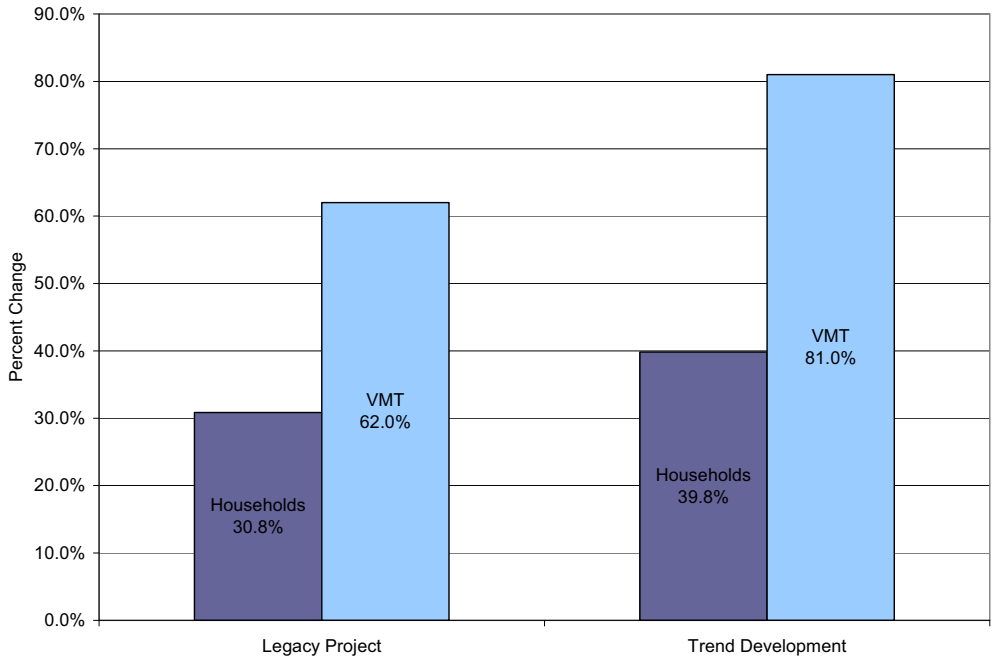
The baseline daily VMT on all roads within the District is 1.5 million, including 14,001 on county roads in 2006. This represents an average of 5.5 daily VMT per-household on county roads, and 100 on state and federal highways. The vast majority of daily VMT in the district occur on U.S. Forest Service roads.

Table 21: Housing Units and VMT Growth in the Frenchtown Fire District (includes Missoula County Portions)[26]

	2006	Legacy Project	Trend Development	Plum Creek Only
Housing Units	2,558	2,558	2,788	230
Daily VMT County Roads	14,003	21,791	31,808	10,017
Daily VMT State and Federal Highways	257,505	311,330	343,784	32,454
Daily VMT Forest Service Roads	1,302,022	0	10,805	10,805
Total VMT All Roads	1,573,530	335,678	389,184	53,506

District-wide, daily VMT are projected to grow by 62 percent under the Legacy Project Scenario, and by 81 percent under the Trend Development Scenario. The 230 homes projected on Plum Creek land would contribute 23 percent of the new daily VMT by 2025. Figure 8 shows that the rate of growth in daily VMT is more rapid than the rate of housing development.

Figure 8: Housing Forecast and Traffic Projections, Frenchtown Fire District, 2006-2025



Level of Service

The fire district's total expenditures on operations and maintenance activities average to just over $800,000 for 2007 and 2008. Table 22 shows total expenditures on operations and maintenance and capital outlay (expenditures made to improve capital facilities).

Table 22: Frenchtown Fire District Annual Expenditures[27]

	Total Expenditures	Capital Outlay	Operations and Maintenance
2007	$1,048,541	$197,675	$850,866
2008	$952,166	$180,730	$771,436
Mean	$1,000,354	$189,203	$811,151

Given the proportionate share discussed above, and the fire district's operations and maintenance budget, Table 23 shows that it costs the Frenchtown Fire District $76 dollars annually to maintain the existing level of service for traffic-related services to each home in the district. Total costs to maintain the current level of service are $274 annually including both traffic and non-traffic-related demand for services.

Table 23: Frenchtown Fire District Operations and Maintenance Level of Service Costs

	Total Costs	Per Household Costs
Traffic Related Proportionate Share	$194,676	$76
Non-Traffic Related Proportionate share	$505,509	$198
Total	$700,186	$274

It requires significant investment to run a rural fire protection and EMS district. Table 24 shows that the replacement value of capital facilities, including seven rural fire stations, engines and equipment, is $5.9 million.

Table 24: Frenchtown Fire District Capital Facilities[28]

Location	Station #	Sq. Ft.	Replacement Value
Frenchtown	1	10,800	$1,544,400
Evaro	2	1,200	$171,600
Huson (Six Mile)	3	1,200	$171,600
Huson (Nine Mile)	4	2,400	$343,200
Alberton (Petty Creek)	5	2,680	$383,240
Alberton (Mineral County)	8		
Missoula (Wye)	7	4,560	$652,080
Total		22,840	$3,266,120
	Quantity	Replacement Cost	Total Replacement
Structure Engines	6	275,000	$1,650,000
Rescues	2	225,000	$450,000
Wildland Engines	4	75,000	$300,000
Water Tenders	2	120,000	$240,000
Total			$2,640,000
Grand Total			$5,906,120

Table 25 shows that the value of capital facilities associated with the traffic-related portion of district services total $550 per-household and $1,443 per-household for all other residential demand.

Table 25: Frenchtown Fire District Capital Facilities Level of Service Costs

	Total Costs	Per Household Costs
Traffic Related Proportionate Share	$1,417,469	$554
Non-Traffic Related Proportionate Share	$3,680,694	$1,439
Total	$5,098,163	$1,993

Because new homes that could be constructed inside the Mineral County portion of the fire district are remote from population centers and generate relatively high daily VMT, new development in the Mineral County portion of the District will be more expensive to service than the cost of maintaining the current level of service for existing homes averaged across the entire district.

Predicting the cost of maintaining the current level of service in the future involves projecting the traffic-related and residential portion of current level of service costs based on the average number of homes and daily VMT under the alternative development scenarios. Table 26 shows the average traffic and non-traffic-related household costs used to make level of service cost projections.

Table 26: Frenchtown Fire District Level of Service Cost Projections

Traffic Related Household Costs	
Operations and Maintenance Household Costs	Capital Facilities Household Costs
$76	$550
Non-Traffic Related Household Costs	
Household Operations and Maintenance Costs	Household Capital Facilities Costs
$198	$1,443
Total Household Costs	
Household Operations and Maintenance Costs	Household Capital Facilities Costs
$274	$1,992

Table 27 shows that providing the same operations and maintenance level of service to the 789 new homes predicted under the Legacy Project Scenario is $275,539 (includes all homes in Mineral and Missoula Counties). The 230 units considered possible on Plum Creek lands will cost another $83,000 annually, accounting for 29 percent of the total increase in operations and maintenance costs.

Table 27: Frenchtown Fire District Operations and Maintenance Cost Projections

	Legacy Project	Trend Development	Plum Creek Only
Per Household Costs	$349	$352	$362
Number of Households	789	1,019	230
Total Costs	$275,539	$358,891	$83,352

Table 28 shows that the one-time capital facilities needs generated by the Legacy Project Scenario are projected to be over $2 million. The 230 units considered possible on Plum Creek lands will generate an additional $606,902 in one-time capital facilities needs, bringing total new capital facilities needs to over $2.6 million.

Table 28: Frenchtown Fire District Capital Facilities Level of Service Cost Projections

	Legacy Project	Trend Development	Plum Creek Only
Per Household Costs	$2,543	$2,564	$2,639
Number of Households	789	1,019	230
Total Costs	$2,006,241	$2,613,143	$606,902

Revenue Projections

About 75 percent of the Frenchtown Fire District's revenue is generated by property taxes, or just under $900,000 in FY 2007. Only about 6 percent of property taxes are generated in Mineral County—the other 94 percent are generated by land and property in Missoula County. Non-tax revenue comes in the form of grants and reimbursements, mainly from the state government.

Table 29: Frenchtown Fire District Revenue, 2007[29]

	Mienral County Share	Missoula County Share	Total
Tax Revenue	$72,899	$823,559	$896,458
Non-Tax Revenue			$294,500
Total Revenue			$1,190,958

Because of the high proportion of revenue generated by property taxes, the District's budget is closely tied to growth within the district. The majority of property taxes are generated by residential and industrial associated with agriculture, timber, and utilities in rural areas. There is less certainty that the grants and redistributions portion of the budget will also increase as new development occurs. For the purposes of this analysis, we assume that they will. In 2006, the average house in the Frenchtown Fire District (including Missoula and Mineral County) generated $269 in revenue compared to a total demand for services of $274. The small deficit is subsidized by the commercial and industrial portion of the tax base, and by grants and distributions from other governments.

Table 30: Frenchtown Fire District Annual Operations and Maintenance Costs Fiscal Impact Analysis

	Legacy Project	Trend Development	Plum Creek Only
Per Household Revenue	$269	$269	$269
Per Household Cost	$349	$352	$362
Difference	($80)	($83)	($93)
Number of Homes	789	1,019	230
Total Fiscal Impact	($62,998)	($84,393)	($21,395)

Table 30 shows that the by 2025, new development associated with the Legacy scenario will result in an annual deficit of $80 per household, or a total deficit of $62,998 in annual operations and maintenance costs. New development under the Trend Development Scenario will generate an average household deficit of $83, or a total annual deficit of $84,393. Isolating just the 230 homes possible on Plum Creek lands reveals a net deficit of $93 per home, and a total deficit of $21,395 that could eventuate if the Legacy Project is not successful at precluding the development of these lands.

The real impact of new development on the Frenchtown Fire District will be the need to expand capital facilities to meet growing service demands. Because new development is projected to cost more for annual operations and maintenance costs than it will provide in new revenue, no new money will be available to fund new capital facilities needs.

Table 31: Frenchtown Fire District One-Time Capital Facilities Costs Fiscal Impact Analysis

	Legacy Project	Trend Development	Plum Creek Only
Per Household Cost	($2,543)	($2,564)	($2,639)
Number of Homes	789	1,019	230
Total Fiscal Impact	($2,006,241)	($2,613,143)	($606,902)

Table 31 shows that new development under the 2025 Legacy Project Scenario will generate unfunded capital facilities needs of over $2 million. The 2025 Trend Development Scenario will generate new capital facilities needs of $2.6 million, of which $606,902 is associated with only the 230 new homes possible on Plum Creek lands associated with the Legacy Project.

Frenchtown Fire District Conclusion

Because the Frenchtown Fire District receives most of its revenue from local property taxes, the District is better prepared to keep pace with growing operating and maintenance costs than is Mineral County, although new growth will still result in a negative fiscal impact. However, like Mineral County, new capital facilities needs will go unfunded unless new revenue can be generated through specific impact fees or growth in other revenue sources (e.g., commercial and industrial property tax revenue or new grants and distributions from other governments).

If the Plum Creek lands are developed, the analysis above indicates the costs associated with providing fire and emergency medical services. However, there is no requirement that the Frenchtown Fire District accept these lands into the district, or that they do so without negotiating first for all or a portion of capital costs to be paid by the landowner or developer. The district has conducted an impact fee study—an indication of their desire and ability to shift these costs to landowners. This study should be further evidence of the need to require new development to pay the costs of capital facilities upgrades.

APPENDIX A: TRAVEL DEMAND MODEL DATA & METHODOLOGY

For the most part, off-the-shelf transportation models are designed for urban transportation systems and are extremely data intensive. Headwaters Economics contracted with the Rural Planning Institute and Animas Geographic Services in Durango, Colorado to produce a custom rural travel demand model. Creating the county travel demand model (using ESRI products) involved 2 programming components and the use of *Network Analyst*.

GIS Data

- Mineral County GIS base data
- Montana NRIS Library: http://nris.mt.gov/gis/
- Montana Department of Transportation: transportation addressing system
- USGS DEM for Mineral County: http://seamless.usgs.gov/
- Headwaters Economics: 2006 quarter-section shape files containing housing unit values for existing conditions, 2025 projected, and 2025 disposition land development scenario.

Methodology

1. Set-up: Assembled data into geodatabase and made manual fixes to the road network layer where necessary

2. Programming: Housing unit existing conditions and projections (and their daily trips) were associated with nearest road.
   Programming Rules:
   Traffic from existing or projected housing units initially accesses county roads if closer than Forest/BLM roads, but traffic will access state highways or interstate frontage roads if closer than county or Forest/BLM roads.

3. Network Analyst: Routes created along road network to nearest interstate Exit or Municipality.
   Programming Rules:
   Traffic from housing units finds its way to the nearest interstate exit. The assumption is that destinations are accessed in municipalities or via the interstate. The direction vehicles go once they reach the highway or interstate is a function of economic and demographic factors. These factors were accounted for in the modeling of routes, specifically in determining the destination of various routes.
   Out of County Travel Patterns
   Data: The % traveling out for work was derived directly from 2000 Census labor force and commuting data contained in the SF3 tables. Determining the out of county destinations involved calculating an commuting index that divides total population (representing economic activity) by the distance from the county (representing commute times and costs). This index balances draw for jobs and shopping with the travel investments necessary to reach the destination.
   % of Travel Headed Out of County: 23%
   Of this 23%, the summary in Table A1 represents the logic and calculations deriving destinations for travel leaving the county:

Table 32: Out of County Travel Patterns[30]

	Population 2007	Distance (Miles)	Commuter Index	% of Total Index
Coeur d'Alene	38,388	70	548	20%
Missoula City	67,165	30	2,239	80%

For travel occurring to destinations in the county, the destinations were assumed to be to one of the two municipalities weighted according to their populations (representing economic activity).

Table 33: Local Destination Travel Patterns

	2007 Population	% of Total Population
Alberton town	424	33%
Superior town	880	67%

Map Suggestion:
Description: Map showing Route Destinations and Road Network
Data: PlainRoads.shp and RouteDestinations.shp
Symbology: display plain roads by jurisdiction. Field = Roads_2016

4. Programming: Routes were spatially associated with roads, allowing direct application of road data to roads. This also allowed analysts to differentiate between distances travelled on county roads vs. state highways.

5. 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 9.57 trips (in + out).
   Thus VMT per quarter section = (quarter section trip length) X (average daily trips)

Paving Needs Analysis
The distribution of 230 residential units on disposition lands results in significant new traffic in the Fish Creek drainage. Traffic flows on the 4.2 mile gravel county road section shown in Map 5 (see page 15) will likely need to be paved. Chapter 4 of the 1993 *American Association of State Highway Officials Guide for Design of Pavement Structures* includes a Flexible Pavement—Aggregate Surface Catalogue. This catalogue indicates that for Montana's climate, roads with average daily trip (ADT) volumes in excess of 771 ADT should be paved. Volumes below this level will function with aggregate, or gravel/dirt surfaces. The new ADTs generated by the disposition lands will exceed this threshold.

Recent impact fee support studies (Gallatin County 2007 Tischler, Rio Blanco County 2007 RPI Consulting) cite a range of rural road rebuilding and paving projects that range from $1.6 million to $2.5 million dollars per mile. Using the lower end of this range, we find that the total cost of rebuilding the road segment is just over $6.7 million.

Sharing the bill for the 4.2 miles of county road paving across all ADT in the county generates a new cost of $107 per ADT. The share of these costs that would be paid by new growth is $4,130,378. The cost is shared across all current and future development because these projects are typically financed, and all taxpayers share in the cost and use of the upgraded road. If all the cost were shifted to only the 230 new units in Fish Creek, the per unit cost totals $29,130 for a new total capital investment cost of $30,458 per housing unit in the disposition lands only.

Road ownership is split between the county and the U.S. Forest Service. The county currently owns 1.4 miles of the road segment requiring paving, and the Forest Service owns and maintains the remaining 2.8 miles. It is possible that the Forest Service would dedicate the road the county, shifting maintenance and paving costs to the county. Even so, it is unlikely the county will pay the entire cost. The Forest Service or private landowners can be required to bring the road up to standard before the county will accept maintenance responsibility or approve development applications.

Table 34: Paving Needs Cost

Rebuilding Roads and Paving Gravel Roads	
Miles Needing Paving	4.2
Cost per Mile	$1,600,000
Total Cost	$6,720,000
Total Daily VMT Trend Development Scenario	62,937
Cost per Household	$2,892

ENDNOTES

[1] Dan Testa, "Baucus, Plum Creek, Legacy Groups Announce Massive Land Deal." *Flathead Beacon*, July 30, 2008. See also http://www.themontanalegacyproject.org.
[2] Personal communication with county commissioners and staff from Lincoln, Mineral, Missoula, Powell and Lake County, July 30, 2008 at a Montana Legacy Project informational meeting in Missoula, MT.
[3] Kim Briggeman, "Tricon mill lays off 40 workers." *The Missoulian*. September 23, 2008. http://www.missoulian.com/articles/2008/09/23/news/local/news03.txt
[4] See for example Robert Struckman, "Montana's Wood Products Industry Continues to Decline." *New West Network*, November 28, 2007. http://www.newwest.net/city/article/forest_industry_continues_its_long_decline/C8/L8/
[5] Tyler Christensen, "Timber in transition: For Plum Creek, real estate adds value to forestlands." *The Missoulian*. February 5, 2007. http://www.missoulian.com/articles/2007/02/05/news/top/news01.txt and Peter Metcalf, "Holley Lays Out Plum Creek's Plans…" *New West Network*, October 24, 2008. http://www.newwest.net/topic/article/holley_lays_out_plum_creeks_plans/C35/L35/.
[6] P.H. Gude, A.J. Hansen, and D.A. Jones. 2007. Biodiversity Consequences of Alternative Future Land Use Scenarios in Greater Yellowstone. *Ecological Applications* 17(4):1004-1018.
[7] Ibid.
[8] Headwaters Economic Growth Model, RPI Consulting Rural Travel Demand Model.
[9] Ibid.
[10] VMT data , ibid. Road department financial information from Mineral County Budget Reports and Audited Annual Financial Reports, 2006 and 2007.
[11] Mineral County Budget Reports and Audited Annual Financial Reports, 2006 and 2007. Asset Information from Payne Financial Group, Inc., Butte, MT.
[12] TischlerBise Consulting, Gallatin County, MT Impact Fee Study, 2007. RPI, Inc. Road and Bridge Impact Fee Support Study for Rio Blanco County, Colorado, 2007.
[13] Mineral County Sheriff's Department Citations Records
[14] Mineral County Budget and Financial Reports.
[15] Ibid and Payne Financial Group, Inc.
[16] U.S. Census 2000, Bureau of Economic Analysis REIS.
2007. Data: U.S. Census Bureau, 2000 and Bureau of Economic Analysis, REIS.
* Table p26 from SF3, Census 2000
**Bureau of Economic Analysis REIS
***EPS, Headwaters Economics
****Multiple Job Holding of 1.1 Jobs/Person
For methods, see Tishler Bise Consulting, "Frenchtown Fire District Impact Fee Support Study," March, 2008. Published online: http://www.frenchtownfire.org/Impact%20Fee%20Study/3-28-08_FrenchtownFees.pdf.
[17] Level of service is calculated using a range of information. Mineral County budget audit reports and financial reports submitted to the state were the information base used to compile annual operations and maintenance costs by county function. Audit reports were used to define expenditures for most functions, and the financial reports were used to find additional detail on funds not classified in standard audit reports. The audit reports also allowed analysts to separate out regular operating and maintenance expenses from capital outlay, debt payments, and one-time grant funded projects. The capital facilities component of the level of service calculation was based on insurance inventories.
[18] Source: Asset Information from Payne Financial Group, Inc. - Butte, MT; Occupancy data from county employee roster.
[19] Mineral County Annual Financial Statements.
[20] Ibid. PILT payments data Bureau of Land Management PILT distributions. Montana Association of Counties Secure Rural Schools and MT Entitlement Share distributions to counties.
[21] Ibid. and Mineral County Budget Revenue Report, 2007.
[22] Tishler Bise Consulting, "Frenchtown Fire District Impact Fee Support Study."
[23] Ibid.
[24] Frenchtown Fire District Incident Report 2007.

[25] Ibid. and Headwaters Economics Housing Forecasts.
[26] RPI Rural Traffic Model.
[27] Frenchtown Fire District Annual Budget, 2007. Accessed on the Frenchtown Fire District Website:
[28] Impact Fee Study.
[29] Frenchtown Fire District Budget, 2007.
[30] Census Bureau Estimates.