



Dear Fellow Wyoming Residents,

Wyoming Connects: The Long Range Transportation Plan represents a new approach to transportation planning for Wyoming. The plan updates the vision for the State's transportation system to 2035 to help set our direction for the medium- and long-term, balanced with a new approach to short term project selection, as described in the Integrated Planning Framework, published separately. The plan identifies the targets that are crucial to maintain a transportation system that is efficient and responsive to the needs of our residents and visitors, our economy, and our place in interstate commerce.

The Plan utilizes an innovative approach to analyzing the statewide transportation system and its needs. This corridor-based plan identifies 16 key multimodal routes that form critical links in the system and shapes a long range vision for each, complete with goals and strategies unique to the areas they serve. We call these routes "State Significant Corridors." While all routes in Wyoming are important to the overall system, this era of competing needs and scarce resources requires a new approach to analyzing needs and setting priorities for the future. In short, Wyoming needs a plan to guide a performance-based project selection process that recognizes the trade off of the needs. This Plan does just that.

Three themes define **Wyoming Connects**. First, we have endeavored to make this a plan for the people of Wyoming, not just for WYDOT. It is part of a larger effort to bring transparency to the tough decisions we must make. Second, we have taken extensive measures to listen to the public and create a plan that responds to what we have heard. Finally, the plan describes the true cost of making needed transportation improvements. Due to aging infrastructure and rising costs combined with declining revenues at both the state and federal levels, WYDOT's ability to maintain the high level of service across the entire system is in jeopardy.

Wyoming Connects provides an informational platform where the requirements to construct, maintain, and operate the system are clarified and gives us choices for the future. Essentially, our choices are these: make do with what we've got even if it means deteriorating conditions, look for ways to keep the system in the condition we see today even though costs may exceed today's funding, or choose to invest for the future to keep Wyoming the dynamic and essential place it should be.

All this, and more, is discussed in the following document. I invite you to join the conversation and become our partner for the future.

John Cox, Director
Wyoming Department of Transportation

ACKNOWLEDGEMENTS

Wyoming Transportation Commission

The Wyoming Transportation Commission governs activities of the Department of Transportation (W.S. 24-2-101). The commission is composed of seven members appointed by the Governor, with approval of the Senate. Commissioners are appointed to six-year terms representing districts of three or four counties.

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EXECUTIVE SUMMARY

Wyoming Connects, including the Long Range Transportation Plan (LRTP), provides the vision for Wyoming’s transportation system – what it can and should become. This exciting new program brings fresh opportunities and perspectives to the planning process. The challenges for the Wyoming Department of Transportation (WYDOT) to build, operate, and maintain a system that meets the needs of the state have never been greater. To meet these challenges, **Wyoming Connects** includes a broad base of support, presents quality information in understandable terms, and is flexible enough to adapt to a constantly changing landscape of needs and resources.

Role of the LRTP in Wyoming Connects

The LRTP is one of four major components of **Wyoming Connects**. Together, the Integrated Planning Framework, the Long Range Transportation Plan, the Corridor Visions, and the Corridor Plans provide a solid link between strategic planning goals and project implementation. This helps ensure that the state’s transportation investments address the appropriate mix of system preservation, safety, capacity, mobility, and economic development needs.

Wyoming Connects charts the course for WYDOT to achieve the transparency and flexibility so important to its mission. There are many benefits to the new process, including:

- Accountability to the Public
- Transparent Process
- Logical Prioritization
- Resource Maximization

Figure ES-1

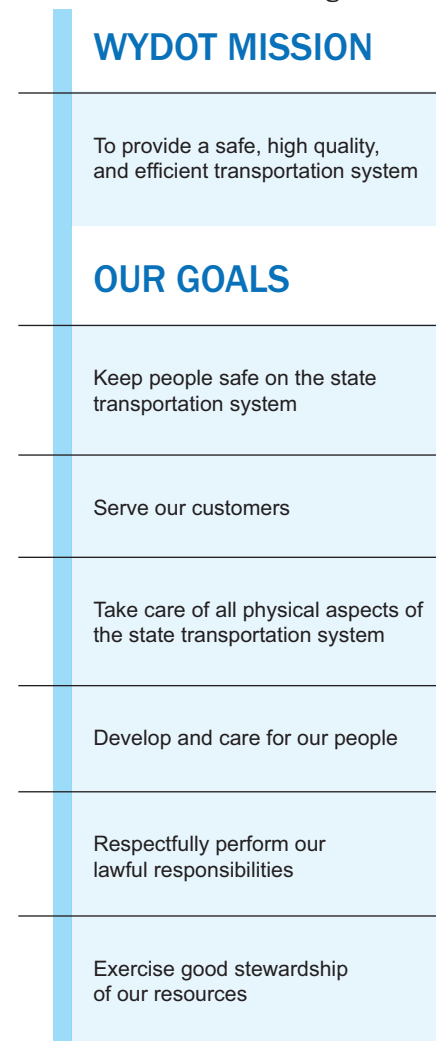
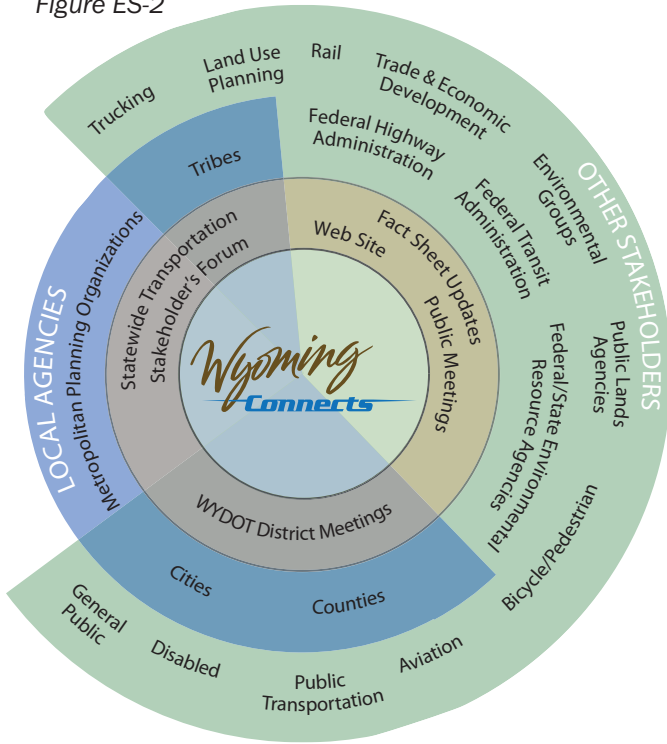


Figure ES-2



Public Involvement

Wyoming Connects stresses the value of public understanding and support for the long-range plan. Figure ES-2 illustrates how these components and a wide range of stakeholders have been brought into the process to focus ideas, needs, and solutions on the plan. Representatives of each mode, local jurisdiction, and affected state and federal agency have their own entry point into the process.

Wind River Indian Reservation

WYDOT is committed to maintaining and improving communication and coordination with the tribes of the Wind River Indian Reservation (WRIR). Primary coordination activities are with representatives of the Wind River Indian Reservation's Joint Business Council (JBC) and include county, state, and federal agencies as appropriate. A primary area of concern and coordination on WRIR involves management of the Indian Reservation Road (IRR) system. Various parts of the IRR system are owned and maintained by WYDOT, Fremont County, Hot Springs County, the Bureau of Indian Affairs (BIA), or the Reservation.

Figure ES-3

KEY ISSUES AND EMERGING TRENDS

Funding/Costs
Energy Development and Associated Transportation Impacts
Truck Traffic
Economy
Environment
Quality of Life
Operations

Corridor Visions

A corridor vision has been created for each of the 16 State Significant Corridors (SSC). The visions describe needs, goals, and strategies that establish the best possible multimodal transportation system while at the same time being pragmatic. During a future phase of *Wyoming Connects*, WYDOT will develop a specific plan for each corridor. The corridor plans will contain more detailed analyses of location-specific improvements and anticipated costs for each corridor.

A wide range of improvements will be needed across the transportation system in coming years to address deficiencies in Safety, System Preservation, and Mobility. The corridor vision document contains a comparative analysis of all the corridors. This helps identify priorities by corridor, type and extent of need, and relative necessary investments. Figure ES-5 on the next page summarizes those needs in a single display. Each corridor shows the type and extent of need compared to its total length in miles

Figure ES-4

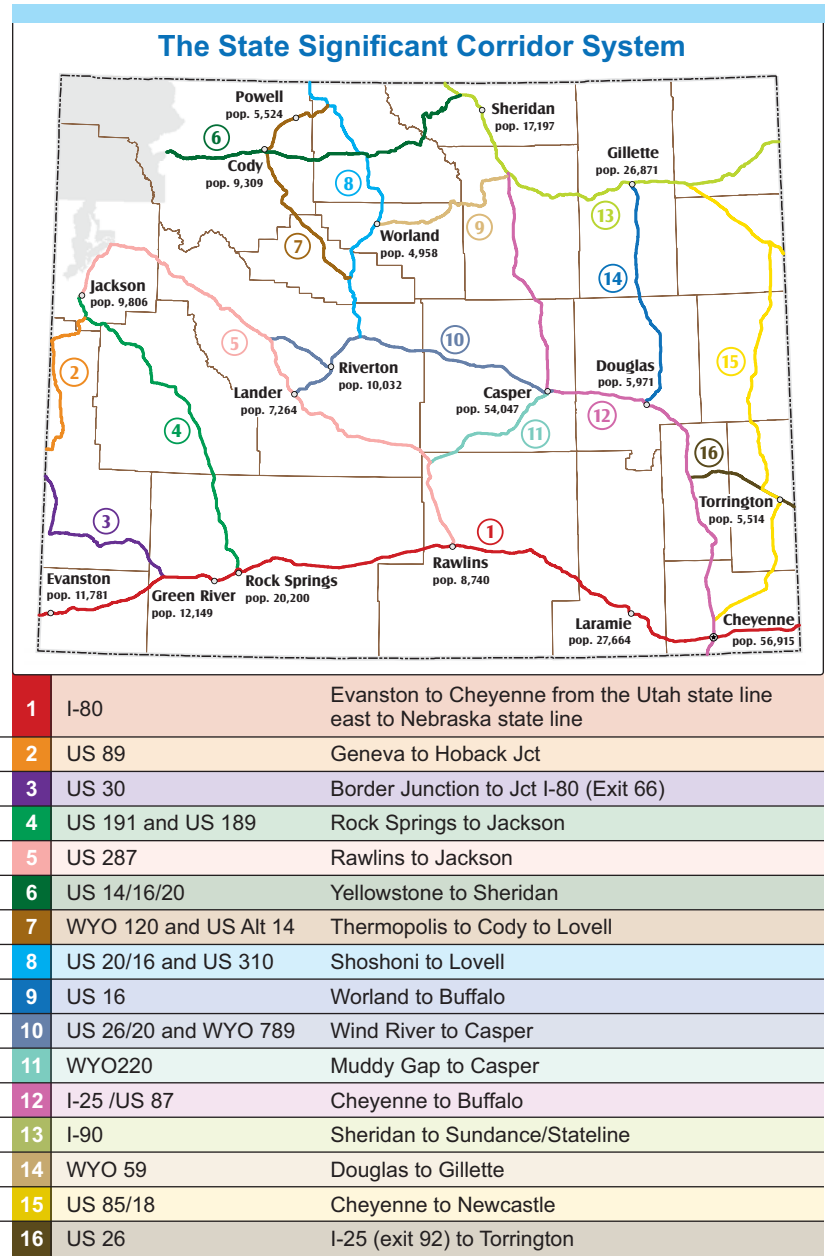
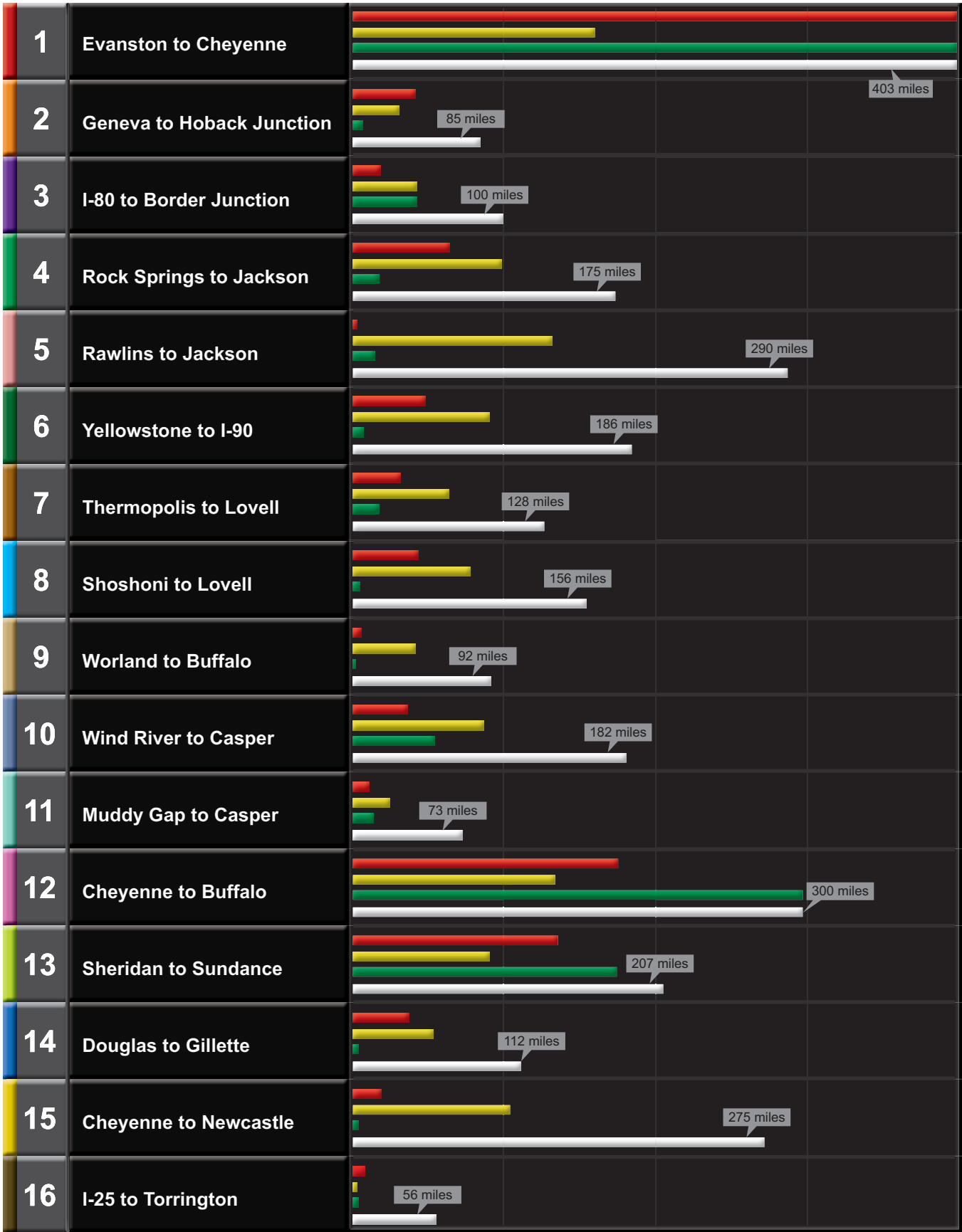


Figure ES-5

Corridor Needs

% Miles By Investment Category



The Transportation System

Wyoming ranks 42nd in public road mileage and 8th in land area. The state’s low population density creates challenges for making air, rail, and transit cost-effective. Wyoming’s small and dispersed population, relatively large land area, and limited availability of commercial air service contribute to a heavy reliance on the state’s highway system. The highway transportation system in Wyoming provides vital links on its 6,742 centerline miles to markets for many smaller communities that are not served by other modes. Wyoming has the highest miles driven per person per year of all states – 17,914 – compared to the national average 10,045. Approximately 80 percent of Wyoming’s total Daily Vehicle Miles of Travel (DVMT) occurs in rural areas; 43 percent of all urban DVMT is in the cities of Casper and Cheyenne.

HIGHLIGHTS

of the Wyoming Transportation System

Figure ES-6

The highway network provides all-weather mobility and land access to property, goods and services and is instrumental in shaping the growth and development of Wyoming’s communities.

I-80 forms a critical link in the national movement of freight.

Wyoming winters necessitate periodic roadway closures due to blizzard conditions and contribute to significant maintenance costs.

WYDOT administers Federal Transit Administration funds to agencies providing transit services in all 23 counties.

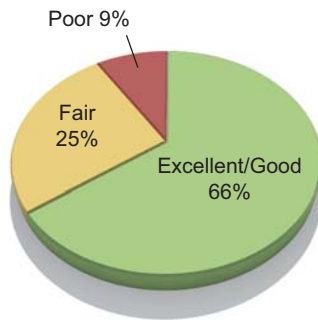
The BNSF Railway and the Union Pacific Railroad move 40 percent of the nation’s coal used for energy production to power plants across the country.

Ten commercial airports transport over one million passengers per year while 30 general aviation airports provide much-needed mobility to smaller towns and rural areas.

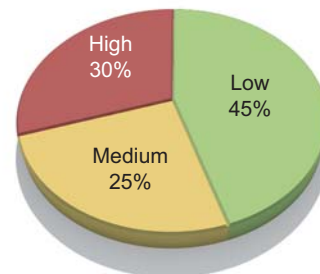
Figure ES-7

TRANSPORTATION SYSTEM Condition and Operating Characteristics

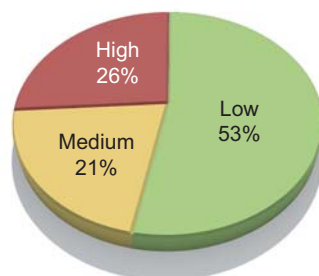
SURFACE CONDITION (2008)
State Significant Corridors (2,817 Miles)
(% Miles)



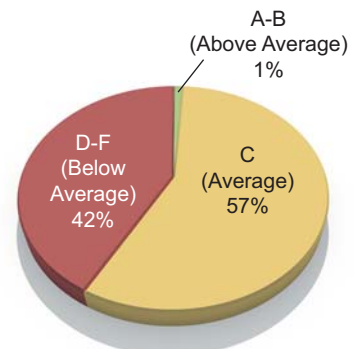
TRAFFIC VOLUME (AADT) (2008)
State Significant Corridors (2,817 Miles)
(% Miles)



TRUCK TRAFFIC VOLUME (AADTT) (2008)
State Significant Corridors (2,817 Miles)
(% Miles)



SAFETY INDEX (2005-2009)
State Significant Corridors (2,817 Miles)
(% Miles)



Rest Areas

Rest areas are an important part of the state transportation system. Rest areas with parking for large trucks are especially important for freight corridors. The costs to maintain these facilities, especially in isolated areas, has become more difficult to justify in the face of increasing costs for other basic services.

Bicycle and Pedestrian Transportation

Walking and bicycling are integral parts of Wyoming's intermodal transportation system. WYDOT concentrates on the three Es (engineering, education and enforcement) to improve bicycle and pedestrian transportation. The existing roadway system constitutes the basic network for bicycle travel. WYDOT has designated four routes for interstate bicyclists as recommended touring routes. These routes receive priority for sweeping and shoulder maintenance in order to preserve a higher level of service for bicyclists.

Public Transportation

WYDOT administers 11 transit programs funded by a variety of federal and state programs. Currently all 23 counties have at least one public transportation provider. Service includes both rural and urbanized systems, services for the elderly and disabled, public transportation on the Wind River Indian Reservation, and various other programs. Local public fixed route service is available under these programs in Casper, Cheyenne, Jackson, Laramie, and Rock Springs; regional service is available in Fremont County, including Lander, Riverton, Ft. Washakie, and Shoshoni. In addition several public and private agencies provide intercity bus transportation. In 2004, Wyoming transit providers provided nearly 2 million rides for over 66,000 individuals, a third of who have no other transportation.

Rail System

Two major railroads operate Class One lines in Wyoming: the Union Pacific Railroad (UP) Central Corridor and the Burlington Northern Santa Fe Railway (BNSF). Coal is the largest component of all rail freight, constituting 95 percent of total tonnage. The two lines haul more than 400 million tons of low-sulfur coal produced annually in Wyoming. Roughly a quarter of this output comes from 10 large mines in the Powder River Basin, south of Gillette. No regularly scheduled passenger rail service has existed in Wyoming since the discontinuation of Amtrak's Pioneer route in 1997.

Aviation

Wyoming airports make 719 commercial flights to and from the state each week with 32,000 available passenger seats. Beyond the transportation of passengers and cargo services, aviation in Wyoming directly or indirectly adds 14,460 jobs within the state on an annual basis and a \$1.4 billion impact, according to the Wyoming Aeronautics Division 2009 Economic Impact Study.

Urban Areas

The WYDOT Urban System Program makes discretionary funds available to the 16 largest cities for transportation improvements. The urban transportation systems include not only state highways within the city limits, but also off-system arterial and collector roadways.

The People: Population and Employment

Wyoming has the smallest residential population of all 50 states and its density of 5.6 persons per square mile is the second lowest, just ahead of Alaska. Wyoming's projected average annual growth rate is about 0.8 percent over the long term.

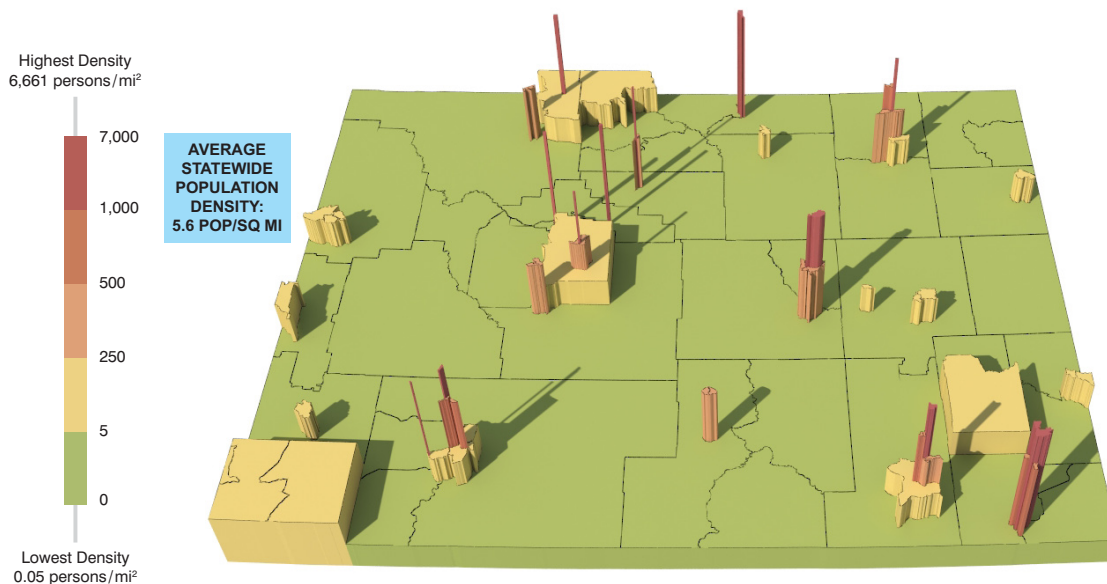
Major demographic influences in Wyoming include:

- The mining industry consisted of 7.1 percent of total employment in 2005 for Wyoming, the highest in the nation, compared to 0.5 percent nationally.
- The percent of the population age 27 to 43 in Wyoming is very low, contributing to a general workforce shortage and tight labor market.
- Travel and tourism for Wyoming are expected to continue moderate growth. However, jobs created in the tourism industry are mostly seasonal, and typically low-paying, offering little in the way of long-term growth for the state.

POPULATION DENSITY by Census Tract (2010)

Figure ES-8

Population density is the measure of the number of people per unit area, commonly represented as people per square mile. Wyoming's population resides primarily in urban areas. The capital and the most populous city is Cheyenne, followed by Laramie and Casper.



Source: U.S. Bureau of the Census 2000 and Wyoming Department of Administration and Information, Economic Analysis Division, July 2008

The Environment: Our Valuable Resources

The abundance of natural resources in Wyoming makes it a national leader, particularly in energy resources. The extraction of these resources provides important economic opportunities, but the potential to deplete them threatens the balance of the ecosystem. The State Significant Corridors link tourists to places of beauty and help transport energy resources across the state. Coordination with other federal, state, and local agencies provides WYDOT an opportunity to communicate on important environmental topics, like big game migration patterns and air quality, which are directly influenced by the state highway system.

Public Lands

The SSC provides the primary connections to national parks, forests, recreation areas, and other public lands. Over 50 percent of land in Wyoming is publicly held. Preservation is key to securing the longevity of these areas which can deteriorate quickly through the construction of infrastructure and over-exploitation of resources.

PUBLIC LANDS Federal and State Agencies *Figure ES-9*

United States Forest Service	Nine National Forests/Grasslands and 15 Wilderness Areas	8.8 million acres
National Parks Service	Seven National Parks and Monuments	2.4 million acres
Bureau of Land Management	Includes seven National Historic or Scenic Trails	17.5 million acres (One-third of the State)
United States Fish and Wildlife Service	Five National Wildlife Refuge Areas and two National Fish Hatcheries	81,000 acres
Division of State Parks, Historic Sites and Trails	Eleven state parks, one state recreation area, over 20 historic sites and two state	131,000 acres land/water
Bureau of Reclamation	Flood control, hydropower, irrigation, and recreation facilities	955,000 acres

Mining

Wyoming produces 13.2 percent of all U.S. energy, providing more coal and uranium than any other state. Wyoming is the second leading producer of natural gas among the 50 states; it is the seventh largest producer of oil (Wyoming Outdoor Council). It is a major provider of wind energy. Railroads, transmission facilities, pipelines for natural gas, and transmission lines for electricity constitute a significant infrastructure system for transporting both raw materials and electricity.

Compliance with the National Environmental Policy Act

Environmental protection is a priority for WYDOT through all phases of project planning, design, construction, and maintenance. Federally funded projects must comply with the National Environmental Policy Act (NEPA)

Figure ES-10

ENVIRONMENTAL RESOURCES Considered during NEPA Process

RESOURCE	WYDOT Role
Cultural Resources	Consultation with State Historic Preservation Officer (SHPO) and Tribal governments
Wetlands and Water Quality	Planning for mitigation of impacts from transportation projects through coordination with US Army Corps of Engineers
Threatened and Endangered Species and Biological Resources	Coordination with FHWA, US Fish and Wildlife, Wyoming Game and Fish Department
Air Quality	Coordination with Environmental Protection Agency and Wyoming Department of Environmental Quality to maintain air quality conformity in non-attainment areas (Sheridan County)
Noise	Adherence to the Statewide Noise Plan (in process)

Climate Change

Greenhouse gasses have emerged as a major federal transportation policy concern. They are a by-product of burning fossil fuels and are thought to affect climate change Wyoming is vulnerable to the impacts of climate change in several ways, including its dependence on cars and trucks for transportation, the dispersed settlement pattern, economic dependence on carbon fuel production, and the effects of extreme temperatures and weather on infrastructure. These risks are currently addressed in a number of ways, including implementation of Intelligent Transportation Systems to mitigate impacts of severe weather events, engagement with agencies and organizations involved in climate action planning, and integration of transportation and land use with efficient land use patterns.

The Financial Outlook

Anticipated Revenue 2010-2026

Anticipated revenue of \$9.88 billion will be available to WYDOT from all current sources from 2010 to 2026, as shown in Figure ES-11. The largest category, Federal Aid, is primarily derived from the Highway Trust Fund, the mechanism that receives funds from the Federal motor fuel tax and other transportation related sources. Federal aid also includes dedicated funds from the Federal Transit Administration and aeronautics sources. Fuel taxes are by far the largest part of the state’s Highway Account income, which also receives various truck, tire, and other vehicle fees.

Figure ES-11

Figure ES-12

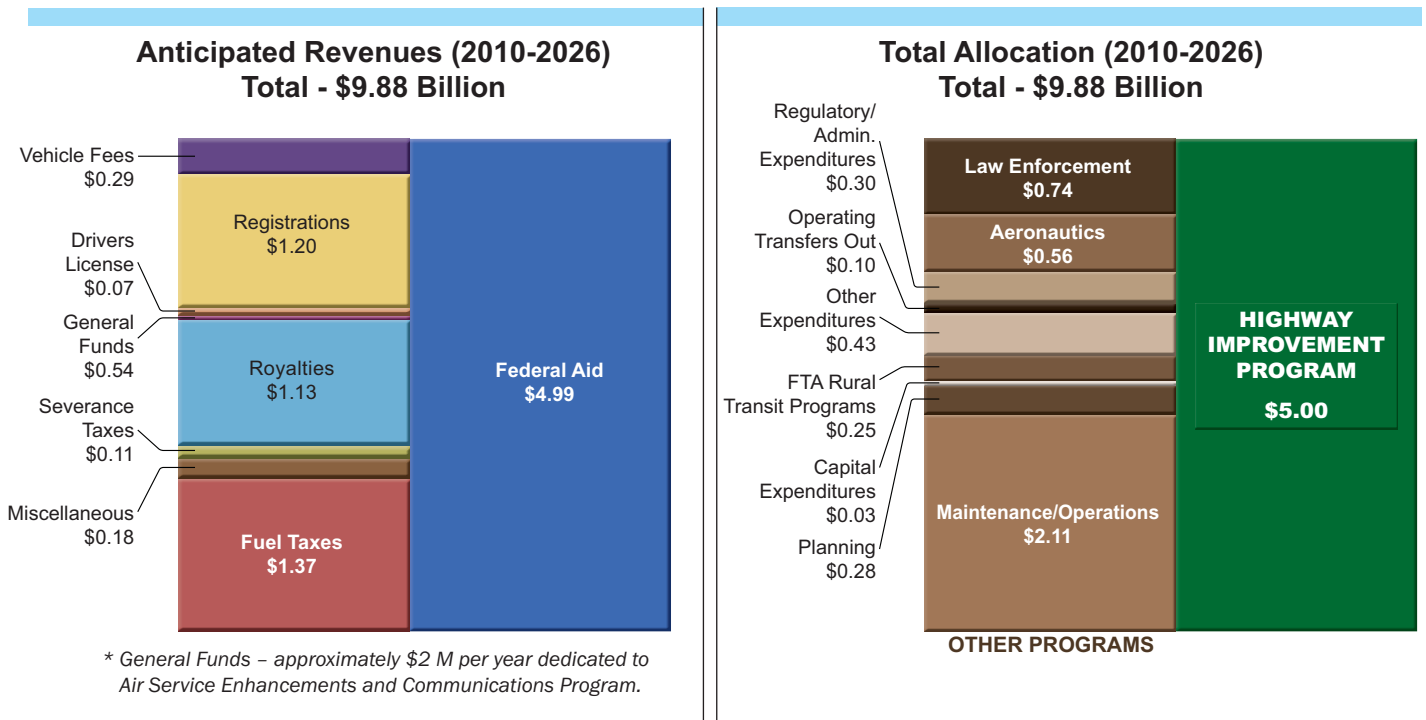
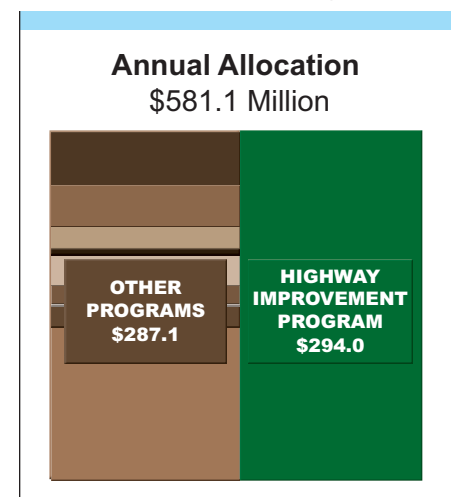


Figure ES-13

Allocation of Revenue 2010-2026

Figure ES-12 shows the current plan to allocate expected revenues to WYDOT programs over the next 17 years. Over 70 percent of the total budget is programmed for the Highway Improvement Program and Maintenance/Operations, with nearly 30 percent for other programs.

Figure ES-13 shows the allocation of funds on an annual basis. An average of \$581.1 million dollars will be distributed each year to the Highway Improvement Program (\$270.5 million), which includes major construction and highway resurfacing projects. Other Programs (\$281.0 million) include Law Enforcement (Highway Patrol), Aeronautics, Transit, and administrative expenses.



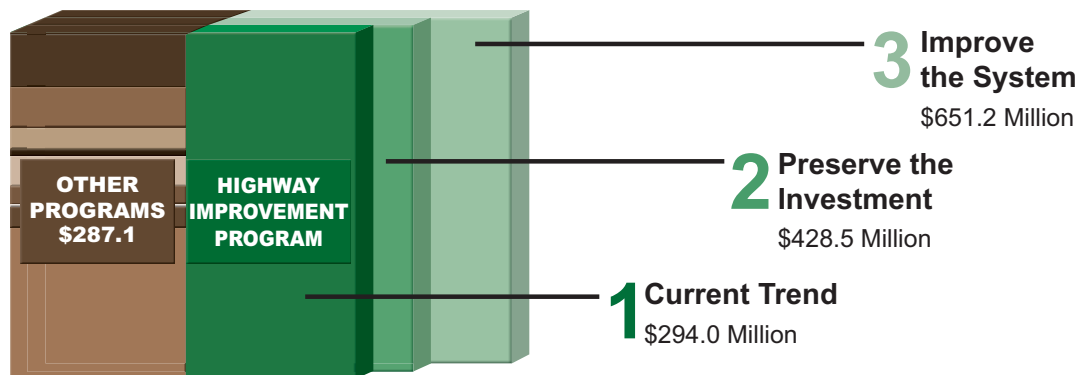
The Transportation Vision

Wyoming Connects provides the vision for Wyoming’s transportation system – what it can and should become. The challenges for WYDOT to build, operate, and maintain a system that fully meets the needs of the State have never been greater. To meet these challenges, *Wyoming Connects* presents choices. The choices center on the level of investment required to achieve the best balance between the optimal system and investment value.

The aging transportation infrastructure in Wyoming requires some costly repairs just to bring the system up to expectations for today and tomorrow. Given the increased costs to preserve the existing system, little remains for new capital improvements. Transportation problems in Wyoming are not yet insurmountable, but action is required right away. Wyoming has a rare opportunity to invest in its future in a way that sustains it as a desirable place to live, visit, and do business before the costs become too great. The gap between transportation system needs and available funding will likely continue to grow over time unless Wyoming makes a financial commitment to the future.

Figure ES-14

THREE FUNDING SCENARIOS Average Annual Investment



The enhanced revenues shown in Scenarios 2 and 3 are directed only to on-the-ground, constructed improvements. Other programs and administrative costs have been held at current levels throughout the planning period.

Wyoming Connects identifies three potential funding scenarios, or levels of investment. The scenarios have been developed to illustrate total annual funding required through the year 2026. The scenarios use the current trend in funding projected to 2026 compared to the amount needed to maintain the system at today's performance levels and the amount needed to achieve necessary improvements for today and the future. Each scenario describes the conditions expected with that level of investment.

The funding scenarios are built on the assumed average annual funding available for WYDOT to invest in the system. Current projections (\$581.1 million average annual) form the base case, or Current Trend. Two additional scenarios are presented with supplementary funds from an enhanced revenue stream. The enhanced revenues shown in Scenarios 2 and 3 are directed only to on-the-ground, constructed improvements. Other programs and administrative costs have been held at current levels throughout the planning period.

Each scenario in figure ES-14 shows a dashboard view of how system performance would be affected at a given level of investment. The gauges indicate poor, fair, or good performance for each measurement.

Figure ES-15

INVESTMENT SCENARIOS: Performance Indicators



Keys to the Vision

Wyoming faces a certain challenge in the middle to long term. The costs to maintain and operate the state highway system to meet expressed goals will continue to exceed available public resources. The public costs of the current downward funding trend are damaging in many ways - deteriorating roadways, bridges nearing the end of design life, failure to provide adequate responses to growing energy industry needs, unmet safety objectives, an inability to support growing communities, and underfunded transportation alternatives. With the challenges come opportunities to change the trajectory in ways that will allow the State to meet public expectations. **Wyoming Connects** proposes a series of positive actions to improve transportation, the keys to the vision.

Figure ES-16



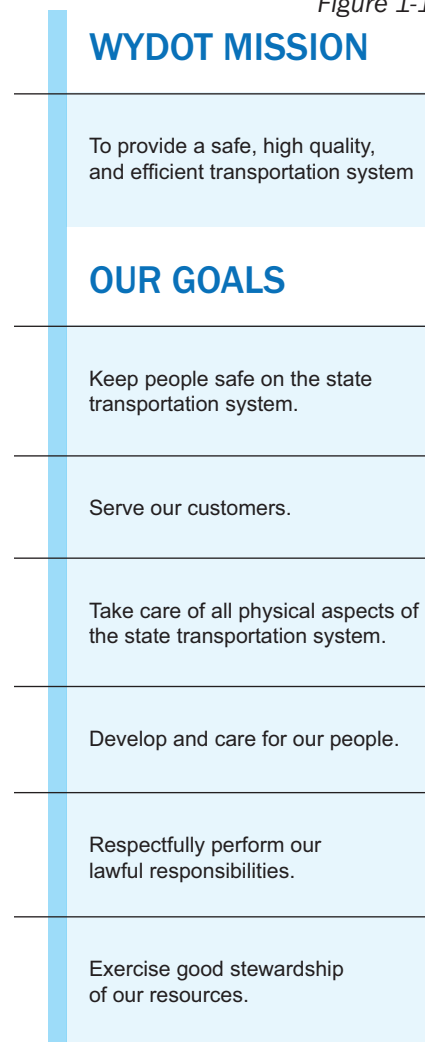
1 ROLE OF THE LONG RANGE TRANSPORTATION PLAN IN WYOMING CONNECTS

Background

The Wyoming Department of Transportation (WYDOT) is responsible for managing and operating the state transportation system. To be successful, WYDOT needs a consistent vision for the Department and tools to navigate the way. An effective planning process provides the compass heading, a scalable approach to long term planning, and a system to measure progress and retargeting goals.

WYDOT recognizes these challenges and the importance of planning in the current reality of shrinking funding, aging infrastructure, and increasing costs. Our Mission and Goals provide the stepping-off point for the Long Range Transportation Plan (LRTP).

Figure 1-1



Wyoming Connects: The New Comprehensive Planning Process

To advance WYDOT's Mission and Goals, the Department has undertaken a new and ambitious planning process - **Wyoming Connects**. The process refers to connecting people and places, as well as connecting the vision to project selection and implementation.

The process has multiple parts. This LRTP represents one step on the way from ideas, policy, and strategies to investment in the future. Each part is published under separate cover and forms the whole of the planning process. **Wyoming Connects** contains four parts:



The Integrated Planning Framework describes the planning process in detail, including the linkage between strategic goals and project implementation - and all the steps in between. The framework resulted from an extensive review of current WYDOT processes directed by a core project team and steering committee. This phase of **Wyoming Connects** included extensive discussions with all internal departments and Districts to determine how each could benefit from a well-described and integrated process. A Statewide Transportation Stakeholders Advisory Committee has also been convened to provide the front line public perspective about the planning process. The framework describes each successive part of the planning process, essentially setting the course for subsequent parts of the plan.



The Long Range Transportation Plan analyzes the state transportation needs from a systems level, describes the issues and problems facing the State including future revenue and programming, and presents options for future investments, all within the context of the Integrated Planning Framework. The LRTP includes a discussion of Key Issues and Emerging Trends that affect transportation in Wyoming, pointing the way to needed improvements. It provides the information required by the public and policy makers to determine the form of the future transportation system.



Corridor Visions have been created for each of 16 State Significant Corridors (SSC). During the Integrated Planning Framework phase of **Wyoming Connects**, WYDOT identified the SSC system as the best mechanism to organize the statewide transportation system for analysis. The SSC system represents high volume routes in the state that connect major activity centers to each other and to points external to Wyoming. The corridors provide the structure to forecast long term needs for each part of the system, and in aggregate, the system as a whole.



Corridor Plans build on the Corridor Visions by providing a more detailed look at specific needs and location-based solutions. The plans will identify a set of solutions, or program of projects, to be implemented over time that address specific, documented needs. A plan for each SSC will be completed in the near future.

Steps to Better Planning

The new LRTP, Corridor Visions, and Corridor Plans are the centerpieces of the more comprehensive approach of *Wyoming Connects*. Each project selected for implementation will be designated based on accurate data (road condition, safety, travel demand, etc.) with the goal of preserving the roadway system and achieving the statewide vision through effective implementation in each corridor.

Current Process

The current process to plan for the system includes the following components.

- **The Strategic Plan** – A guiding document with the big picture overview of WYDOT’s mission and goals
- **The Long Range Transportation Plan** – The statewide vision and policy document that identifies long term needs and strategies to achieve strategic goals
- **Needs Analysis** - A list initiated by each of the five WYDOT Districts to define transportation needs from a local perspective
- **State Transportation Improvement Program (STIP)** – The fiscally constrained project list that matches available or reasonably anticipated funding to projects scheduled for implementation over a six year period

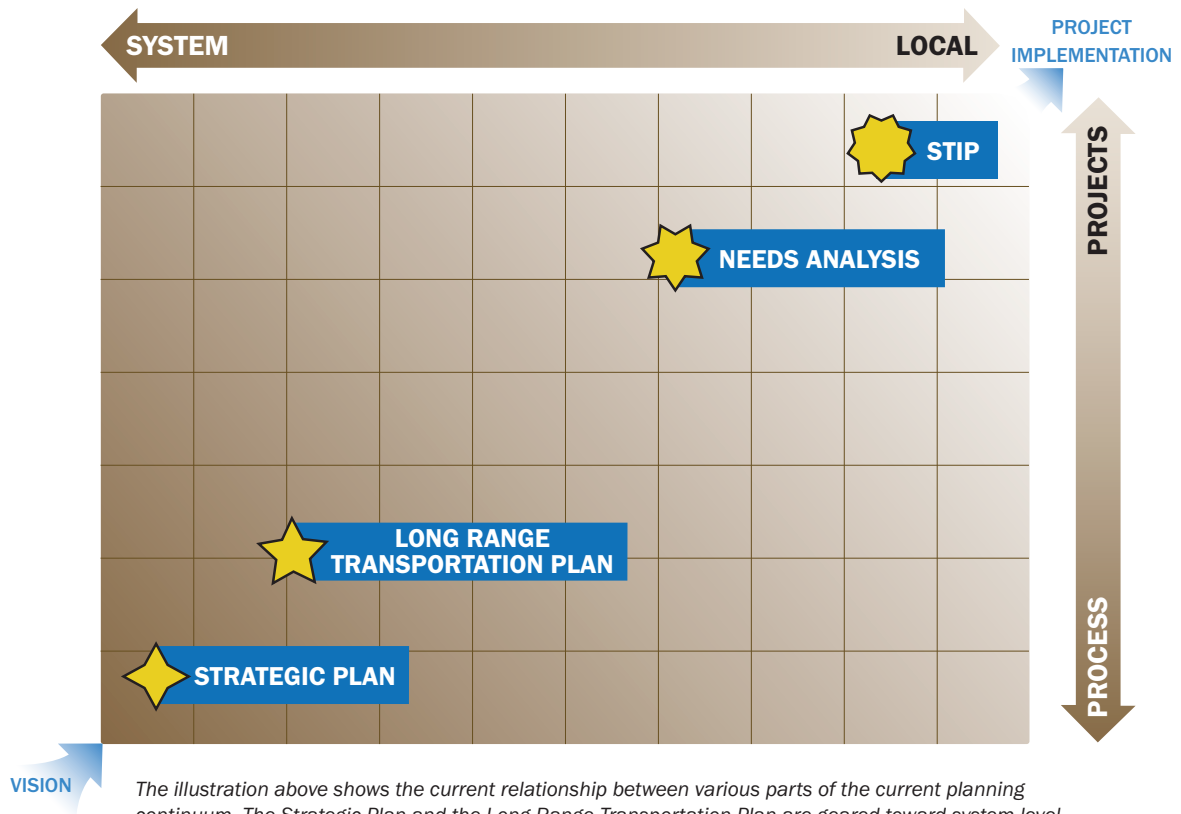
As Wyoming’s transportation needs grow and resources are stretched further, WYDOT seeks to progress to a more advanced level of planning, integrating the components described above into a program to accountably connect its long-range vision to project level decision-making. Further, WYDOT wants to understand and quantify how its project selections perform in terms of implementing the vision outlined in the LRTP, especially considering system-wide factors.

Roadway infrastructure problems plague most states. The aging infrastructure requires costly repairs and transportation systems are failing to meet expectations. Other states with extreme traffic volumes or severe congestion may already be in trouble. Wyoming has just begun to experience these problems. Transportation costs in Wyoming can be addressed by acting now. WYDOT has a rare opportunity to head off what could become a burden from which it may never recover. It will, however, require some significant changes in the way WYDOT conducts its business.

The Gap in the Planning Process

The chart below places the Strategic Plan, the Long Range Transportation Plan, the Needs Analysis, and the STIP on a continuum that begins with a broad-based long range vision. The vision components are at the systems level and are process-based. At the other end of the spectrum, the Needs Analysis and STIP identify individual location-based projects in preparation for construction over the shorter term. A stronger connection between the system-wide vision and actual project level expenditures has been lacking — until now.

Figure 1-2 Current Planning Gap



The illustration above shows the current relationship between various parts of the current planning continuum. The Strategic Plan and the Long Range Transportation Plan are geared toward system-level analysis. The annual Needs Analysis and Statewide Transportation Improvement Program (STIP) are more locally based and operate at the project level. There is little connection among these efforts. This gap in the planning process illustrates the need to build a better connection.

Key Concepts in the Long Range Transportation Plan

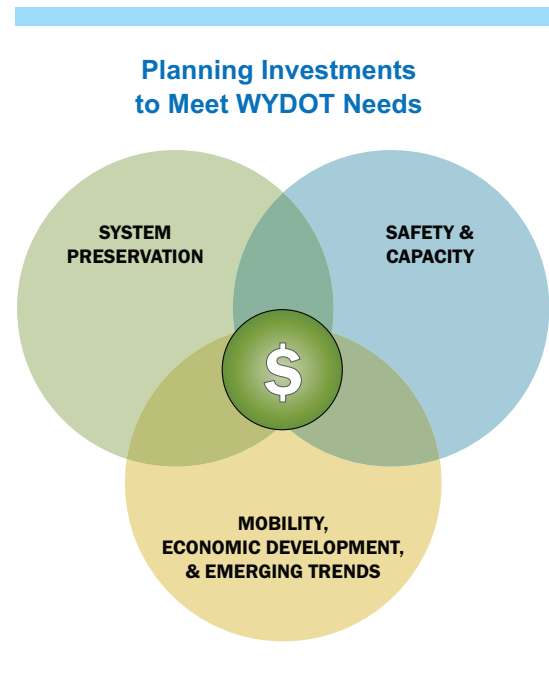
The LRTP provides the vision for Wyoming’s transportation system – what it can and should become. This new program brings fresh opportunities and new perspectives to the planning process. The challenges for WYDOT to build, operate, and maintain a system that fully meets the needs of the State have never been greater. To meet these challenges, *Wyoming Connects* includes a plan with a broad base of support, presents quality information in understandable terms, and is flexible enough to adapt to a constantly changing landscape of needs and resources. Ultimately the plan provides a methodology to achieve the best balance for the people of Wyoming.

WYDOT has organized the statewide transportation system into a series of travel corridors. Each corridor will have its own long range vision that sets the stage for choosing improvements by corridor. Further, each corridor will have a plan to carry the process to a greater level of detail and nearer time horizon. Thus, the Strategic Plan and LRTP are connected to the Needs Analysis and STIP via Corridor Visions and Corridor Plans as illustrated in Figure 1-4 on the next page.

New Investment Goals

The existing planning process effectively addresses system conditions and safety on the highway system, accounting for a large portion of the annual budget. Long range planning for major mobility improvements, projects to support economic development, and adequate responses to emerging trends have not had a very solid relationship to planned investments. A major goal of *Wyoming Connects* is to redirect investments to balance preservation of the existing system, safety, and future mobility needs.

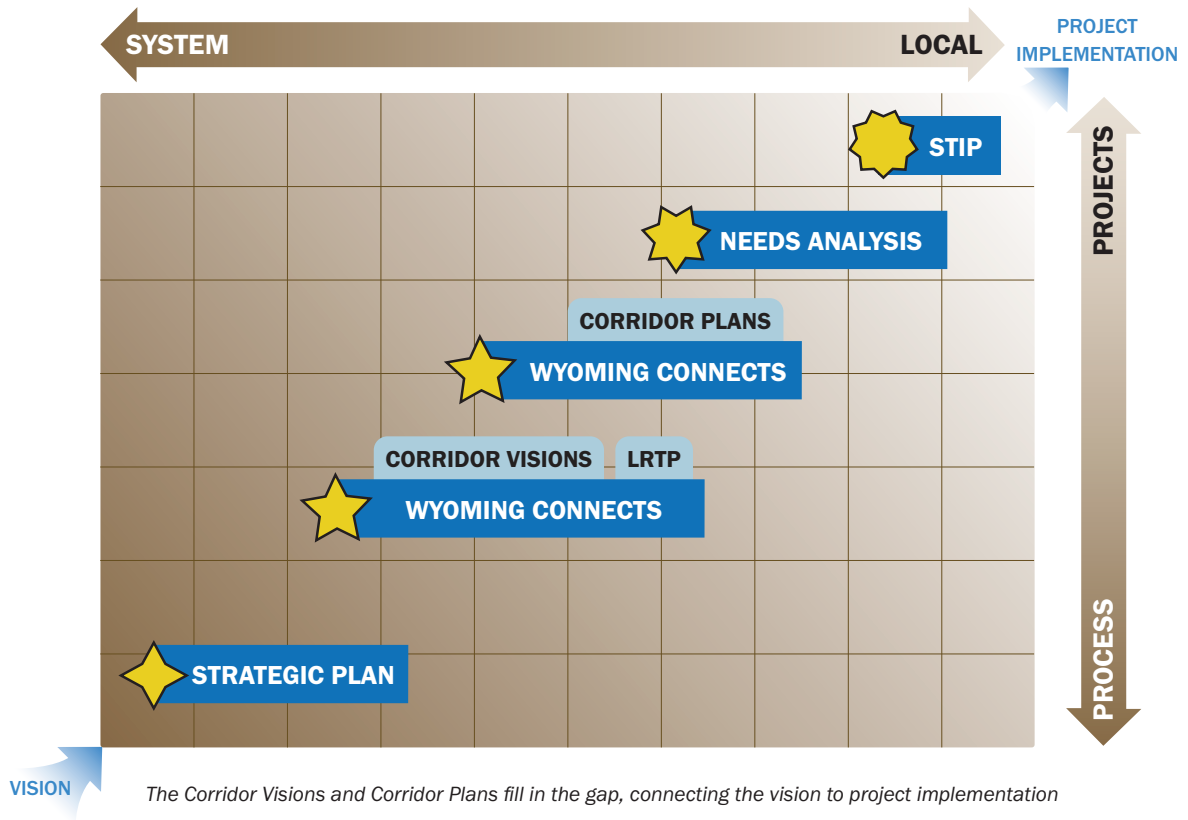
Figure 1-3



Filling the Gap in the Planning Process

The original components of the planning process are each valuable in their own right. However, *Wyoming Connects* includes interim steps in the planning process to better connect strategic planning (vision) and investments (project implementation). In other words, *Wyoming Connects: The Long Range Transportation Plan* with the new *Corridor Visions* (distributed under separate cover and summarized in this document) close the gap between vision and project implementation. System-wide planning is connected to local planning and process requirements are connected to project implementation. This plan, which ultimately serves to connect the people of Wyoming with its many destinations, also connects vision to implementation. An individual Corridor Plan for each major corridor will solidify the link from the long-range, vision process to localized project programming in the Needs Analysis and STIP.

Figure 1-4 Filling the Gap



PLANNING PROCESS COMPARISON

Figure 1-5

	Original Process		Wyoming Connects		
Vision ↑	Strategic Plan	Mission, Goals, Performance Measures	Strategic Plan	Mission, Goals, Performance Measure Goals	Long Term ↑
	Long Range Transportation Plan	Policy Level			
Project Specific ↓			Long Range Transportation Plan	Policy, System Analysis, Performance Achievement	Near Term ↓
			Corridor Visions	Corridor Level Vision	
			Corridor Plans	Corridor Level Needs	
	Annual Needs Analysis	Project Level Costs	Annual Needs Analysis	Project Level Costs	
	STIP	Near Term Programming	STIP	Near Term Programming	

Why is Wyoming Connects Important?

Wyoming Connects leads the way for WYDOT to achieve the transparency and flexibility so important to its mission.

Accountability

The public demands, and deserves, efficient decision-making based on well-grounded analysis. An integrated process with a consistent framework provides WYDOT with an effective accountability tool.

Transparent Process

Decision-makers at WYDOT and its customers are presented with an understandable process used to track a project from inception to implementation.

Logical Prioritization

The process focuses on joining vision and concept to project development and implementation. It helps confirm that decisions are made with full understanding of the implications, costs, and benefits. By setting a common framework for planning and project prioritization, stakeholders can better understand how their individual interests fit within the context of the statewide system.

Figure 1-6

BENEFITS
of an Integrated
Long Range
Planning Process

Accountability to the Public

Transparent Process

Logical Prioritization

Maximize Resources

Maximize Resources

WYDOT identifies which projects should advance and in what order, thereby ensuring expenditures that move toward meeting organizational goals. By linking planning to NEPA, projects that do advance will have a head start by focusing efforts of the environmental documentation to projects and strategies already screened to meet goals, objectives, and needs.

PLANNING FACTORS

Figure 1-7

Under previous authorizing legislation, the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and the Transportation Equity Act for the 21st Century of 1998 (TEA-21), Congress showed support for statewide transportation planning by emphasizing seven distinct areas that states should consider when developing plans. The Wyoming LRTP meets the federal requirements in the current Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) (2005) to address a series of planning factors designed to ensure efficiency while supporting economic development. The LRTP addresses all modes of transportation and reinforces sustainable growth and a high quality of life.

In general, the states must carry out a statewide transportation planning process that provides for consideration and implementation of projects, strategies, and services that:

Support the economic vitality of the [United States, the States, nonmetropolitan areas, and] metropolitan area[s], especially by enabling global competitiveness, productivity, and efficiency

Increase the safety and security of the transportation system for motorized and non-motorized users

Increase the accessibility and mobility of people and for freight

Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns

Enhance the integration and connectivity of the transportation system, across and between modes throughout the State, for people and freight

Promote efficient system management and operation

Emphasize the preservation of the existing transportation system

2 PUBLIC INVOLVEMENT

Opportunities for Stakeholders

Wyoming Connects stresses the value of public understanding and support for the long-range plan. A variety of opportunities are available for citizens to participate in planning the future of transportation in Wyoming. These opportunities include workshops, an advisory committee, an interactive website, email communications, and public meetings.

Figure 2-1 illustrates how these components and a wide range of stakeholders have been brought into the process to focus ideas, needs, and solutions on the plan. Representatives of each mode, local jurisdiction, and affected state and federal agency have their own place in the process. This helps promote a well-rounded and accepted plan with grass roots buy-in from all interested parties.

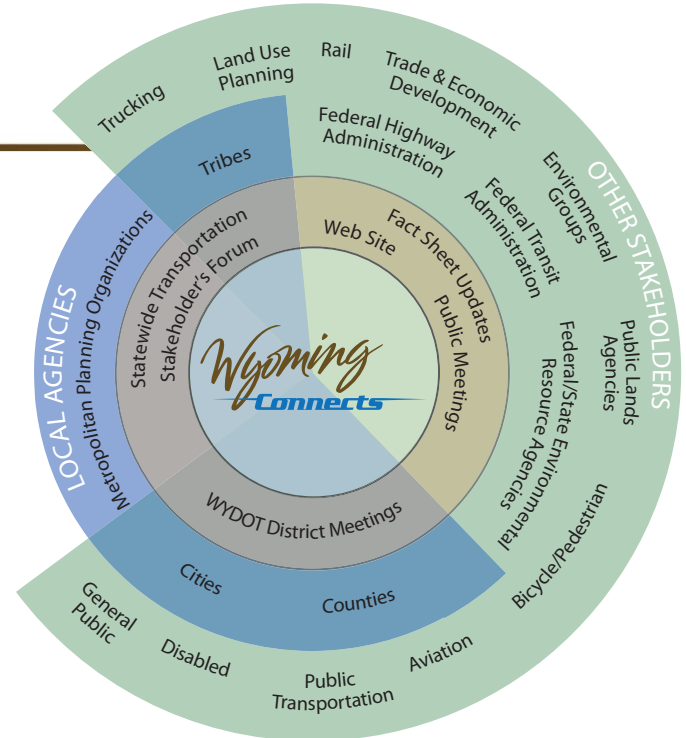


Figure 2-1

PUBLIC INVOLVEMENT

<p>1</p>	<p>Key Issues and Emerging Trends Workshops</p> <p>Held in each District during the summer of 2009.</p>
<p>2</p>	<p>Statewide Transportation Stakeholders Advisory Committee</p> <p>Provides input from diverse groups. September 2009 and Spring 2010 (scheduled)</p>
<p>3</p>	<p>Website: www.wyoconnects.com</p> <p>Long Range Transportation Plan documents, maps, schedule, interactive tools, and survey. Visit the site to add your name to the list and receive regular updates about the plan.</p>
<p>4</p>	<p>Just the Facts</p> <p>Ongoing series of one page fact sheets to disseminate information is updated regularly on the website and sent to email subscribers.</p>
<p>5</p>	<p>Draft Plan Public Review Meetings</p> <p>Opportunities for general public to review and comment on the Draft Plan prior to final publication. Meeting will be scheduled for Spring 2010.</p>

GET INVOLVED!

- Long Range Transportation Plan
- State Significant Corridors
- Just the Facts

WHAT'S NEW!

STAKEHOLDER SURVEY: Help us connect with your community by filling out a brief survey.

TAKE SURVEY

TRANSPORTATION STAKEHOLDER FORUMS: NEW FEATURE!

A Transportation Forum was held on September 8 to discuss transportation needs.

HEAD FORMINOTES

- Wyoming Connects will provide more chat
- A new LRTP that is integral to the state-wide vision to project selected transportation needs
- A method for establishing relative conditions
- A clear and transparent decision-making process to assess the impacts of transportation projects
- A structure to communicate plans

Just the Facts

OCTOBER 2009

Just the Facts

What is a Transportation Stakeholder?

Simply put, a transportation stakeholder is anyone who uses the transportation system. Government agencies, municipalities, industry groups, and businesses are also stakeholders. Any entity, whether an individual or organization, with an interest in the future of Wyoming's multi-modal transportation system is a stakeholder. That includes you!

Transportation Stakeholder Forum

WYDOT invited a select group of stakeholders to learn about the planning process, hear about key issues, emerging trends, and financial challenges; discuss specific questions; and offer guidance and insight. Representing constituencies that depend on the transportation system for their businesses, communities, and economic development, recreation, access, and mobility needs, 23 stakeholders met on September 8, 2009 in Casper, Wyoming. Team members described how the new LRTP will be a corridor based plan that enables strategic project planning and implementation without political boundaries or other constraints and how it will document the true financial needs to both maintain and improve the statewide system. The stakeholders participated in two roundtable discussion periods and Dd McOmie, WYDOT's Chief Engineer, discussed the financial issues facing WYDOT.

Key Issues and Emerging Trends

The Project Team presented the key issues and emerging trends identified to date.

- The disparity between available funding and required project costs
- The impacts associated with the still developing energy industry
- The positive economic factors and negative impacts associated with truck traffic
- The economy
- Environment and wildlife

WYDOT Financial Challenges

The federal legislation dictating how transportation funds can be spent expired on October 1, 2009 and the reauthorization is not expected for another 12-18 months. Some of the proposals under consideration by congressional committees are not favorable to Wyoming due to limiting criteria, such as a focus on major metropolitan areas and a shift toward transit options. Wyoming's gas tax, low as compared to nearby states, inadequately funds the required state portions of transportation monies and General Fund monies are no longer available for transportation construction projects. There are many demands for WYDOT's limited resources and maintenance of 1-80 alone consumes a significant portion of the budget.

The Bottom Line

WYDOT has maintained roadways to the extent that pavement conditions are generally good and the public is generally satisfied. Long-term needs, such as bridge replacement, are not adequately addressed. Maintenance projects that are not funded in the short-term will eventually become more expensive reconstruction projects in the long-term, and the lack of resources will be an insurmountable problem for WYDOT.

Upcoming Events

The draft updated LRTP will be published and available for review and comment in late 2009. The Project Team will host a series of public meetings around the State. Remember, you are a stakeholder and we value your input!

Document Links

[Entire Forum Summary](#)

Contacts

For further information, please contact Mark Wingers, WYDOT Project Manager, and the rest of the project team at ProjectTeam@WyoConnects.com.

WIND RIVER INDIAN RESERVATION

WYDOT is committed to maintaining and improving communication and coordination with the tribes of the Wind River Indian Reservation (WRIR).

Primary coordination activities are with representatives of the Wind River Indian Reservation's Joint Business Council (JBC) and include county, state, and federal agencies as appropriate. The JBC is also included in the consultation process for the State Transportation Improvement Program at an annual meeting. A primary area of concern and coordination on WRIR involves management of the Indian Reservation Road (IRR) system. Any public road or bridge structure within or near the perimeter of the reservation that serves the residents of the reservation is considered part of the IRR system independent of the actual ownership. Various parts of the IRR system are owned and maintained by WYDOT, Fremont County, Hot Springs County, the Bureau of Indian Affairs (BIA), or the Reservation.

Stakeholder Survey Results

A survey of general transportation-related questions is underway. The survey has been used at several events and is available on-line at <http://wyoconnects.com/StakeholderSurvey.asp>. It will remain active throughout the *Wyoming Connects* planning process.

The survey collects information in five areas of interest. The feedback is designed to assist planners and policy makers in creating an effective public involvement process. Early results are summarized below.

Community Issues

Figure 2-2

Every community faces a wide variety of issues. Major issues for communities include economic development, growth, water, and transportation.

Transportation Issues

The topic of transportation covers a wide range. The top issues identified in the survey include maintaining acceptable roadway surface conditions and securing adequate funding for all parts of the system.

Needs vs. Funding

The need for transportation improvements is increasing while the supply of funding is decreasing, the result of higher costs and budget cuts. While most individuals report that they and their local communities are aware of the problem, most do not believe that the public is willing to pay more to offset costs.

Public Education

The public may need more concise information to make informed decisions about the tradeoff between enhanced or alternative funding sources or living with the consequences. This could involve both WYDOT and local jurisdictions working together to create an informed and empowered citizenry.

Cooperation and Coordination

Local land use decisions encouraging or permitting growth often become the source of increased demand on the transportation system, including state highways. Many agree that better interagency coordination could benefit the situation.

Key Issues and Emerging Trends

Many ideas and issues were discussed in the public arena during the development of *Wyoming Connects*. The LRTP is formulated to address these issues. Finding the answers to the problems listed below is key to a successful, sustainable system.

Funding/Costs	<i>Figure 2-3</i>
<p>Transportation improvement and maintenance costs have risen dramatically in proportion to funding availability.</p>	
<p>Many in the state recognize a significant shortage of funds to meet critical needs.</p>	
<p>Wyoming should re-examine the collection and distribution of transportation-related revenues.</p>	
<p>WYDOT should clarify the relationship of transportation needs to spending.</p>	
Energy Development and Associated Transportation Impacts	
<p>The number of trucks and heavy loads on roads and highways not designed for such use are rapidly overtaking WYDOT's financial ability to keep pace with historically high levels of pavement condition.</p>	
<p>Increased rail traffic associated with coal extraction and delivery to distant markets is an issue in some areas, especially with at-grade railroad crossings.</p>	
<p>The boom and bust cycles associated with extractive mining industries require flexibility in plans to adjust to changing conditions. WYDOT must plan for sudden increases in travel, such as have happened with the drilling of gas wells, often in areas with previously low travel demand.</p>	
Truck Traffic	
<p>Trucks are an important contributor to state and local economies. They also expose the system to significant costs, especially maintaining surface conditions.</p>	
<p>Passing lanes in strategic locations could address many issues surrounding heavy trucks such as slow moving vehicles and safety.</p>	
<p>More rest areas, pull-offs, and informational signage are needed to accommodate trucks, especially on heavily traveled routes.</p>	
<p>I-80, with its approximately 50 percent truck traffic, represents the largest collection of transportation problems and, consequently, the largest potential expenditures for improvements and maintenance.</p>	

Key Issues and Emerging Trends (cont'd)

Economy

Rural and urban development, while key to local economic stability, often requires expensive improvements to highway infrastructure. The costs are often expected to be absorbed by WYDOT, where resources are already stretched thin.

While major urban-style congestion is relatively rare, commuter traffic in certain locations can and does push transportation capacity to the limit.

Recreation and tourism traffic to national parks and other public lands is a vital component of the State's economy, but also represents real costs for improvements and maintenance.

Environment

The enjoyment of Wyoming's scenic outdoors is a key value for many residents and visitors alike.

Wildlife (vehicle/animal conflicts) represents a serious threat both to the safety of motorists and to the viability of certain species.

Quality of Life

Communities are concerned about maintaining qualities of life that make them attractive places to live and work. This is true for larger communities dealing with development and congestion as well as the rural way of life that is precious to many who seek to ensure that it is preserved.

Pedestrian and non-motorized vehicle facilities, such as bike paths and trails, and safety are critical livability factors to many communities.

State highways often serve as main streets through towns becoming at once the economic life-blood and a source of noise, traffic, and safety problems.

Operations

Many, but not all, citizens recognize the trade-off in benefits between maintenance and new construction, especially in a financially challenged environment.

Spot congestion in urban areas represents high-cost improvements.

Winter conditions throughout the State contribute significantly to WYDOT's cost of operations through plowing and snow removal.

Coordination with the tribes and other local governments within their jurisdictions is a priority for all concerned. Everyone should have a say in how improvements are planned and built.

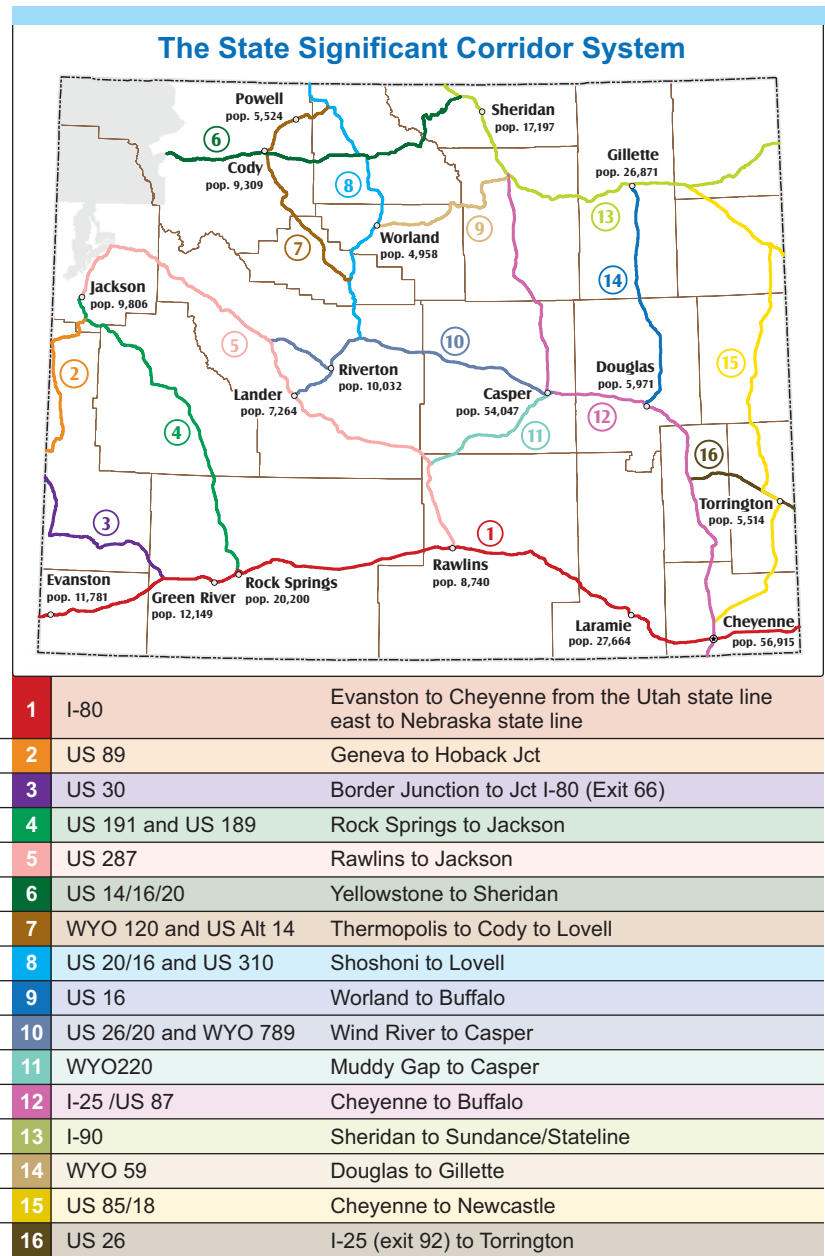
3 CORRIDOR VISIONS

What Is a Corridor Vision?

WYDOT identified 16 State Significant Corridors (SSC) during the Integrated Planning Framework phase of *Wyoming Connects* as the mechanism to organize and analyze the statewide transportation system. The corridors provide the structure to forecast long term needs for each part of the system, and in aggregate, the system as a whole.

A corridor vision has been created for each of the 16 SSC. Each corridor vision has similar sections, type of analysis, and recommendations based on planning level analysis. The vision is a description of ultimate desirable conditions for the corridor/travelshed based on current and future needs. The visions describe needs, goals, and strategies that establish the best possible multimodal transportation system while at the same time being realistic with respect to cost. The purpose of the corridor visions is to provide a platform for discussions of future needs, as well as a decision support tool to assist in prioritizing future improvements that are most beneficial to Wyoming's transportation future.

Figure 3-1



State Significant Corridors

The map on the next page shows the SSC system in colored lines. Each corridor is also numbered to assist with analysis. Regional Corridors are shown in colored dotted lines corresponding to the SSC with which they are associated.

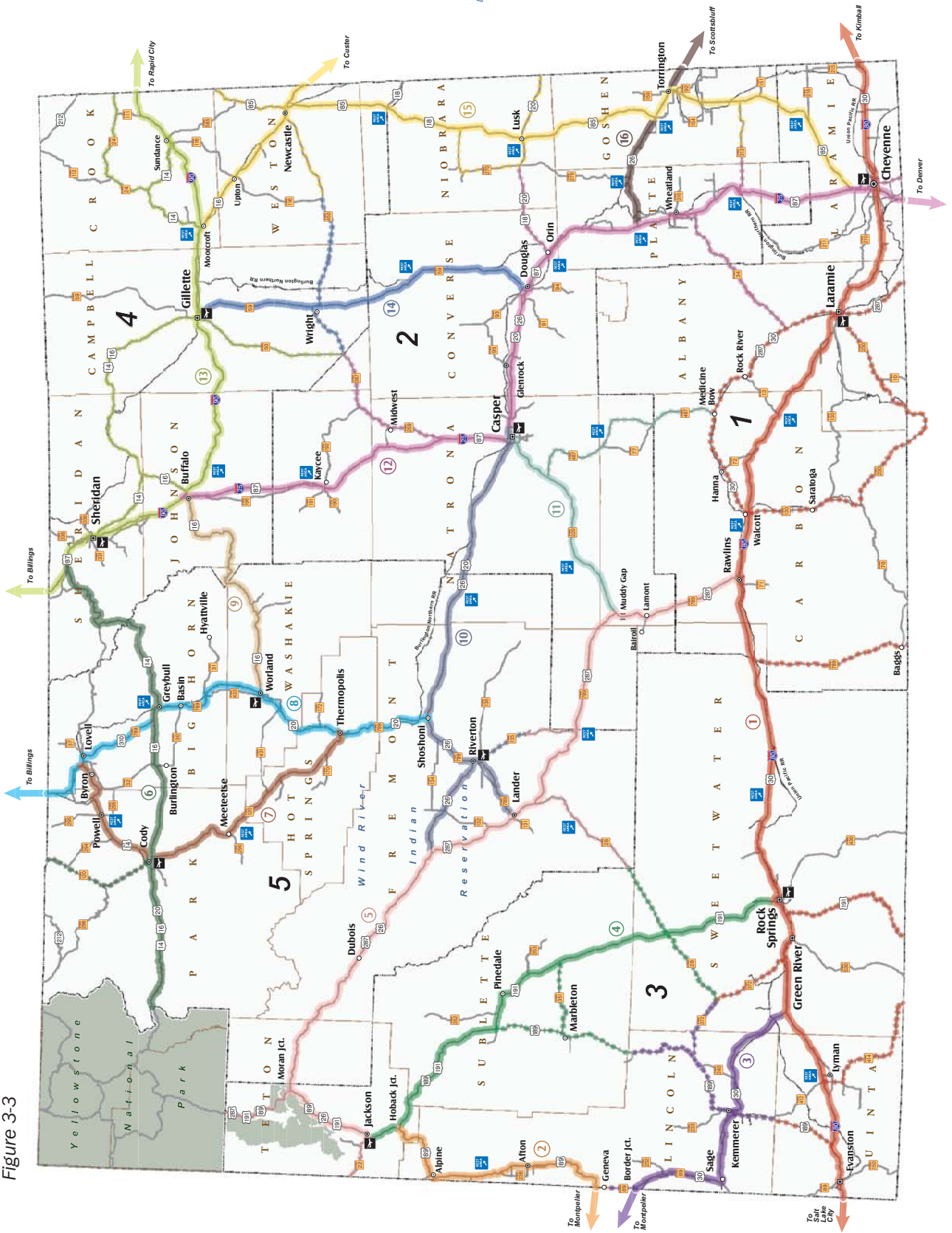
CRITERIA for corridor selection

Figure 3-2

State Significant Corridors	Regional Corridors	Urban Corridors	Local Corridors	Intermodal Services and Facilities
Interstate Highways	Principal or Minor Arterial	State highways within urban areas greater than 5,000 population	All remaining state highways	Commercial service airports
National Highway System	Connects to State Significant Corridor	Connects between SSC and Regional Corridors	Lower traffic volume	Intercity bus routes and stations
Connects major population and other activity centers such as recreation or employment centers	Provides inter-county connection	High volume routes often including "Mainstreet"	Primarily serve to move people and vehicles around rural areas and from rural to urban environments	Non-motorized transportation including identified state bicycle routes
High volume cars and trucks	Hazardous Materials Route	Serve dual role balancing access and mobility	Feed the SSC and Regional Corridor routes	Class One railroads
Snow Route = High	Snow Route = Medium			Local and regional public transit providers
Intercity bus route	Critical to regional economy			
Critical to statewide economy				

STATE SIGNIFICANT CORRIDORS

Figure 3-3



- LEGEND**
- Interstate Highways
 - State Highways
 - Class I Railroads
 - State Significant Corridor
 - Regional Corridor
 - Corridor Number
 - WYDOT DISTRICTS
 - COUNTIES
 - AIRPORTS (Municipal/County/Regional)
 - EXISTING REST AREAS

Data courtesy of: Wyoming Department of Transportation
& The Wyoming Geographic Information Science Center

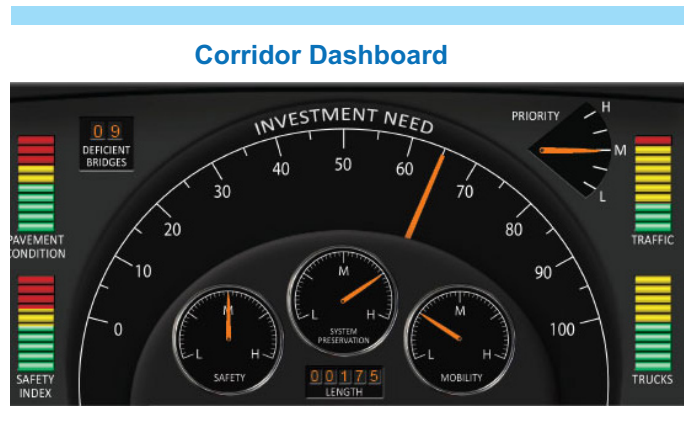


Corridor Dashboard

The corridor visions include a dashboard for each corridor to summarize the level of need, goals, and strategies for the corridor. The dashboard gauges represent needs for different types of investments based on measures of typical areas of interest such as Average Annual Daily Traffic (AADT), Surface Condition, and Safety.

Figure 3-4

The visions also set the stage as a precursor to the Corridor Plans, which will present a more detailed and location specific list of needs and priorities.



Urban Areas

Urban Areas, those cities with a population over 5,000, comprise a distinct set of transportation issues. The WYDOT Urban System Program makes funds available to the 16 largest cities for transportation improvements. The program is maintained on a discretionary basis as a way for WYDOT to participate in project development in urban areas. Each city is an important transportation node, providing the connecting point for many of the State's rural highways. Many cities are intersected by more than one SSC. The urban transportation systems include not only state highways within the city limits, but also off-system arterial and collector roadways. The interface between urban transportation planning and WYDOT's traditional role as manager of the rural highways offers some of the most exciting and challenging planning opportunities for the future. The Urban Corridors section describes this interface and sets the stage for further planning efforts.

Summary of State Significant Corridor Needs

The initial analysis of State Significant Corridors showed that a wide range of improvements will be needed across the system in coming years. The analysis included examining the corridors for deficiencies in Safety, System Preservation, and Mobility. While each corridor vision goes into some detail about needs on that corridor, it is also useful to make a comparative analysis of all the corridors. This helps identify priorities by corridor, type and extent of need, and relative necessary investments.

Figure 3-5 on the next page summarizes those needs in a single display. Each corridor shows the type and extent of need compared to its total length in miles. Since the corridor lengths vary from 56 to 403 miles, this is a useful way to visualize needs both on individual corridors and compared to others in the State. The level of need in each corridor and for each type of investment has been calculated using planning level measures of traffic volumes, truck traffic, highway surface condition, bridge sufficiency, and the safety index. The level of need is then calculated relative to the length of a given deficiency. For example, a corridor 100 miles in length may have 50 miles of deficient pavement, in which case the colored line representing system preservation needs will be 50 percent as long as the corridor.

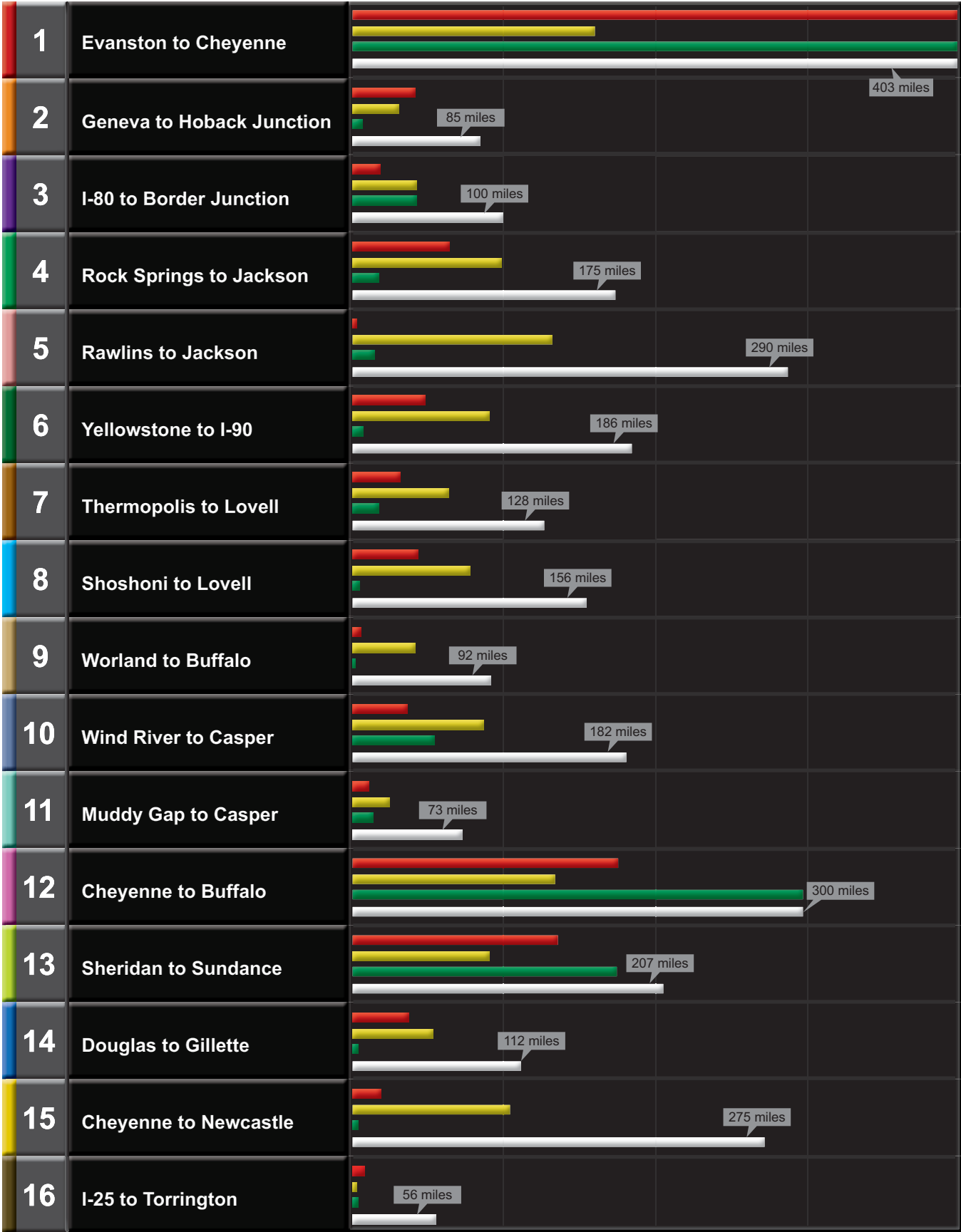
Next Step for Corridor Visions: Detailed Corridor Plans

For the next step in the planning process, WYDOT will create a corridor plan for each SSC, developing planning level elements in the corridor visions to a greater level of detail. The more in-depth analysis and mid-term planning horizon of the corridor plans will result in more specific project resolution and quantification not appropriate in the long-term planning phase.

Figure 3-5

Corridor Needs

% Miles By Investment Category



4 THE TRANSPORTATION SYSTEM

Wyoming ranks 42nd in public road mileage and 8th in land area. The state’s low population density creates challenges for air, rail and transit, making the population very dependent on highway transportation. Wyoming has been described as a small town with very long streets. The highways in the state connect our communities and provide access to land, goods, and services. Unlike other states in which many communities are served by several roads or highways, Wyoming communities are seldom served by more than one or two.

An efficient highway system is an essential prerequisite for economic growth and development in the 21st Century. Wyoming’s small and dispersed population, relatively large land area and limited availability of commercial air service contribute to a heavy reliance on the state’s highway system. The highway transportation system in Wyoming provides vital links on its 6,742 centerline miles to markets for many smaller communities that are not served by other modes. Wyoming has the highest miles driven per person per year of all states - 17,914 - compared to the national average 10,045. Approximately 80 percent of Wyoming’s total Daily Vehicle Miles of Travel (DVMT) occurs in rural areas, while 43 percent of all urban mileage is located in the cities of Casper and Cheyenne.

The people of Wyoming demand and deserve an integrated highway transportation network that will serve present and future travel demands in a safe, efficient, high quality and economical manner. WYDOT will continue to identify locations with safety hazards and work to reduce crash rates and fatalities on the State Highway System, maintain the system to the highest possible standards, and construct needed improvements to support economic growth and development as funding allows.

Source: Management Services Program (2008)

Figure 4-1

Total Daily Vehicle Miles Traveled (2008)
Total Miles 25,489,371

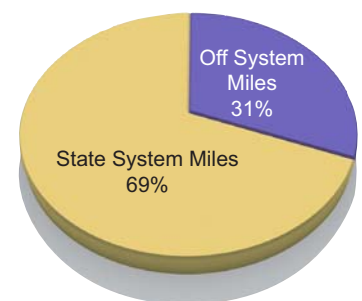
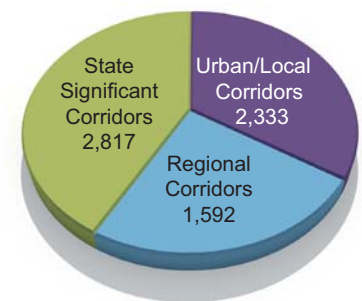


Figure 4-2

System Miles
Total Miles 6,742



General System Characteristics

Over the years the state highway system has grown to become the core of Wyoming's transportation system, providing regional and statewide mobility, as well as access to jobs, recreation, and commerce. The highway network provides all-weather mobility and land access to property, goods and services and is instrumental in shaping the growth and development of Wyoming's communities.

I-80 forms a critical link in the national movement of freight, providing a major link between the West Coast and the Midwest. Semi-trucks comprise more than half the traffic volume and contribute significantly to the maintenance and physical requirements of the highway. The rate of traffic growth on this corridor is nearly twice the state average and is becoming more congested with truck traffic. Steep grades and slow moving trucks exacerbate congestion on the corridor.

Even with WYDOT's active snow plowing efforts, the unpredictable and sometimes harsh Wyoming winters necessitate periodic roadway closures due to blizzard conditions or associated crashes. In addition, high winds frequently cause tractor-trailer blowovers along Wyoming's interstates and occasionally lead to highway closures. With few viable east/west alternatives for the freight industry, these conditions continue to present a major inconvenience to the trucking industry as well as costs to the State. With truck delays costing an estimated one dollar per minute per vehicle, these delays add up to a cost of hundreds of thousands of dollars annually.

Other modes also contribute in a big way to providing mobility for the State. WYDOT administers Federal Transit Administration funds to agencies providing transit services in all 23 counties. Urban bus systems operate in Casper and Cheyenne; resort areas in Jackson and Cody provide shuttle services in support of tourism and employees; and private operators provide intercity bus service on major corridors throughout the state.

The BNSF Railway (BNSF) and the Union Pacific Railroad move 40 percent of the nation's coal used for energy production out of Wyoming to power plants across the country. Ten commercial airports board over one million passengers per year while 30 general aviation airports provide much-needed mobility and access to emergency health facilities to smaller towns and rural areas.

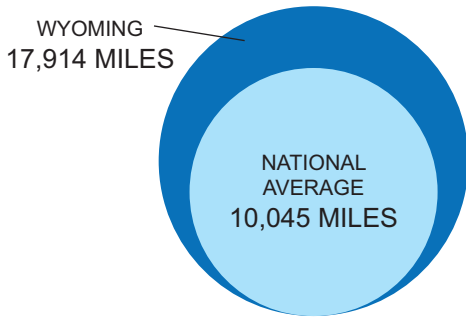
All the transportation options combine to support a high quality of life for Wyoming residents. The investment in transportation infrastructure is significant and requires continual upkeep to maintain an acceptable level of service and operations.

This chapter provides an overview of the multimodal transportation system and its condition and operational characteristics, setting the stage for determining future investments

GENERAL SYSTEM CHARACTERISTICS

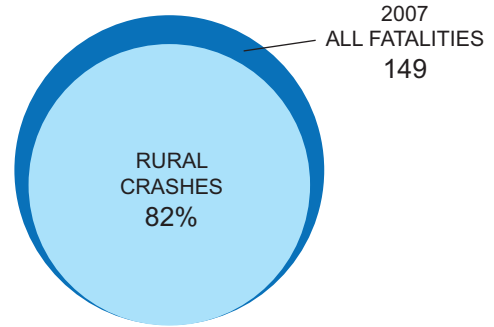
Figure 4-3

Average Miles Driven Per Person



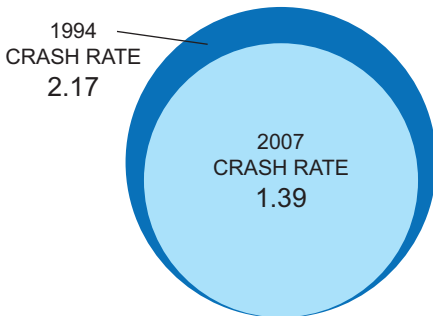
Wyoming is largely rural with great distances between destinations. The average number of miles driven per person per year is the highest in the nation and 56% higher than the national average.

Fatal Crashes In Rural Areas



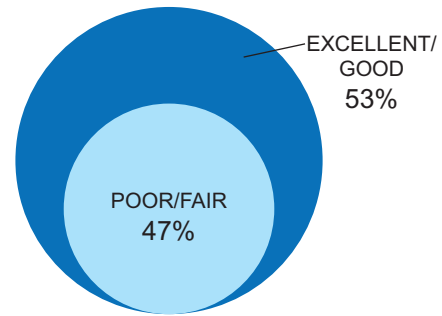
82 percent of fatal crashes occur in rural areas.

Total Crash Rate Declined 1990 to 2007



Total crash rate declined from 2.17 per million vehicle miles traveled in 1990 to 1.39 in 2007.

Poor or Fair Roadway Surfaces



In 2009, 53 percent of the State highway system's roadway surfaces were in excellent or good condition. Since 2000, roadway surface conditions have deteriorated steadily. With currently projected funding, only 39 percent of state highway miles will be in excellent or good condition by 2015.

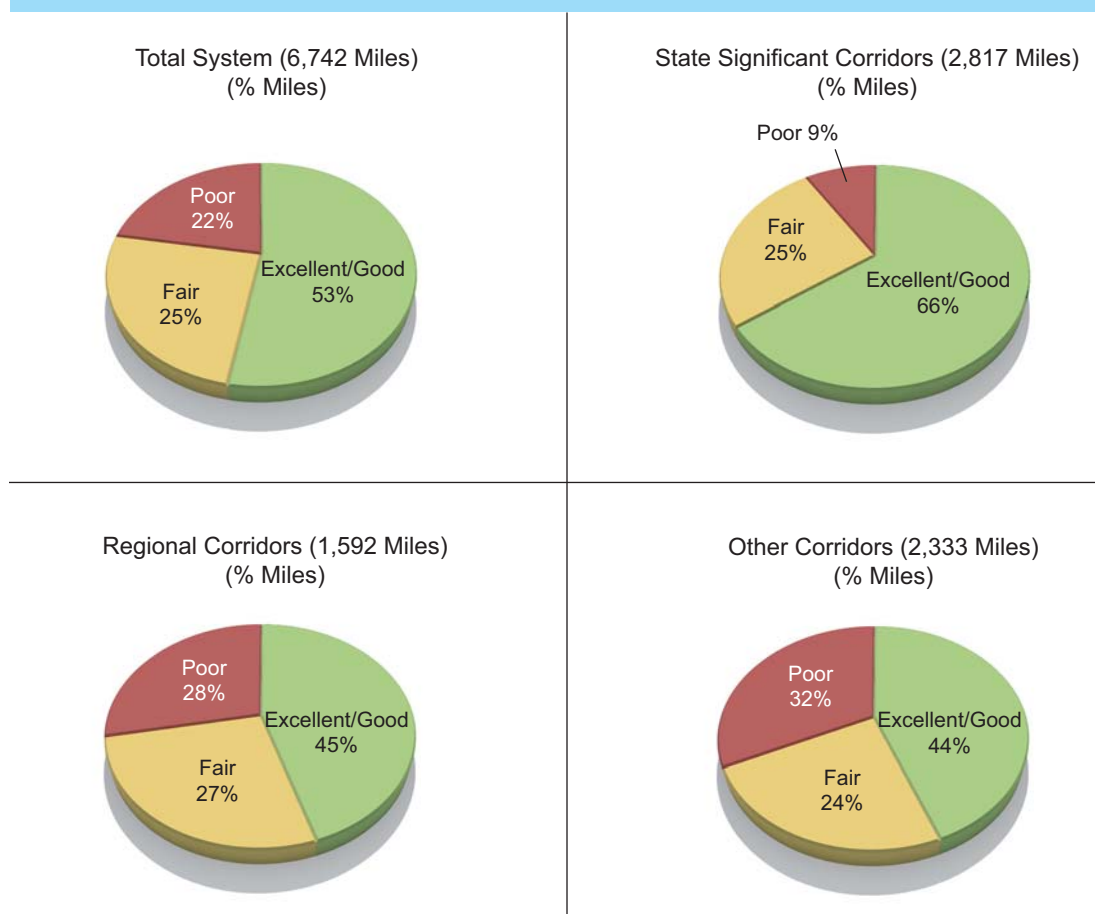
Pavement Surface Condition

The Pavement Surface Condition map on the next page depicts highway surface conditions as Excellent, Good, Fair, or Poor as measured in 2008. These measurements constantly evolve over time from segment to segment; as some segments are repaved and placed in the Excellent category, others age and fall to Fair or Poor.

The pie charts below show the percentage miles on each sub-system rated Good/Excellent, Fair, and Poor. The SSC system, which carries the largest proportion of VMT, has the best overall surface condition, with 66 percent in Good or Excellent condition, and reflects WYDOT's policy to maintain the heaviest traveled highways to the best possible condition.

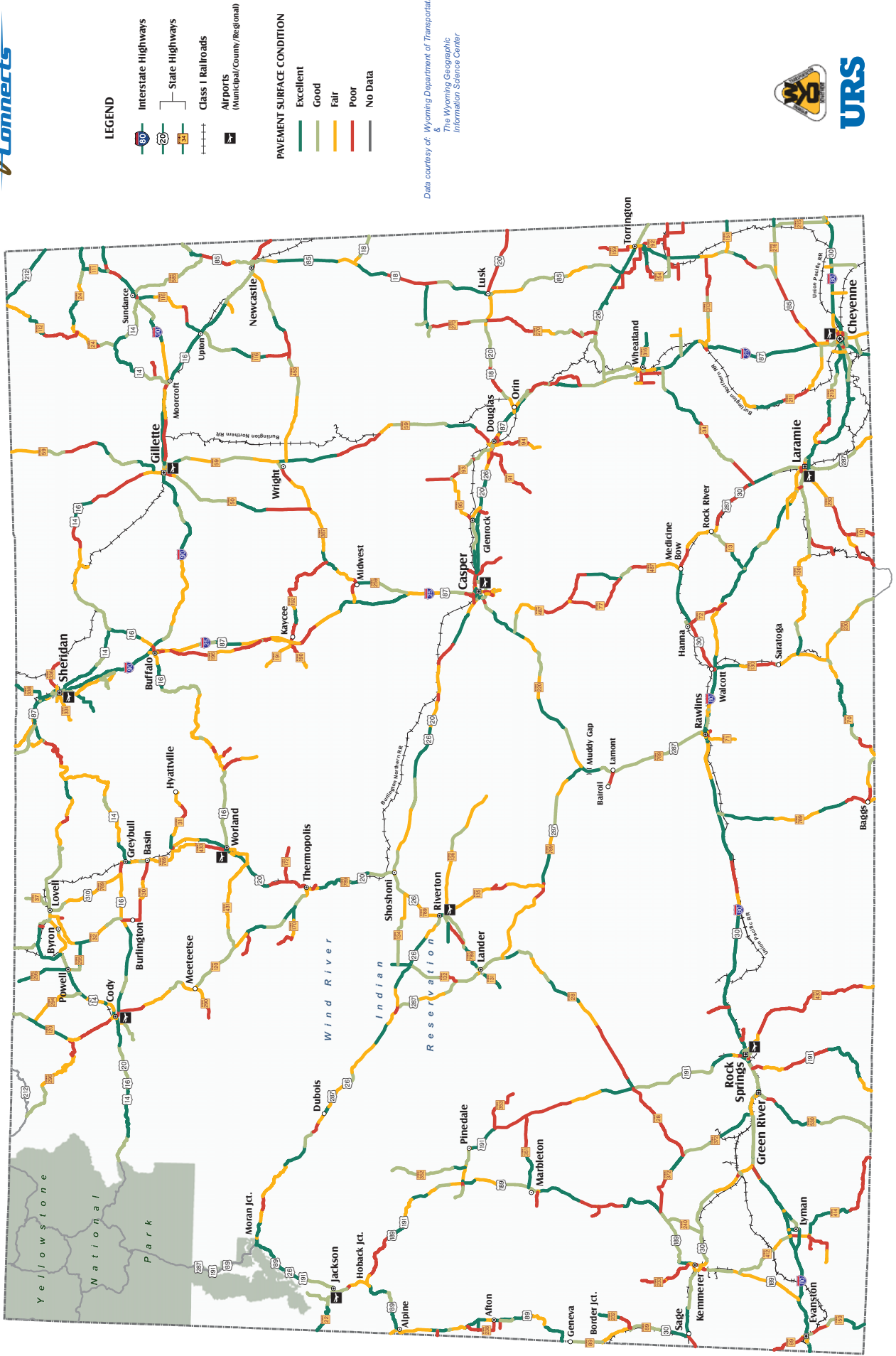
SURFACE CONDITION

Figure 4-4



PAVEMENT SURFACE CONDITION - 2008

Figure 4-5

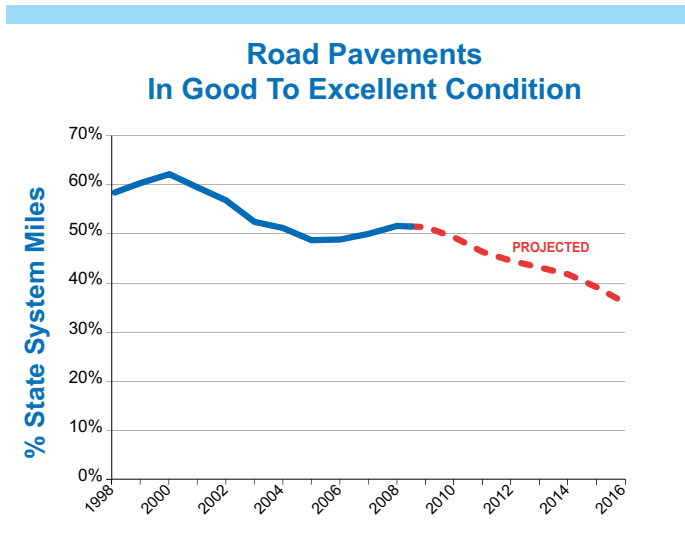


Road Pavements in Good to Excellent Condition

Good pavement conditions in the form of smooth roads is one of the most important factors to drivers. While pavement conditions currently meet WYDOT goals, this may not hold true for the future. The miles of pavement in Good or Excellent Condition on the state highway system have declined from a peak of 62 percent in 2000 to a projected 35 percent in 2016.

Pavement resurfacing costs have increased dramatically over the last eight years. Pavement costs, combined with fewer available dollars in the future mean that fewer miles will be resurfaced each year. Reconstruction in mountainous terrain can be substantially more expensive than the flat land reconstruction figures given.

Figure 4-6



Source: Materials Program

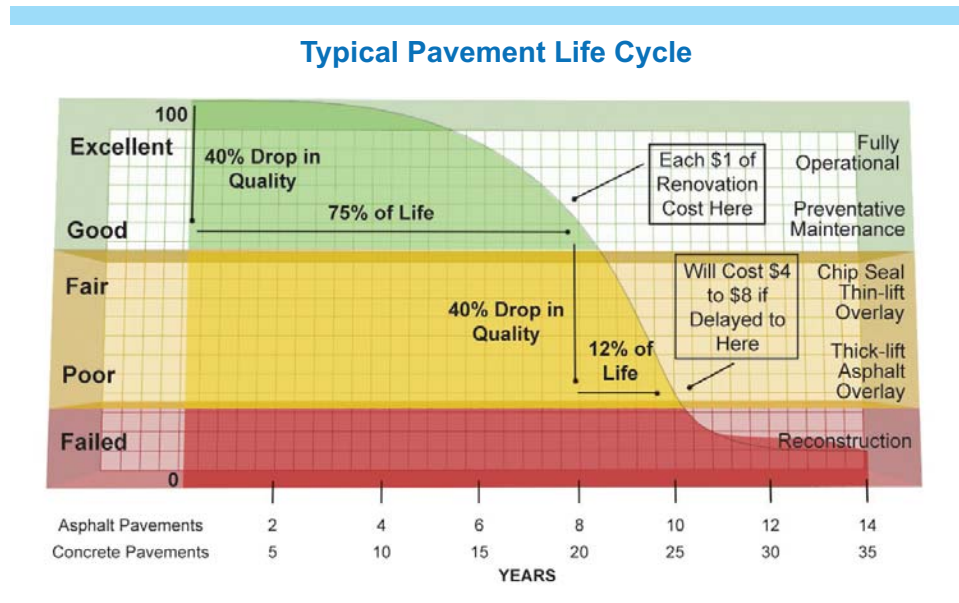
Figure 4-7

CONSTRUCTION COSTS PER MILE (\$000)	
Resurface 2-lane	\$350 - \$1,000
Resurface 4-lane	\$850 - \$2,000
Reconstruct 2-lane	\$700 - \$2,500
Reconstruct 4-lane	\$2,000 - \$3,500
Reconstruct 4-lane (concrete)	\$3,500 - \$4,750

The Pavement Life Cycle

Timely maintenance is the key to getting the maximum life from our pavements. During the first 75 percent of pavement lifespan (about eight years for asphalt pavement), the quality drops from Excellent to Fair. This is the optimum time period to make minor repairs. The pavement will fail within two years if not maintained, and require expensive reconstruction. For every dollar not spent on timely preventive maintenance, \$4 to \$8 will be needed for complete reconstruction.

Figure 4-8



Source: Pavement Management System

Bridges

While WYDOT currently meets its goal to maintain a high level of sufficiency for bridges on the state highway system, the future promises accelerating costs. More than 50 percent of bridges will be over 50 years old within 10 years, meaning that many bridges are approaching the end of their design life and will require a large investment to rehabilitate or replace.





The Deficient Bridges map shows the location of bridges on the state highway system determined to be deficient in one or more ways in 2008. These bridges are eligible for a special federal funding program.

Figure 4-9

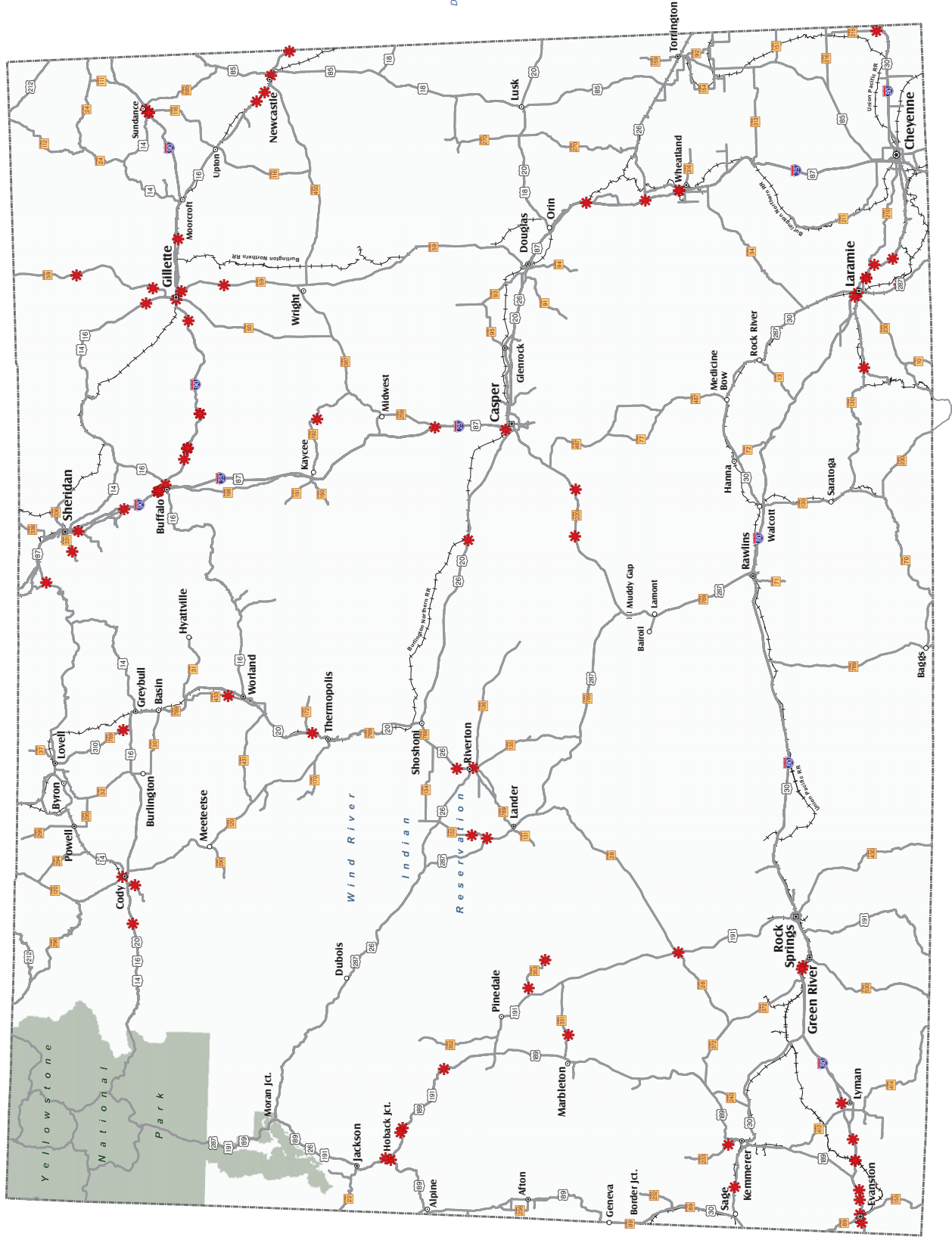
BRIDGES on the State Highway System	
Total Number	1,938
Deficient	95
Percentage	4.9%

DEFICIENT BRIDGES - 2008

Figure 4-10

- LEGEND**
-  Interstate Highways
 -  State Highways
 -  Class I Railroads
 -  Deficient Bridges

Data courtesy of: Wyoming Department of Transportation
The Wyoming Geographic Information Science Center



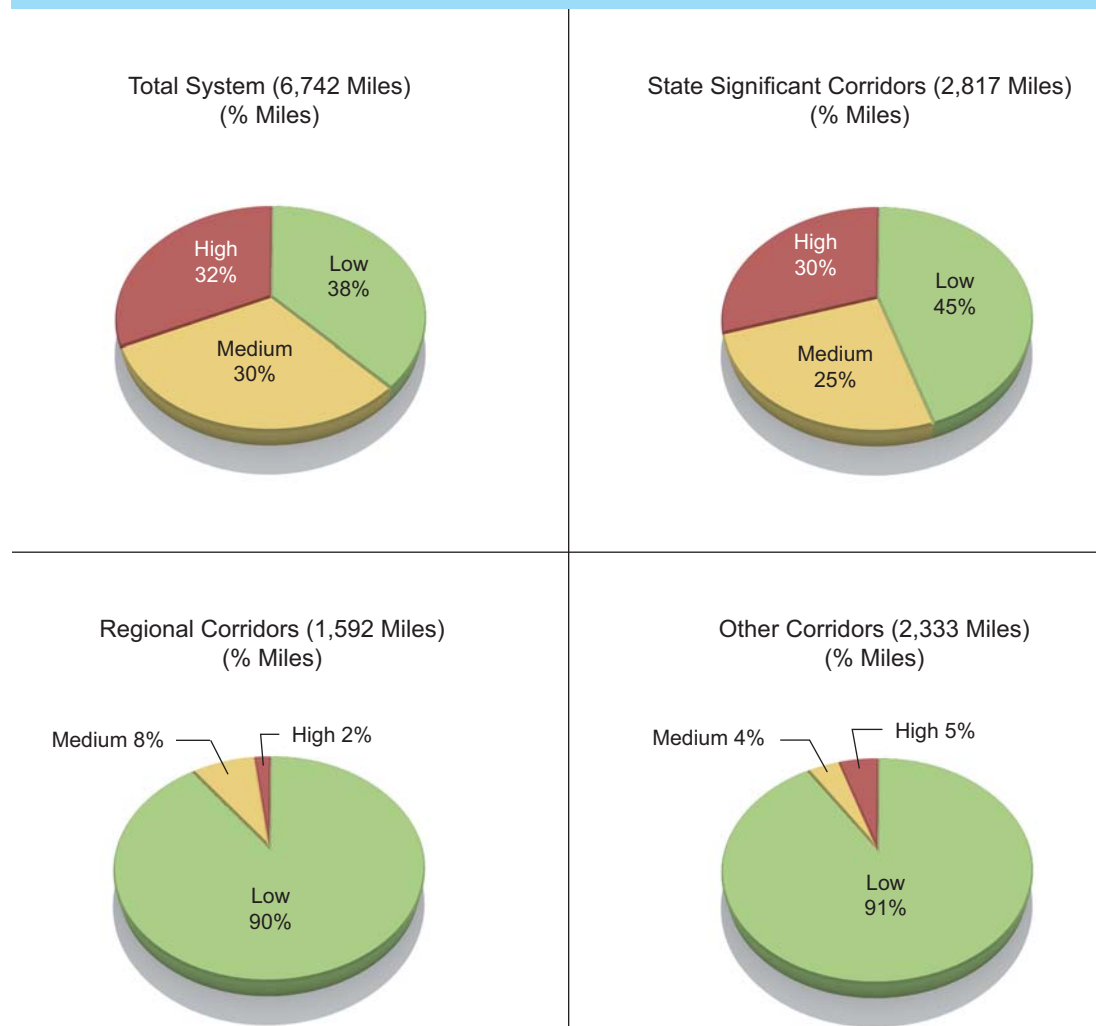
Traffic Volumes

The Average Annual Daily Traffic (AADT) map shows the total volume of vehicle traffic on each highway segment for a year averaged over 365 days. AADT is a useful and simple comparative measurement of how busy the road is, not at any specific time, but on average. There will be peaks and valleys in the traffic volume depending on the time of day, season, weather, or special events. The pie charts show the percentage of miles on each sub-system within the state highway system with high, medium, or low traffic volumes.

The SSC system accounts for about 42 percent of the total highway system, of which about 30 percent exhibits a high level of traffic.

TRAFFIC VOLUMES (AADT)

Figure 4-11



AVERAGE ANNUAL DAILY TRAFFIC - 2008

Figure 4-12



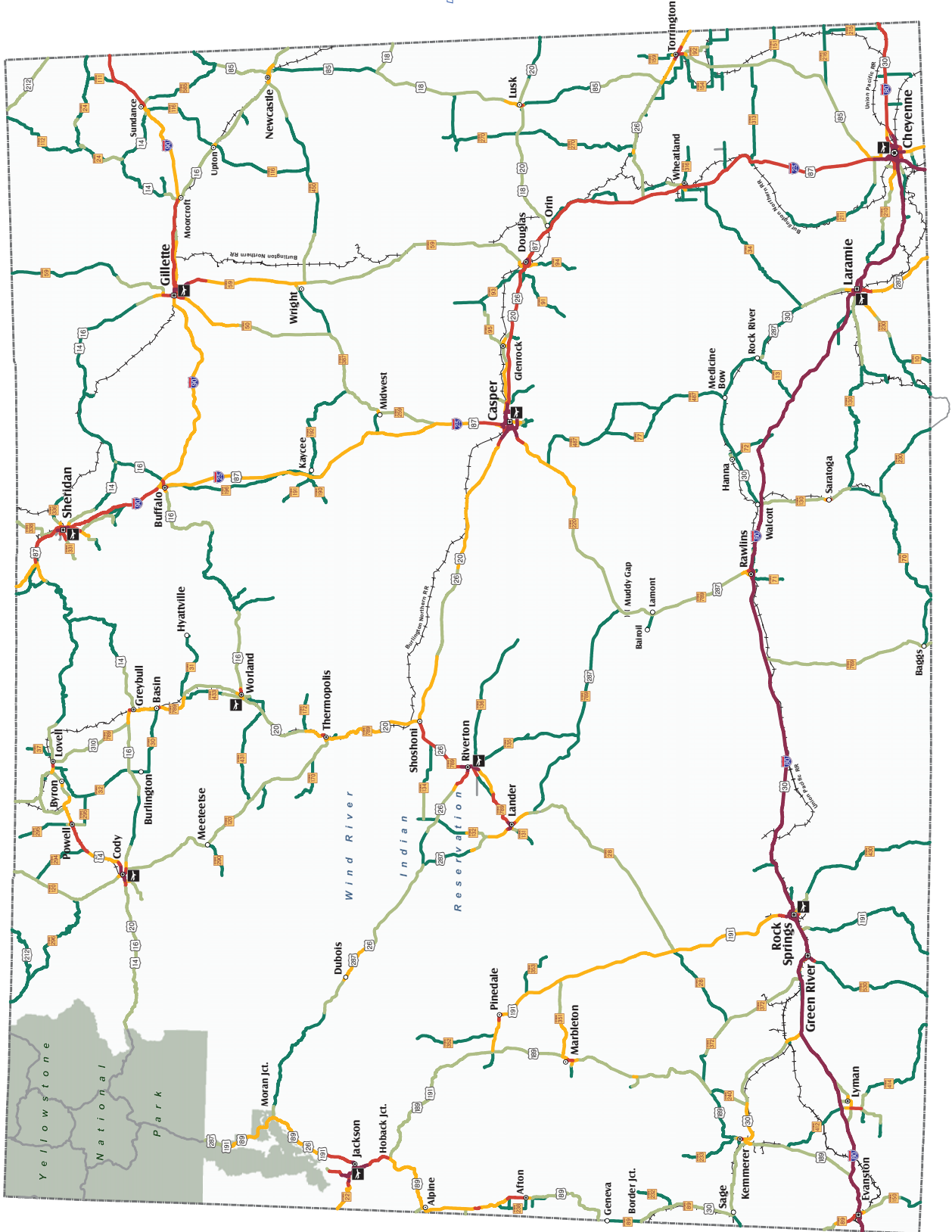
LEGEND

- Interstate Highways
- State Highways
- Class 1 Railroads
- Airports (Municipal/County/Regional)

AVERAGE VEHICLES PER DAY

- < 1,000
- 1,000 - 2,500
- 2,500 - 5,000
- 5,000 - 10,000
- > 10,000

Data courtesy of: Wyoming Department of Transportation
 & The Wyoming Geographic Information Science Center



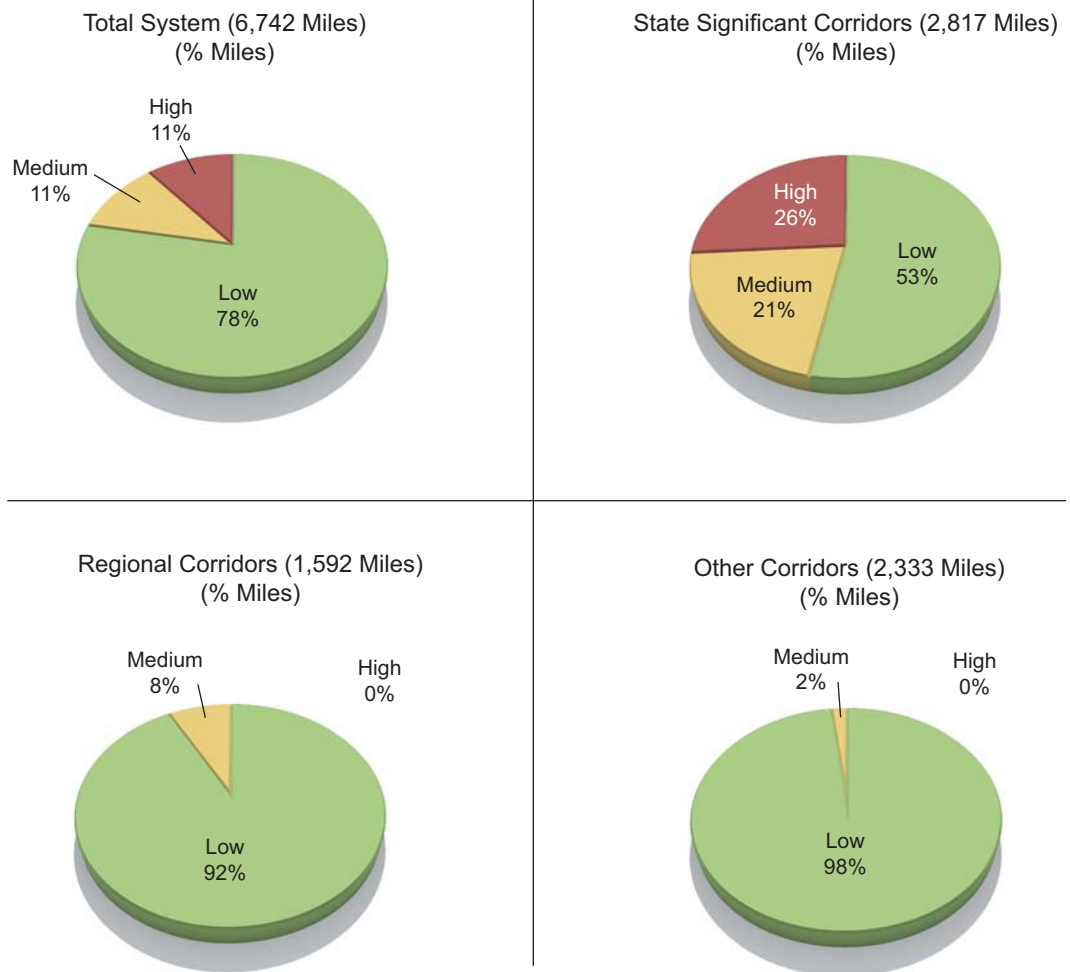
Truck Traffic Volumes

The Average Annual Daily Truck Traffic (AADTT) map shows the volume of large trucks on the highway, averaged over the year. The pie charts show the percentage of miles on each sub-system with high, medium, or low truck volumes.

The SSC system accounts for about 42 percent of the total highway system. About 26 percent of the SSC system exhibits a high level of truck traffic, illustrating how major corridors carry the load.

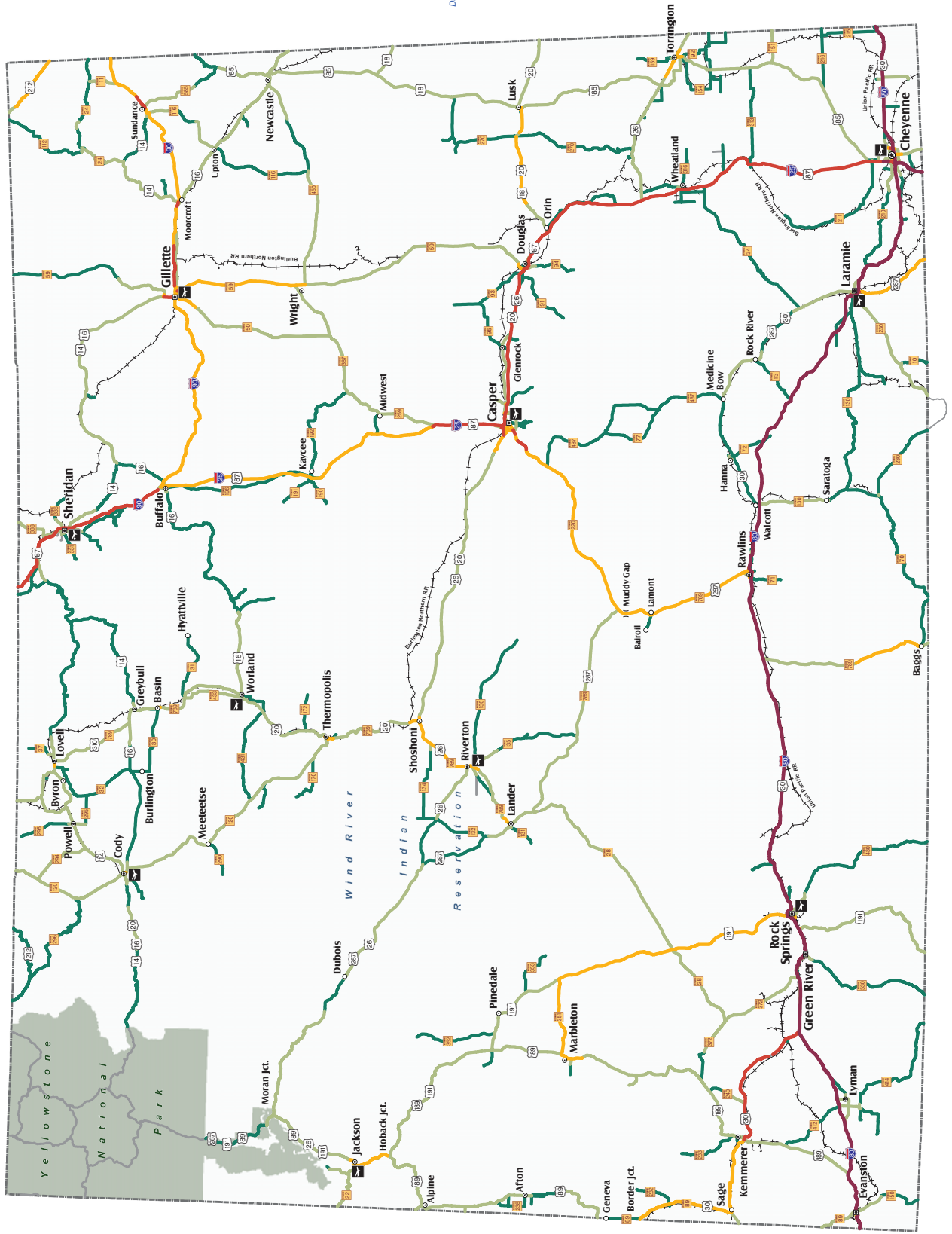
TRUCK TRAFFIC VOLUMES

Figure 4-13



AVERAGE ANNUAL DAILY TRUCK TRAFFIC - 2008

Figure 4-14



- LEGEND**
- Interstate Highways
 - State Highways
 - Class I Railroads
 - Airports (Municipal/county/regional)

- AVERAGE TRUCK TRAFFIC PER DAY**
- < 100
 - 100 - 500
 - 500 - 1,000
 - 1,000 - 2,500
 - > 2,500

Data courtesy of: Wyoming Department of Transportation
The Wyoming Geographic Information Science Center



Figure 4-15

SAFETY FOCUS AREAS	
Roadway Departure Crashes	
Use of Safety Restraints	
Impaired Driving	
Speeding	
SAFETY PROGRAMS	
Intersection safety	
Bicycle/Pedestrian Safety	
School Zone Safety	
Work Zone Safety	
Highway Freight Safety	
Motorcycle Safety	
Railroad Crossing Safety	
Safety Management System	
Traffic Records System	
SPECIALTY SAFETY AREAS	
Access Control	
Narrow Medians	
High Risk Rural Roads	
Animal/Vehicle Crashes	
Visibility Improvement	
Avalanches/Rock Fall	

Source: Wyoming Strategic Highway Safety Plan, September 2006

Safety

WYDOT has always been committed to the development and construction of a safe highway system. To help achieve this goal, WYDOT maintains an extensive database of crash information and routinely monitors and evaluates crash rate by location, type, and severity. If appropriate, safety improvement projects are then programmed for construction. The vehicle and driver behavior are also identified as critical components in the safety equation and are targeted for improvement when possible. This process has resulted in improved safety for travelers on the state highway system. WYDOT programs have a demonstrated beneficial effect in reducing the number and severity of vehicle crashes.

Wyoming Highway Patrol

The Highway Patrol is literally on the front line to enforce traffic and other laws, assist motorists, and help WYDOT achieve its safety goals. Enforcement is one of the primary tools available to help achieve these goals. The focus of field operations is to make a difference by reducing the numbers of serious injuries and deaths that occur in vehicular crashes on Wyoming's highways. About 210 highway troopers drive more than 5-million miles a year patrolling the 6,800-mile state highway system. They also investigate the more than 7,000 vehicle crashes that occur yearly, often as the first on hand to provide first aid to victims. The patrol also administers an extensive education program as part of the overall effort to improve safety. Important safety programs include:

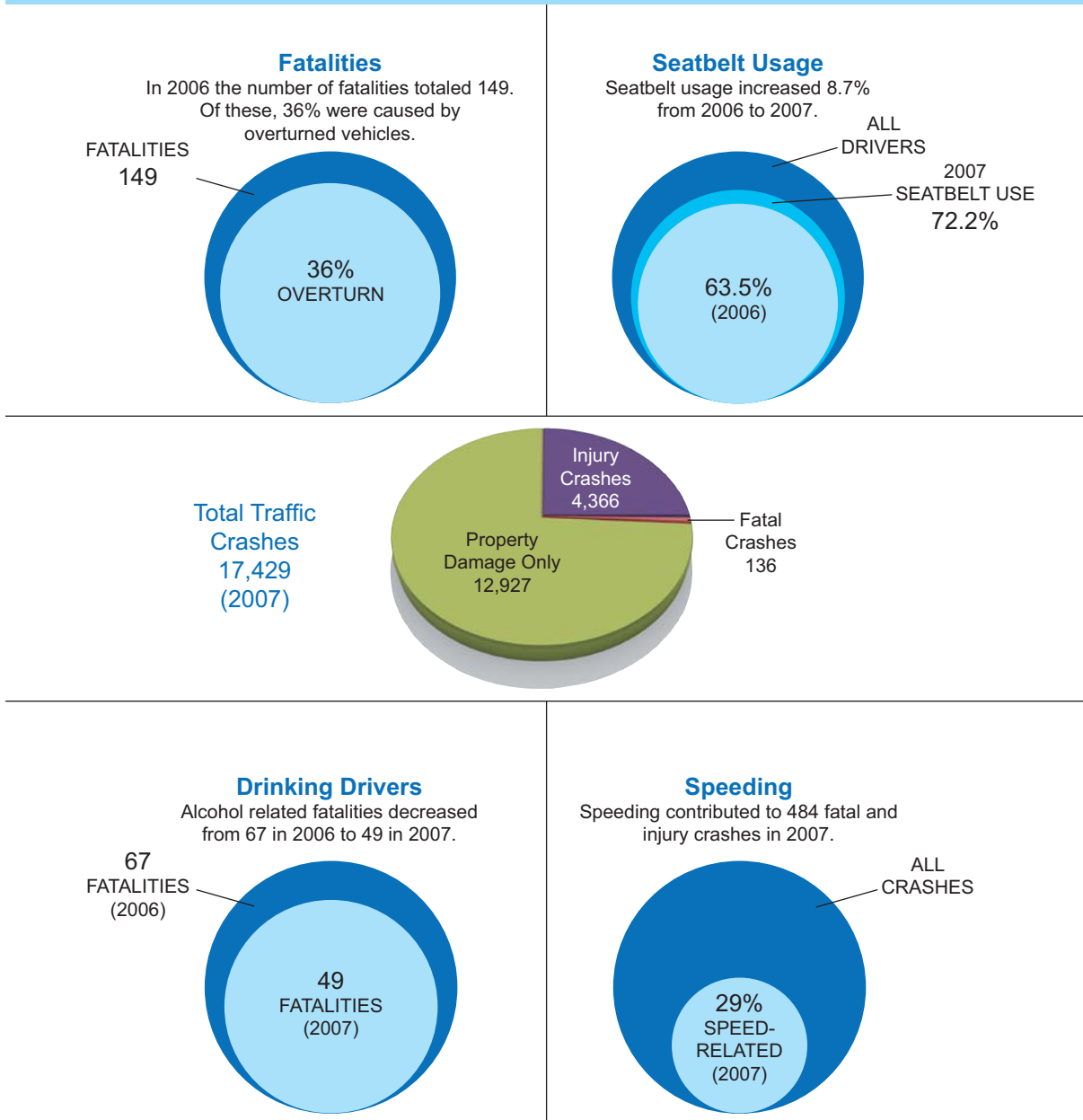
- The Seatbelt Survivor program regularly acknowledges individuals who survive crashes because they are buckled up.
- The Li'l Convincer program uses a simple mechanical device to show youngsters how effective seat belts are in restraining them.
- The REDDI program encourages individuals to report apparent drunk drivers.
- A rollover simulator.
- Highway-safety film documentaries.

Vehicle Crashes

Vehicle crashes in Wyoming cost a total of \$440,657,800 in 2008, according to the National Safety Council.

Figure 4-16

WYDOT SAFETY FOCUS AREAS: Reducing Serious and Fatal Crashes (2007)



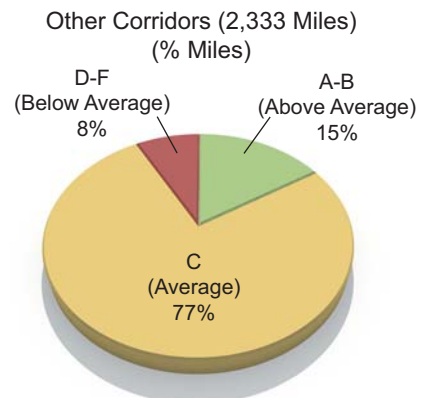
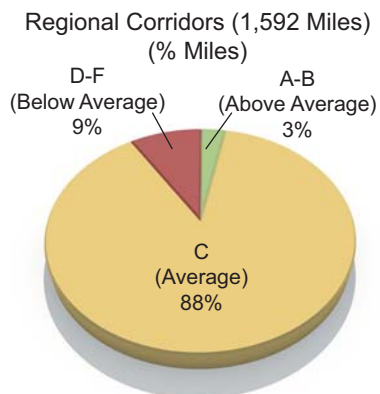
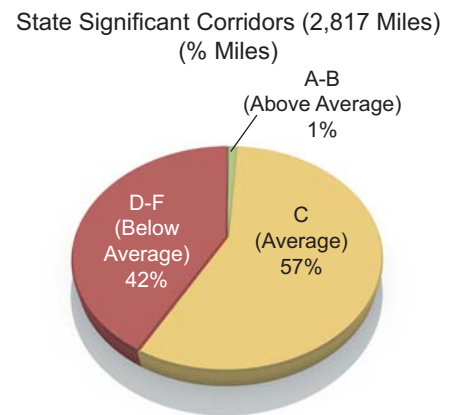
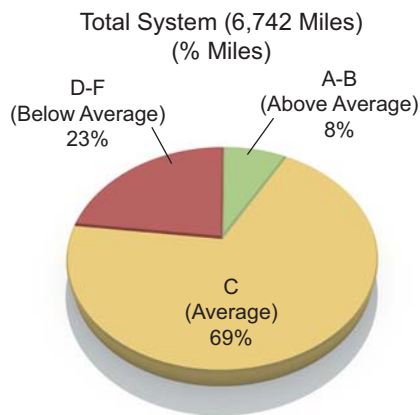
Source: 2009 Safety Problem Identification, WYDOT

Safety Index

The Safety Index categorizes highway segments into letter grades (A through F) to help make the information more meaningful for the wide range of safety partners. The index incorporates all types of crashes, including fatalities, injuries, or property damage only. A weighting system is applied so that more serious crashes lower the grade. The index is a running total of five years of data to smooth out isolated incidents. Grades for individual highway segments are assigned with the idea that a letter grade of “C” is average, “D” and “F” are below average, and “A” and “B” are above average. The intent of the system is to identify highway segments with a potential for crash reductions in the D or F range.

SAFETY INDEX (2005 - 2009)

Figure 4-17



SAFETY INDEX - 2005-2009

Figure 4-18



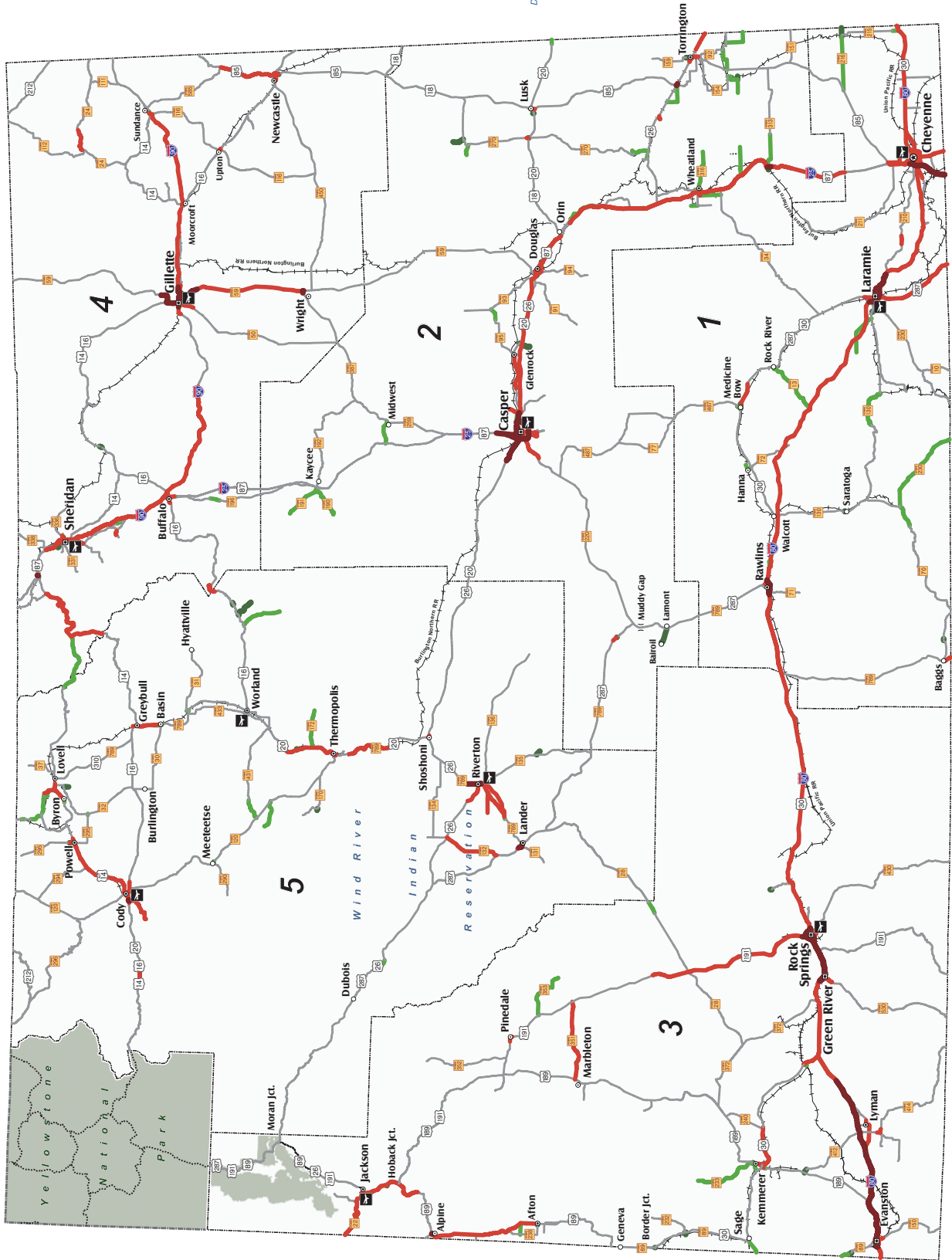
LEGEND

- Interstate Highways
- State Highways
- Class I Railroads
- Airports (Municipal/county/regional)

SAFETY INDEX GRADE

- A
- B
- C
- D
- E
- F

Data courtesy of: Wyoming Department of Transportation & Wyoming Geographic Information Science Center



Transportation System Security

The Wyoming Office of Homeland Security (WOHS) has the statutory requirement for planning and coordinating emergency functions dealing with disasters, both man-made and natural. WYDOT works closely with WOHS to identify and coordinate strategic Emergency Support Functions (ESF). These form the basis for WYDOT to plan and incorporate the capabilities required to support the State of Wyoming during a crisis.

WYDOT KEY FUNCTIONS

Figure 4-19

Damage Assessment
Maintain/Restore Essential Transportation Infrastructure
Maintain Traffic Control and Flow on Essential Highway Systems
Analysis and Dissemination of Data
Hardware
Enforcement Personnel
First Responder Family Transport

Emergency Support Function #1 – Transportation

WYDOT is the primary state agency to coordinate transportation related functions for the State response. The Transportation ESF has the most specific key functions for WYDOT to coordinate. Several of these key functions also form the supporting functions to other ESF.

Emergency Support Function #2 – Communications

In the event of an emergency needing Homeland Security and WYDOT involvement, personnel will check the status of WYDOT-operated communications systems, take corrective action as needed, and ensure that WYDOT's communications equipment is ready to function in the emergency area as directed.

WYDOT is the lead agency in building a digital, trunked radio system to provide interoperable communications to most law enforcement, fire, and emergency medical agencies at all levels of government within Wyoming. This radio system, dubbed WyoLink, will provide robust voice and limited data communications for all public safety services, including emergency workers. This system requires integration with local, adjacent state, federal, and other agency initiatives. Cooperative planning and implementation have been vital to ensure that each agency's communication system operate seamlessly and effectively.

Emergency Support Function #13 – Public Safety And Security

The plan provides a mechanism for coordinating and providing support to state and local authorities including non-investigative/non-criminal law enforcement, public safety, and security capabilities and resources during incidents. ESF #13 capabilities support incident management requirements including force and critical infrastructure protection, security planning and technical assistance, technology support, and public safety in both pre-incident and post-incident situations. ESF #13 generally is activated in situations requiring extensive assistance to provide public safety and security and when local government resources are overwhelmed or inadequate. The Wyoming Highway Patrol is to assist in coordinating state public safety and security support provided to any affected local government. This assistance includes communications, personnel, and equipment. The Patrol also provides public safety and security support. This support may include protecting the area by controlling people moving in and out after an evacuation notice.

Other Support Functions

In addition to WYDOT’s leadership on several key functions, several other internal initiatives are being developed. These center on WYDOT’s ability to monitor, correct, and open roads during natural events such as landslides or severe snow storms, and all support WOHS preparations for emergency events. Photogrammetry (detailed aerial photography)

Risk Analysis

WYDOT has an inherent responsibility to evaluate all infrastructure components for the likelihood of failure against the impact of that failure. This risk analysis assists in determining the need for redundancy or other mitigation efforts. These risk analysis are routinely evaluated for items such as bridges, tunnels, or communications systems.

Figure 4-20

OTHER SUPPORT FUNCTIONS	
	Cost Tracking
	Facilities
	Radiological
	Transit Coordination
	Airports Coordination
	Planning

BICYCLE/ VEHICLE RULES OF THE ROAD

Figure 4-21

Motorists share the road with bicyclists and give them plenty of room when passing

Bicyclists have the same rights and duties as motor vehicle operators

Always ride on the right with the flow of traffic; never ride against traffic

Ride as far to the right as practical on highway shoulders when they are available

Obey traffic laws, signs, and signals

For visibility, wear bright clothing. Use lights and reflectors at night.

Always wear a helmet

Rest Areas

Roadside rest areas along highways where travelers can stop, rest, and rejuvenate are essential for drivers to remain alert and to drive safely. In this capacity, rest areas are an important part of the state transportation system. Rest areas with parking for large trucks are especially important for freight corridors. WYDOT will continue to evaluate the rest area system for needed improvements. However, the costs to maintain these facilities, especially in isolated areas, have become more difficult to justify in the face of increasing costs for other basic services such as roadway resurfacing.

Bicycle and Pedestrian Transportation

Walking and bicycling are integral parts of Wyoming's intermodal transportation system. People walk and bicycle to work and school, for utilitarian trips, such as visiting friends, shopping or other personal errands, and to make connections to transit or other intermodal facilities.

Bicycles are legally classified as vehicles and can be ridden on all public roadways in Wyoming, although riding on interstate highways is discouraged. Bicycle access to all highways is necessary due to the lack of nearby alternative routes in many places.

WYDOT concentrates on the three Es (engineering, education and enforcement) to improve bicycle and pedestrian transportation. The existing roadway system constitutes the basic network for bicycle travel, although most bicyclist travel will occur within and around cities and towns. The needs of long distance cyclists are addressed with a series of identified state routes. Most pedestrian trips are short, therefore local governments have the greatest influence on creating viable pedestrian transportation networks. Continuous sidewalks are recognized as the basic network for urban pedestrian transportation.

Shoulders on Rural Highways

Smoothly paved shoulders adjacent to travel lanes can significantly improve operating conditions for bicyclists. They provide a clear area for bicyclists to ride that is out of the stream of high-speed motor vehicle traffic. According to the 1999 American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities, "Adding or improving paved shoulders can be the best way to accommodate bicyclists in rural areas, and also benefit motor vehicle traffic." The focus of WYDOT's efforts to accommodate bicyclists on rural highways is to provide and maintain highway shoulders.

Designated Bicycle Routes

Figure 4-22

WYDOT has designated the following routes for interstate bicyclists as recommended touring routes. These routes receive priority for sweeping and shoulder maintenance in order to preserve a higher level of service for bicyclists, particularly around urban areas or where rumble strips have been installed.

Transamerica Bicycle Route

This 25-year old route, formerly known as the BikeCentennial route, is the most popular long distance touring route in America. The entire cross-country route travels from Oregon to Virginia. The route in Wyoming begins at the Wyoming/ Idaho state line in Yellowstone National Park on US 191, continues on US 287 southeast to Rawlins, and exits Wyoming on WYO 230 south at the Wyoming/Colorado state line.

Northern Tier East/West Route

This route provides the cross-country bicycle tourist with a route across northern Wyoming to access Yellowstone National Park. The route runs from the east entrance to the Park on US 20/16/14 east to Gillette, and on WYO 24 to the Wyoming/South Dakota state line.

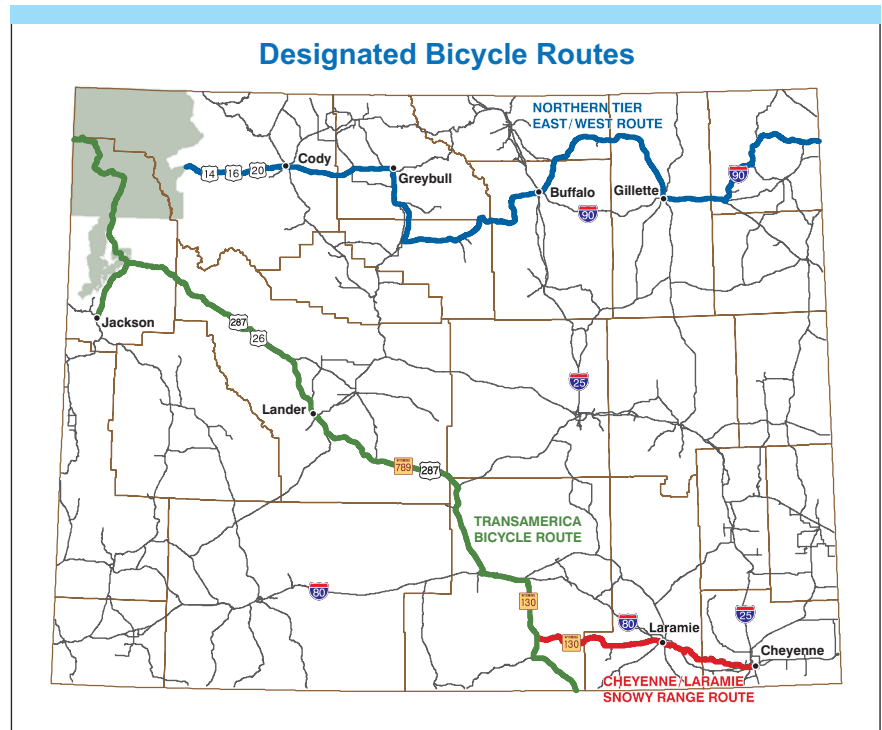
Cheyenne/Laramie/Snowy Range

This route provides access to the Snowy Range and Vedauwoo area from Laramie and Cheyenne and provides a connection to Cheyenne for tourists on the Transamerica Route who wish to visit the State Capitol. The route begins south of Saratoga, continues east on WYO 130 to Laramie, then on I-80 east from Laramie to WYO 210 (Happy Jack Road), then on WYO 210 east to Cheyenne.

Great Divide Mountain Bike Route

This route provides a continuous trail from Canada to Mexico roughly following the Continental Divide. The trail is mostly off paved highways but does include a few sections on the State Highway System.

For more information about bicycle and pedestrian transportation in Wyoming, see http://www.dot.state.wy.us/wydot/safety/pedestrian_bicycle.



Public Transportation

The existing Wyoming Public Transit systems, facilities and services are discussed in this section. Information presented here was used to develop the transit strategies to meet the demand and service gaps for the transit dependent and general public population.

Wyoming Public Transit Programs

Transit programs in Wyoming are administered by WYDOT and funded through a variety of federal and state programs. Currently all 23 counties have at least one provider of public transportation.

Program Goals

Rural Public Transit Program

FTA Section 5311 /
State Transit
Program

Provide quality public transit service to Wyoming's rural communities. This service is available to residents of all 23 counties. Most transit providers are senior centers that have been active in the transit business since the inception of this program in Wyoming in 1985. There are over 40 rural public transit providers, plus the two urbanized areas of Casper and Cheyenne.

Urbanized Area Formula Assistance Program

FTA Sec. 5307

Provide quality public transit service to Wyoming's urban communities of Casper and Cheyenne. Both of these cities surpass the threshold of 50,000 population. This service is available to all residents of both cities.

Elderly and Persons with Disabilities

FTA Section 5310

Provide capital for the purchase of vehicles for programs related directly to transportation of elderly and persons with disabilities. This is a capital-only program and is utilized by WYDOT to purchase accessible vehicles and equipment.

Rural Public Transit Program

FTA Sec. 5309/
Capitol Investment
Program

Provide funds to invest in public transit capital equipment and facilities. In Wyoming, this assistance is available to transit providers for bus purchases and bus-related facilities including bus shelters and garages.

Intercity Bus Projects

FTA Sec. 5311(f)

Each state is required to allocate a minimum 15% of its annual FTA Sec. 5311 (rural transit) apportionment for development and support of intercity transportation.

Program Goals

New Freedoms funding assists in meeting transportation needs of persons with disabilities, aged, and other transportation-dependent who are beyond the normal reach of the Section 5310 and other federally funded programs.

New Freedoms
FTA Sec. 5317

Planning funds for Metropolitan and Statewide Rural areas to foster the development of coordinated community and regional transit planning.

Metropolitan & State Planning Programs
FTA Sec. 5303 & 5304

This program provides funding for grants and contracts for research, technical assistance, training and related support services for rural transit programs. Allocation of federal funds for RTAP occurs annually in conjunction with rural transit program funds. The majority of funds are contracted to Wyoming Public Transit Association (WYTRANS) to assist with statewide technical issues.

Rural Transit Assistance Program (RTAP)
FTA Sec. 5311(b)(3)

Provide a State funding source for public transit vehicle acquisitions. The trust fund is administered by the State Loan and Investment Board.

Transportation Enterprise Fund

Enhance the access of public transportation on and around Indian reservations in non-urbanized areas to health care, shopping, education, employment, public services, and recreation;
Assist in the maintenance, development, improvement and use of public transportation systems in rural and small urban areas;
Encourage and facilitate the most efficient use of all Federal funds used to provide passenger transportation in non-urbanized areas through the coordination of programs and services; and
Provide for the participation of private transportation providers in non-urbanized transportation to the maximum extent feasible.

Public Transportation on Indian Reservations
FTA Sec. 5311(c)

Improve access to employment and employment-related activities for low-income individuals and welfare recipients through transportation services.

JARC Job Access / Reverse Commute
FTA Sec. 5316

Source: Wyoming Public Transit Programs, Wyoming Department of Transportation, Office of Local Government Coordination

Multimodal System

Figure 4-21 shows intercity bus lines and local services within the state. Commercial airports and general aviation airports are also shown. The intercity lines generally run along major corridors in Wyoming and connect to Greyhounds national network. Local public fixed route service is available in Casper, Cheyenne, Jackson, Lander, Laramie, Rock Springs, and Shoshoni. In smaller towns, private non-profits usually serve the transit needs of the communities. With the recent spike in fuel costs and anticipated increases in fuel costs, Wyoming is experiencing a surge in demand for rural public transit service. The transit providers are experiencing increased operation costs.

BENEFITS & SERVICES

Wyoming Transit Programs FY2004

Figure 4-23

The only connection to the outside world and socialization for many of the riders.

1,905,707 one-way rides for over 66,000 different individuals, 21,652 of whom have no other transportation.

- 106,412 rides for nutrition
- 67,322 medical
- 504,704 educational
- 92,114 employment
- 79,690 social
- 170,961 personal

Rides for estimated 4,460 individuals to work who would not be able to get to the job otherwise.

Rides for 887 seniors who would have to move from independent living to a nursing home without transit. Between independent living and nursing home care, transit saves individuals tremendous expenses and saves the state a portion of the nursing home costs they pay for.

Over 165,000 rides for the division of family services clients; vocational rehabilitation clients; developmentally disabled agency clients; Headstart clients; public health clients; and other riders. Some paid for but many are not.

A recent study indicated that the transit systems in Wyoming provided dial-a-ride, door-to-door service at a cost per ride that was average for the Rocky Mountain study area.

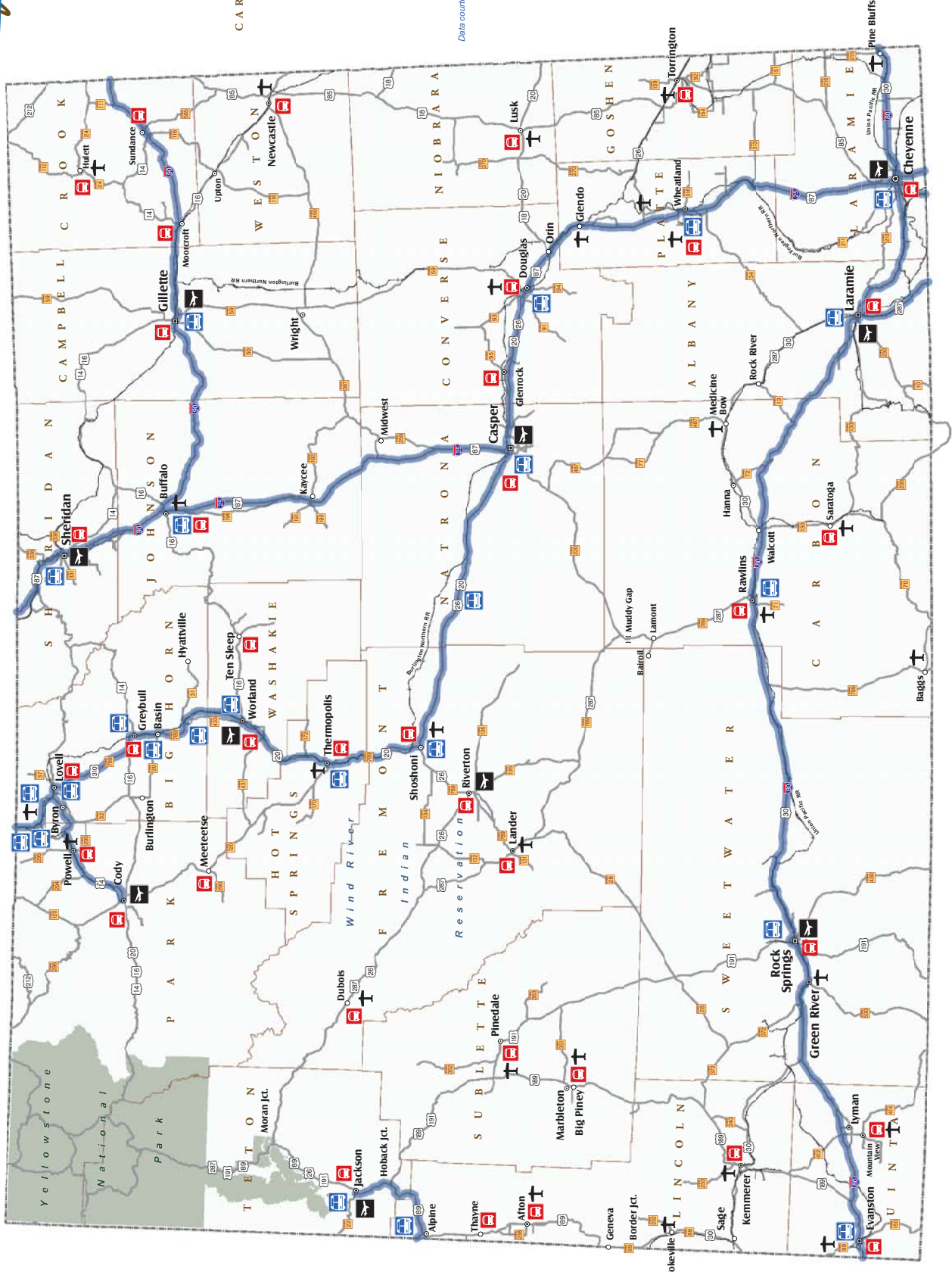
MULTIMODAL ROUTES AND SERVICE PROVIDERS

Figure 4-24



- LEGEND**
- Interstate Highways
 - State Highways
 - Class I Railroads
 - Counties
 - Greyhound Lines
 - U.S. Subsidies
 - U.S. Connecting Carriers
 - Greyhound Stations
 - Public Transit
 - General Aviation Airports
 - Commercial Airports

Data courtesy of: Wyoming Department of Transportation
 & The Wyoming Geographic Information Science Center



PUBLIC TRANSPORTATION PROVIDERS in Wyoming

Figure 4-25

Provider Agency Name	Location	Type of Service	Size of Fleet	Annual Passenger Trips FY08
Carbon County Senior Service	Baggs, Dixon, Elk Mountain, Hanna, Medicine, Rawlins	Non-Profit Demand Response	5 Vehicles	19,999
Southwest Sublette County Pioneers	Big Piney	Non-Profit - Demand Response	2 Vehicles	2,791
Black Hills Stage Line	Billings, MT to Denver, CO via routes connecting through Lovell, Shoshoni, Worland, Buffalo, and Greybull; and direct on I-90/I-25 through Cheyenne	Private; Fixed Route Intercity Bus	N/A	N/A
Buffalo Senior Citizens Center	Buffalo	Non-Profit - Demand Response	3 Vehicles	18,564
Casper Area Transportation Coalition	Casper Area	Public Fixed Route, Demand Response	19 Vehicle	173,874
City of Cheyenne Transit Program	Cheyenne	Fixed Route and Demand Response	27 Vehicles	289,623
City of Cody	Cody	Public; Seasonal Shuttle Service (June 1 - September 30)	1 Vehicle	2,569
Cody Council on Aging	Cody	Non-Profit - Demand Response	4 Vehicles	12,192
Palmers Outpost	Cody to Lovell	For-profit; Shuttle	1 Vehicle	N/A
Douglas Senior Citizens	Douglas	Non-Profit - Demand Response	6 Vehicles	38,287
High Country Senior Citizens Center	Dubois	Non-Profit - Demand Response	2 Vehicles	10,544
Uinta County Seniors	Evanston and Mountain View	Non-Profit Demand Response	8 Vehicles	45,531
Campbell County Senior Citizens Association	Gillette	Non-Profit - Demand Response	11 Vehicles	25,877
Glenrock Senior Citizens	Glenrock	Non-Profit - Demand Response	3 Vehicles	11,184
Sweetwater Transit Authority Resources (STAR), includes:	Green River and Rock Springs	Deviated Fixed Route and Demand Response	13 Vehicles	106,574
Young at Heart Seniors of Rock Springs	Rock Springs	Public Transit		
Saratoga Senior Center	Saratoga	Public Transit		
Sheridan Mini Bus	Sheridan	Non-Profit - Demand Response	12 Vehicles	58,028
South Big Horn Senior Citizens	Greybull, Lander	Non-Profit - Demand Response	4 Vehicles	13,037
Alltrans, Inc.	Jackson	Jackson Hole Airport Shuttle; Targhee Express; Jackson Hole Express; Idaho Falls		
Children's Learning Center	Jackson	Non-Profit - Demand Response	5 Vehicles	4,161
Senior Center of Jackson Hole	Jackson	Non-Profit - Demand Response	2 Vehicles	9,145
Southern Teton Area Rapid Transit (START)	Jackson	Public Transit; Fixed Route, Demand Response	29 Vehicles	855,108
Kemmerer Senior Citizens Association	Kemmerer	Non-Profit - Demand Response	3 Vehicles	10,731
Lander Senior Center	Lander	Non-Profit - Demand Response	5 Vehicles	30,163

Figure 4-25 continued

Provider Agency Name	Location	Type of Service	Size of Fleet	Annual Passenger Trips FY08
Wind River Transportation Authority	Lander	Public Organization; Fixed Route, Demand Response	15 Vehicles	69,148
Child Development Services of Fremont County	Lander, Riverton, Dubois	Non-Profit - Demand Response	22 Vehicles	29,149
Eppson Center for Seniors	Laramie	Deviated Fixed Route and Demand Response	9 Vehicles	34,620
University of Wyoming TransPark	Laramie	Fixed Route and Demand Response	19 Vehicles	453,733
North Big Horn Senior Citizens	Lovell	Non-Profit - Demand Response	4 Vehicles	12,698
Niobrara Senior Center	Lusk	Non-Profit - Demand Response	3 Vehicles	23,770
Meeteetse Recreation District	Meeteetse	Non-Profit - Demand Response	3 Vehicles	1,658
Crook County Senior Services	Moorcroft, Sundance, Hewlitt	Non-Profit - Demand Response	7 Vehicles	4,015
Western County Senior Services	Newcastle	Non-Profit - Demand Response	8 Vehicles	44,916
Rendezvous Pointe Senior Center	Pinedale	Seniors and Persons with Disabilities - Demand Response	4 Vehicles	9,850
The Learning Center	Pinedale, Big Piney and Jackson	Non-Profit - Demand Response	5 Vehicles	4,161
Powell Senior Center	Powell	Private; Fixed Route Intercity Bus	N/A	N/A
Jefferson Bus Lines	Rapid City, SD to Billings, MT through Buffalo	For Profit; Fixed Route Intercity Bus	N/A	N/A
Riverton Senior Center	Riverton	Non-Profit - Demand Response	6 Vehicles	21,523
RENEW	Sheridan, Gillette and Newcastle	Non-Profit - Demand Response	15 Vehicles	57,364
Shoshoni Senior Center	Shoshoni	Non-Profit - Demand Response	1 Vehicle	2,738
Wind River Transportation Authority	Shoshoni	Public Organization; Fixed Route, Demand Response	15 Vehicles	69,148
Ten Sleep Senior Center	Ten Sleep	Non-Profit - Demand Response	2 Vehicles	4,884
Thayne Senior Center	Thayne	Non-Profit - Demand Response	2 Vehicles	5,416
Hot Springs County Senior Citizens Center	Thermopolis	Non-Profit - Demand Response	3 Vehicles	15,385
NOWCAP Foster Grandparents Program	Thermopolis	Non-Profit - Demand Response	2 Vehicle	10,737
Diversified Services	Torrington	Non-Profit - Demand Response	13 Vehicles	35,832
Goshen County Senior Friendship Center	Torrington	Non-Profit - Demand Response	6 Vehicles	46,806
Washakie County Senior Citizens Center	Worland	Non-Profit - Demand Response	3 Vehicles	7,649
Services for Seniors	Wheatland	Non-Profit - Demand Response	6 Vehicles	173,874

Rail System

Per the State of Wyoming's constitution, Wyoming may not obligate any debt or aid in the construction of any rail system. However, because of the inevitable interactions between the public highway and railroad networks, WYDOT must continue to work with rail carriers to improve crossings and separations where needed and strive for sustainable working relationships between parties.

Major Carriers

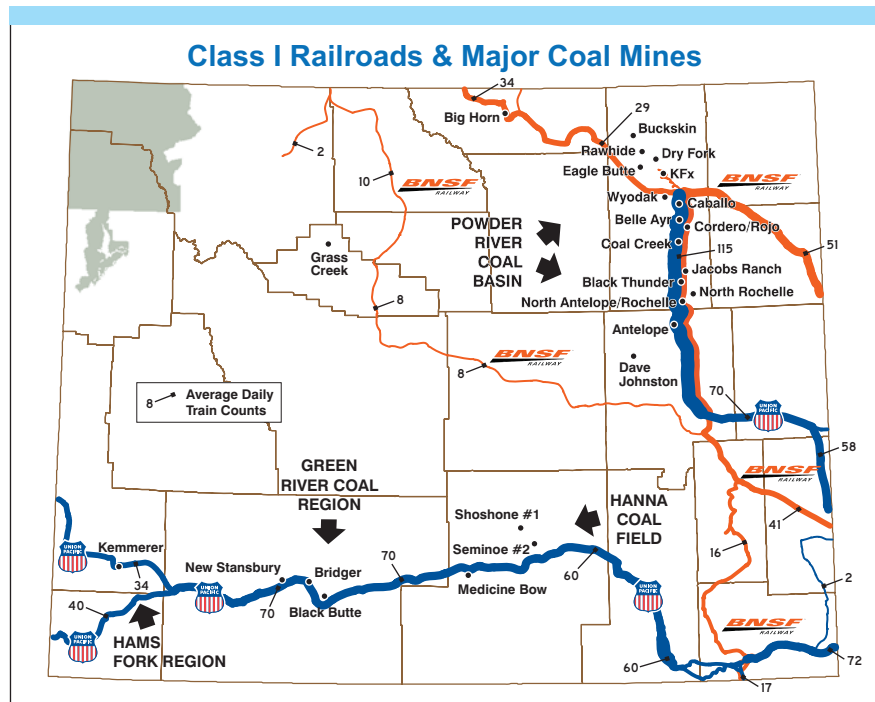
Two major railroads operate Class One lines in Wyoming. The Union Pacific (UP) Central Corridor operates primarily an east-west alignment along I-80, with 824 miles of track. The BNSF Railway Company (BNSF) operates primarily in the central and eastern parts of State, with 897 miles of track. The two railroads operate a joint line in the Powder River Basin between Gillette and Orin, with 103 miles of track.

Major Products

Coal is the largest component by far of all rail freight, constituting 95% of total tonnage. While the UP is the dominant east/west railroad, the BNSF is the main north/south line. Together, they haul more than 400 million tons of low-sulfur coal produced annually in Wyoming, the nation's number-one coal state. Roughly a quarter of this output comes from ten huge mines in the Powder River Basin, south of Gillette. The UP and BNSF jointly own the rail line out of the coalfields, parallel to WYO 59. The coal shipments terminate at major electric producers throughout Midwest, South, and Eastern states markets. Wyoming supplied 40 percent of the nation's coal production in 2008.

Other products shipped by rail in Wyoming include grain, intermodal containers, chemicals, metals and minerals, forest products, automobiles, and consumer goods.

Figure 4-26



Source: WYDOT and Wyoming Mining Association

Passenger Rail

No regularly scheduled passenger rail service has existed in Wyoming since the discontinuation of Amtrak’s Pioneer route in 1997. The Pioneer route was re-evaluated by Amtrak in 2009, but implementation costs appear cost prohibitive. A feasibility study for a commuter rail system between Fort Collins, Colorado and Casper, Wyoming was prematurely closed in the Fall of 2009. High preliminary cost-per-mile estimates, an inability to utilize existing rail alignments, and topographic challenges played a strong part in the decision to terminate the study.

Other Considerations

Train and vehicle traffic will remain steady, or increase in areas such as communities within the Powder River Basin. As such, railroad-related safety and quality of life issues such as crashes and near miss reports, train blockage, and train horn noise will remain in the forefront of railroad topics of discussion. WYDOT must continue to cooperate and remain proactive in the mitigation of such issues where practical and feasible.

KEY RAIL ISSUES

Figure 4-27

Coal will continue to play a major role in nationwide energy production for the foreseeable future.
Intermodal benefits of rail freight transportation include low energy consumption and reduced highway congestion.
At-grade crossings have major implications for communities, both from a safety viewpoint and community dissection. Although few collisions occur on mainlines, near miss reports show that close calls between vehicles and trains are steadily increasing.
WYDOT funds about 5 new circuitry and 7 new surfacing improvements annually. WYDOT also funds other applicable safety improvements such as site distance mitigation, and statewide signage and LED projects.
Noise in populated areas also leads to public concerns. Railroad quiet zones are slowly being implemented by local governments in cooperation with WYDOT.
Hazardous materials are often hauled by rail and must be safely managed.
Homeland Security as it relates to the safety of rail systems and its importance to the nation’s economy must be acknowledged and planned.
Preservation of historic sites on the historic infrastructure is of major interest to Wyoming communities.
Corridor preservation, especially with respect to highway right-of-way and longitudinal easements for slope and drainage from adjacent highways is of concern to the railroads and to WYDOT.

Source: State of Wyoming Rail Plan, WYDOT, 2004; BNSF Near Miss Reports, 2005 - 2010

Wyoming Aeronautics Commission Mission

To Enhance the Economic Well-Being and Quality of Life in Wyoming by Working with Public and Private Partners to Produce a Safe and Efficient Aviation System.

Aviation

The Wyoming State Legislature passed the Air Service Enhancement Program (ASEP) into law in 2004. Under this program, the Wyoming Aeronautics Commission is granted \$1.5 million annually to support air service initiatives. These initiatives require a community match and include such things as facility enhancements, incentives directly to the airlines, marketing funds used to advertise air services, or to attract new air carriers to the state. Since the bill's inception, six Wyoming communities have participated in the air service enhancement program. The 10 commercial airports in Wyoming have experienced a 32 percent increase in ridership since 2004, the program's inception.

Air Service in Wyoming

Wyoming airports make 719 commercial flights to and from the state each week with 32,000 available passenger seats. Destinations include Denver, Salt Lake City, Las Vegas, Minneapolis and other destinations. In 2008, just over one million passengers used one of ten Wyoming commercially served airports, a 5.8 percent increase from 2007. Since 2002, air traffic for the state is up 52 percent.

Figure 4-28

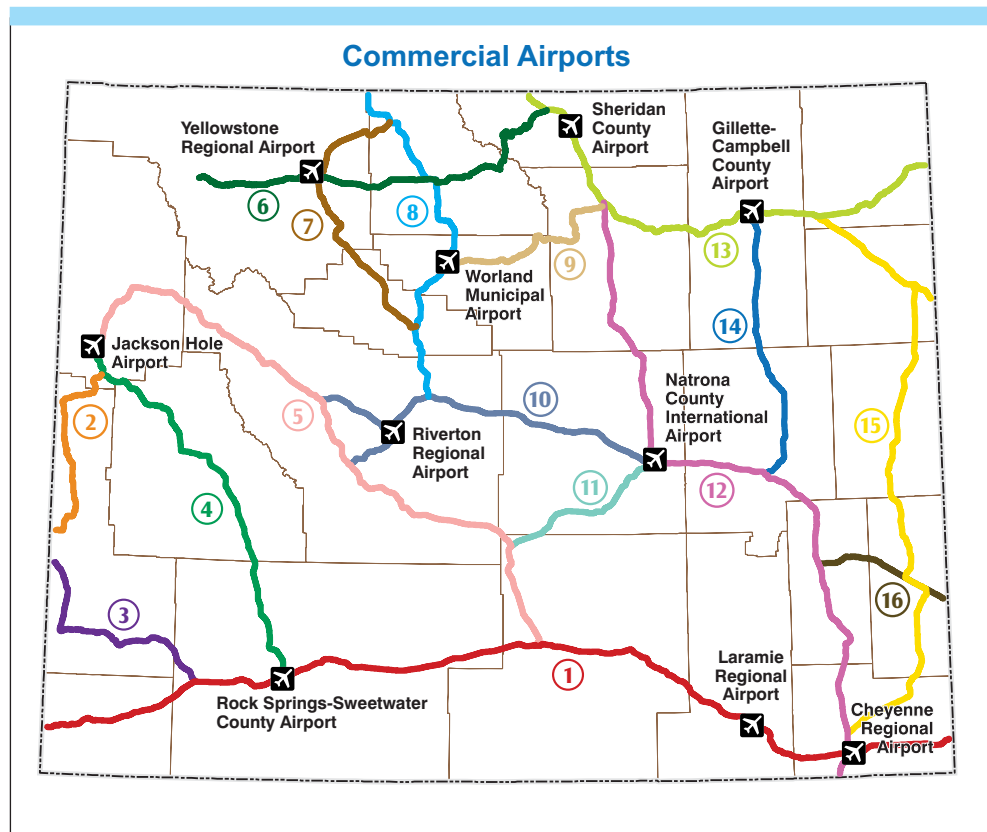


Figure 4-29

Benefits of Aviation

Air service brings many positive benefits to Wyoming. The state’s expansive geography requires the quick and efficient transportation of passengers and goods from across the state with direct links into the national transportation network. In addition to the transportation of passengers and cargo services, aviation in Wyoming directly or indirectly adds 14,460 jobs within the state on an annual basis and a \$1.4 billion impact, according to the Wyoming Aeronautics Division 2009 Economic Impact Study.

“Air transportation benefits Wyoming in many ways. Air transportation is essential for business attraction and retention. Airports play a key role in economic development for many communities. In today’s time-sensitive environment, air transportation improves overall business efficiency by enabling businesses to improve customer service and the delivery of their products to market. Airports in Wyoming are the gateway to the nation’s air transportation system and the world’s economy.”

“Air transportation is not only important to businesses in Wyoming, it also helps to support tourism, emergency medical services, the military, and public safety. Airports enable doctors to reach smaller towns in Wyoming, and they facilitate the transfer of patients to larger medical centers. Airports increase accessibility to better health care throughout the state. Airports help to support services which are vital to all citizens in Wyoming. Even if they never use an airport directly, citizens benefit from an improved quality of life that air transportation helps to support. Through simple things such as package delivery and the ability to visit family and friends, aviation in Wyoming helps promote safer, healthier, and more productive lives.”

QUALITATIVE BENEFITS of Aviation

Emergency medical transport
Police support
Search-and-rescue operations
U.S. military and other government organizations
Prisoner transport
Forest and rangeland firefighting efforts
Statewide agricultural activities
Entertainment opportunities (e.g., museums, air shows)
School field trips and other educational events
Staging area for community events

Wyoming Airport Classification System

Using the existing classification system, the Wyoming Aviation System had largely been defined using criteria outlined in the National Plan of Integrated Airports Systems (NPIAS). The NPIAS is used by the Federal Aviation Administration (FAA) to monitor the development needs of the nationwide network. It contains approximately 3,421 of the 5,200 public-use airports in the country and has a five year development plan exceeding \$41 billion. The NPIAS includes both existing and proposed (new) airports deemed significant to the nation's airport system. Inclusion in the NPIAS is a requirement to receive Federal grants for airport improvement projects.

Source: Air Service Handbook, Wyoming Department of Transportation, Aeronautics Division, January 2009.

The Aeronautics Commission developed a new airport classification system to more accurately represent the current and future roles of each airport in the Wyoming Aviation System.

The new classification system:

- Aligns airports with similar physical facility and service attributes.
- Assigns roles for each airport classification based on services they provide.
- Defines the types of facilities and services needed at each functional group of airport to meet the existing and future needs of the State of Wyoming.
- Establishes facility and service objectives by classification of airport to meet the system Vision and Goals established for this Study.

Figure 4-30

COMMERCIAL SERVICE AIRPORTS and Passengers (2008)

Airport Name (Associated City)	Total Airport Operations	Passengers (On/Off)	Based Aircraft
Jackson Hole Airport (Jackson Hole)	30,605	603,967	47
Natrona County International Airport (Casper)	61,297	146,813	85
Campbell County Airport (Gillette)	19,105	55,167	53
Yellowstone Regional Airport (Cody)	38,285	51,841	57
Rock Springs-Sweetwater County (Rock Springs)	17,017	49,572	49
Sheridan County Airport (Sheridan)	37,230	35,557	88
Riverton Regional Airport (Riverton)	8,423	34,046	34
Cheyenne Regional-Jerry Olsen Field (Cheyenne)	58,953	29,945	77
Laramie Regional Airport (Laramie)	10,090	19,165	39
Worland Municipal Airport (Worland)	4,180	6,091	13

Figure 4-31

GENERAL AVIATION AIRPORTS No Commercial Passenger Service (2008)

Airport Name (Associated City)	Total Airport Operations	Based Aircraft
Afton Municipal Airport (Afton)	12,200	40
Big Piney-Marbleton (Big Piney)	3,500	7
Johnson County Airport (Buffalo)	7,320	20
North Big Horn County Airport (Cowley)	4,175	10
Dixon Airport (Dixon)	2,600	9
Converse County Airport (Douglas)	5,585	37
Dubois Municipal Airport (Dubois)	5,000	11
Evanston Uinta County Burns Field (Evanston)	6,080	18
Fort Bridger Airport (Fort Bridger)	3,500	10
South (Big Horn County Airport (Greybull)	4,175	27
Kemmerer Municipal Airport (Kemmerer)	3,400	7
Hulett Municipal (Hulett)	1,400	5
Hunt Field (Lander)	11,180	55
Lusk Municipal Airport (Lusk)	7,030	2
Mondell Field (Newcastle)	11,180	11
Pine Bluffs Municipal Airport (Pine Bluffs)	8,000	9
Ralph Wenz Field (Pinedale)	9,516	17
Powell Municipal Airport (Powell)	3,130	17
Rawlins Municipal/Harvey Field (Rawlins)	12,000	22
Shively Field (Saratoga)	8,965	27
Hot Springs County-Thermopolis Airport (Thermopolis)	2,580	8
Torrington Municipal Airport (Torrington)	4,431	27
Phifer Airfield (Wheatland)	3,820	14
Cokeville Municipal Airport (Cokeville)	1,250	2
Thomas Memorial Airport (Glendo) (non-paved)	450	0
Camp Guernsey Army Airfield (Camp Guernsey)	3,900	6
Medicine Bow Airport (Medicine Bow) (non-paved)	40	0
Shoshoni Municipal Airport (Shoshoni) (non-paved)	75	3
Upton Municipal Airport (Upton) (non-paved)	60	1

ITS PROGRAM BENEFITS

Enhanced traveler information (especially during winter driving months).

Expanded safety warning systems.

Improved efficiency of commercial vehicle administration and safety.

Enhanced efficiency of maintenance operations.

Advanced traffic signal systems and traffic management.

Better data collection/management and system integration.

ITS IMPLEMENTATION

More advanced traffic signal control systems

Road weather information systems.

Avalanche monitoring systems.

Vehicle/animal conflict detection systems.

Dynamic Message Signs – (both permanent and portable units).

Highway Advisory Radio

Wyoming Road and Travel System.

Web cameras monitoring highway locations.

Weigh-in-motion and PrePass at ports-of-entry.

Intelligent Transportation Systems (ITS)

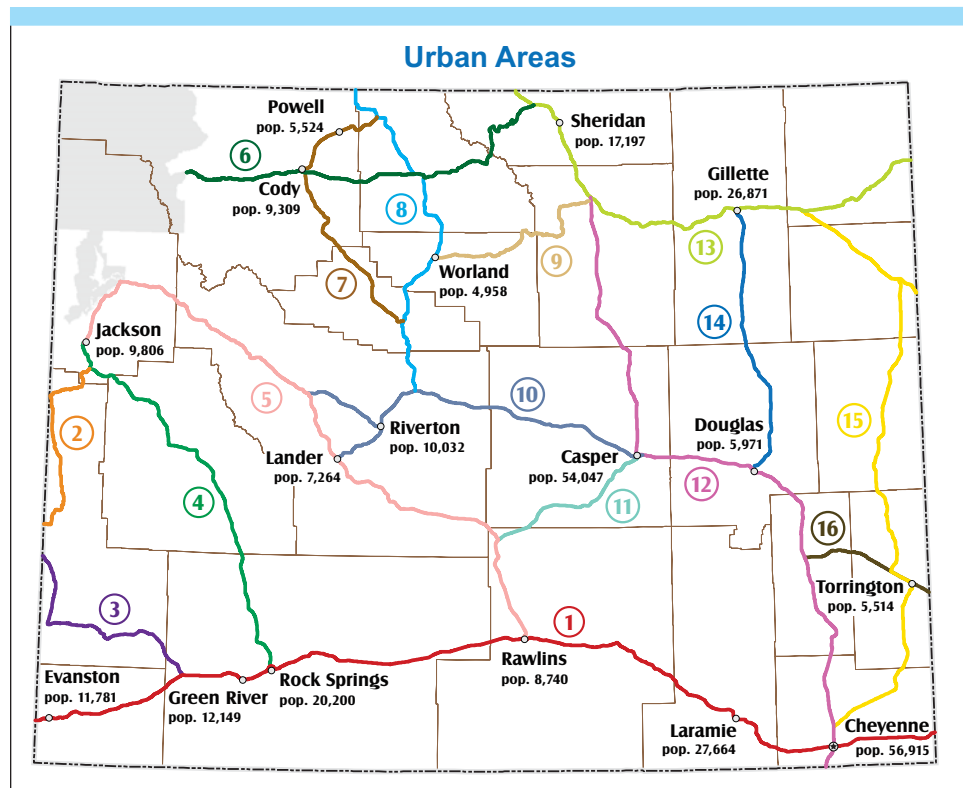
ITS refers to efforts to add information and communications technology to transport infrastructure and vehicles in an effort to manage factors such as vehicles, loads, and routes to improve safety and reduce vehicle wear, transportation times, and fuel consumption.

ITS provides a set of tools for WYDOT to address problems evolving with changing transportation trends. Used in conjunction with traditional transportation management strategies, its an important element in the overall approach toward optimizing the cost effectiveness of the program. In Wyoming, ITS tools provide important to information to travelers about weather and road conditions.

Urban Areas

Urban Areas, those cities with a population over 5,000, comprise a distinct set of transportation issues. The WYDOT Urban System Program makes funds available to the 16 largest cities for transportation improvements. These cities are important nodes, providing the connecting points for many of the State's rural highways. Several are intersected by more than one SSC. The urban transportation systems include not only state highways within the city limits, but also off-system arterial and collector roadways. The interface between urban transportation planning and WYDOT's traditional role as manager of the rural highways offers some of the most exciting and challenging planning opportunities for the future.

Figure 4-32



Populations Source: US Bureau of the Census 2009

5 THE PEOPLE: POPULATION AND EMPLOYMENT

Wyoming’s projected average annual growth rate is about 0.8 percent over the long-term. Wyoming has the smallest resident population of all 50 states and its density of 5.6 persons per square mile is the second lowest, just ahead of Alaska.

Figure 5-1

POPULATION Wyoming and Counties (2000 - 2030)

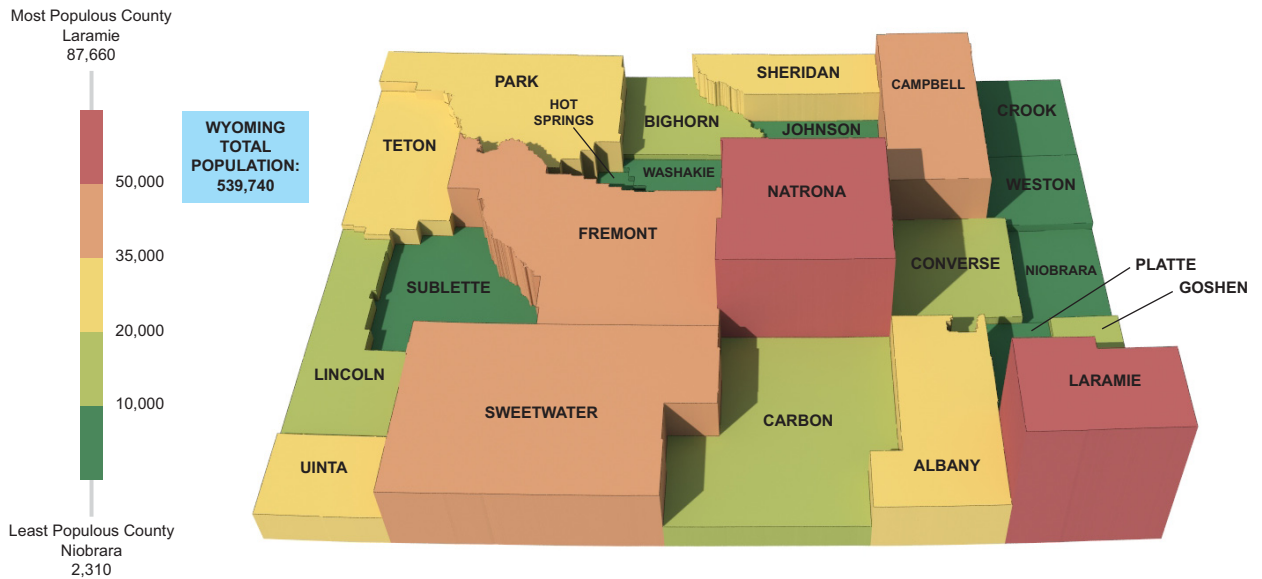
	2000 Census	2010 Forecast	2030 Forecast	Average Annual % Growth	Total % Growth
WYOMING	493,782	539,740	621,160	0.8%	25.8
Albany	32,014	32,250	32,870	0.1%	2.7
Big Horn	11,461	11,340	11,650	0.1%	1.6
Campbell	33,698	43,440	59,990	1.9%	78.0
Carbon	15,639	16,160	17,120	0.3%	9.5
Converse	12,052	13,240	14,930	0.7%	23.9
Crook	5,887	6,550	7,630	0.9%	29.6
Fremont	35,804	38,390	42,370	0.6%	18.3
Goshen	12,538	12,050	11,800	-0.2%	-5.9
Hot Springs	4,882	4,580	4,420	-0.3%	-9.5
Johnson	7,075	8,640	11,220	1.5%	58.6
Laramie	81,607	87,660	98,000	0.6%	20.1
Lincoln	14,573	17,240	22,430	1.4%	53.9
Natrona	66,533	74,050	85,540	0.8%	28.6
Niobrara	2,407	2,310	2,340	-0.1%	-2.8
Park	25,786	27,550	29,860	0.5%	15.8
Platte	8,807	8,290	7,960	-0.3%	-9.6
Sheridan	26,560	28,910	33,560	0.8%	26.4
Sublette	5,920	9,170	16,930	3.6%	186.0
Sweetwater	37,613	41,700	48,130	0.8%	28.0
Teton	18,251	20,570	24,990	1.1%	36.9
Uinta	19,742	20,730	22,440	0.4%	13.7
Washakie	8,289	7,900	7,690	-0.2%	-7.2
Weston	6,644	7,020	7,290	0.3%	9.7
Wind River Res.	23,250	24,929	27,514	0.6%	18.3

Source: Wyoming Department of Administration and Information, Economic Analysis Division, July 2008

POPULATION ESTIMATE by County (2010)

Figure 5-2

The most populous county is Laramie followed by Natrona, Sweetwater, Fremont, and Campbell Counties.

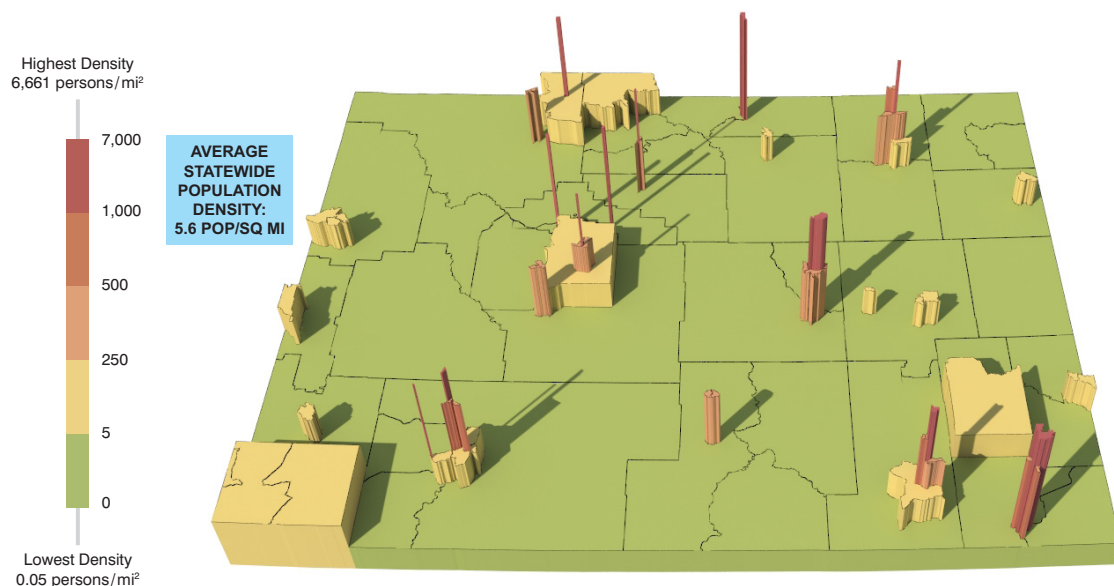


Source: Wyoming Department of Administration and Information, Economic Analysis Division, July 2008

POPULATION DENSITY by Census Tract (2010)

Figure 5-3

Population density is the measure of the number of people per unit area, commonly represented as people per square mile. Wyoming's population resides primarily in urban areas. The capital and the most populous city is Cheyenne, followed by Laramie and Casper.



Source: U.S. Bureau of the Census 2000 and Wyoming Department of Administration and Information, Economic Analysis Division, July 2008

Figure 5-4

AVERAGE ANNUAL PERCENT GROWTH by County (2000-2030)

Projected 2000-2030 data shows Sublette County in western Wyoming with the highest growth rate of all counties in Wyoming. Sublette County has three incorporated towns: Big Piney, Marbleton, and Pinedale. Recent growth has largely been associated with the gas and oil industry. Hot Springs and Platte Counties have the lowest percentage growth rate during this time period.

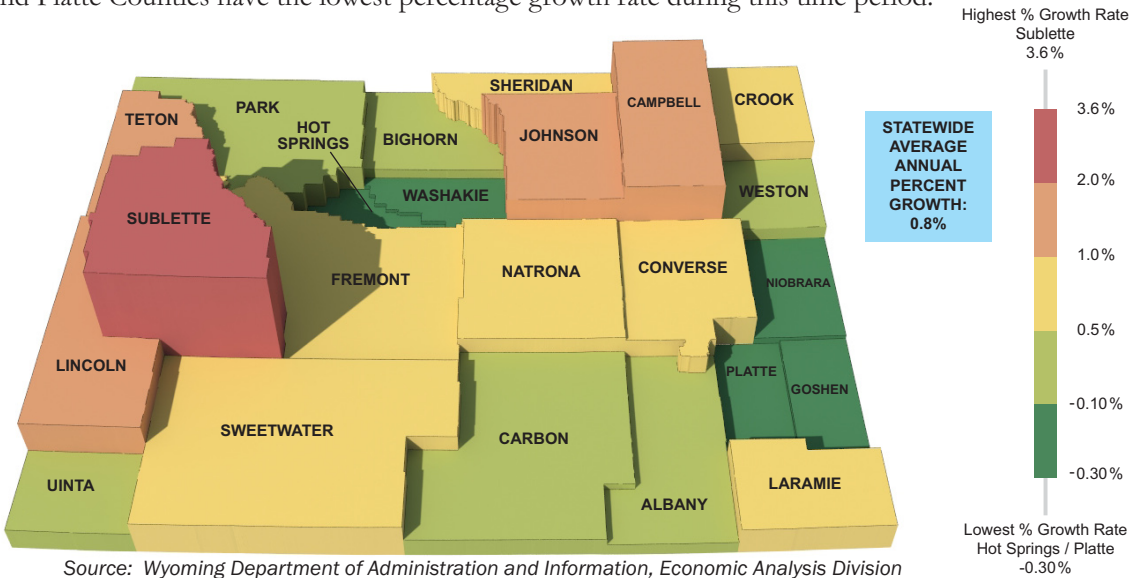
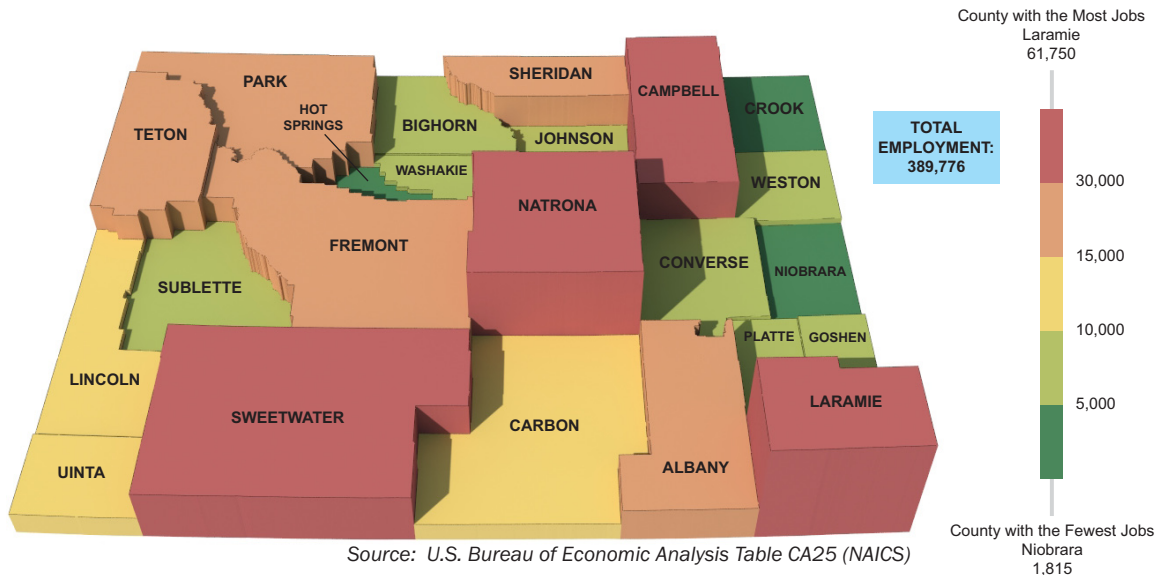


Figure 5-5

EMPLOYMENT by County (2007)

Natrona County has the highest total number of jobs, led by the Health sector. Sweetwater and Campbell Counties follow closely and are fueled by the energy industry. Laramie County, home to the City of Cheyenne, is also one of the State's largest employment centers, led by the Education, Health, and Public Administration sectors.



Population and Employment Trends Affecting Transportation

Labor Market

Compared to the rest of the nation, Wyoming has the youngest average age for population 25 years ago, but is projected to have the oldest average age in the future. Several factors contribute to the state's rapidly aging population. First, Wyoming has a high proportion of the early baby boom population. During the oil boom in the late 1970s and early 1980s, tens of thousands of young workers migrated into the state. Though some moved out when the bust happened in the mid 1980s, many stayed. Their ages are now between 50 and 60 years old. At the same time, the percent of the population age 27 to 43 (so called Generation X) in Wyoming is very low because a significant number left the state in late 1980s and 1990s to seek employment when they were young adults.

Due to the aging population, the tight labor market is expected to continue for years. Wyoming's workforce shortage is one of the most crucial issues facing businesses. Due to the state's low population, consistently low unemployment rate, and continuing economic growth, Wyoming's industries are struggling to hire and retain the skilled workforce they need to prosper. Workers finding high paying energy jobs leaves fewer people available to fill positions in other industries.

Wyoming is the least diversified state in the nation in terms of employment distribution across industries. Over the long term, Wyoming's very low industrial diversity and/or high dependence on the energy sector may limit overall economic growth.

Affects of Aging on Transportation

The age distribution of the Wyoming population has an important impact on transportation demand. Since 1990, the number of people in Wyoming over the age of 65 has increased from 47,000 to 66,000, a change from 10.4% to 12.3% of the total population. This upward trend is expected to continue, increasing the level of demand for public transportation services. The number of elderly who no longer drive will particularly impact

the demand for transit services and non-motorized facilities. The elderly will require access to health care services and facilities, shopping, cultural activities and social services. The aging population also affects how WYDOT plans for highway improvements and its safety programs, especially in signage, other roadway markings, and enforcement.

The Mining Industry

The mining industry consisted of 7.1 percent of total employment in 2005 for Wyoming, the highest in the nation, compared to 0.5 percent nationally. Other industries contribute to the undiversified nature of the state's economic structure. The proportion of manufacturing jobs in the state is only 3.1 percent (second lowest in the U.S.) and mostly concentrate on wood products, petroleum refineries, and chemical manufacturing. The percentage employed in professional business services and education and health services also rank as one of the lowest, while construction, leisure and hospitality, and government sectors were among the highest in the nation.

Low sulfur Wyoming coal is used to produce 25 percent of the nation's electricity. Long-term growth in the state's coal production will probably depend on converting raw coal to environmentally clean, alternative fuel forms for electrical generation, transportation, and industrial usage.

Economic Outlook

Travel and tourism for Wyoming are expected to continue moderate growth. However, jobs created in the tourism industry are mostly seasonal, and typically low-paying, offering little in the way of long-term growth for the state.

Wyoming's long-term economic outlook will see stronger than average growth, which will continue to be supported by increased natural gas production and mining.

6 THE ENVIRONMENT: OUR VALUABLE RESOURCES



©WYDOT/Rick Carpenter

The variety of landscape in Wyoming includes mountains and rivers such as in the Snowy Range.

Wyoming is a vast landscape filled with jagged peaks, wild rivers, and wide-open landscapes. This land is home to one of the richest assemblages of species in North America including some of the greatest herds of bighorn sheep, pronghorn antelope, elk, and mule deer. Wyoming is a landscape rich in human heritage and mineral resources.

The abundance of natural resources in Wyoming provides a spectrum of opportunities. The use of these natural resources provides Wyoming important economic opportunities, but the potential for depleting these resources poses a threat to the balance of the ecosystem. With this appreciation, the ability to maintain or enhance the quality of the environment should be considered with every opportunity.

The State Significant Corridors provide the central infrastructure to these highly active areas. The corridors link tourists to places of beauty and help transport energy resources across the state. Coordination with other federal, state, and local agencies provides WYDOT an opportunity to communicate on important environmental topics, like big game migration patterns and air quality, which are directly influenced by the state highway system and its interface with public lands.

WYDOT understands the importance of transportation infrastructure improvements to economic growth but is careful to consider environmental impacts during project planning, design, construction, and maintenance. WYDOT strives to make infrastructure projects more sensitive to wildlife and ecosystems through greater integrated planning, partnerships, and cooperative conservation.

Figure 6-1

NATIONAL FORESTS in Wyoming

Ashley National Forest
Bighorn National Forest <ul style="list-style-type: none"> • Cloud Peak Wilderness
Black Hills National Forest
Bridger-Teton National Forest <ul style="list-style-type: none"> • Bridger Wilderness • Teton Wilderness • Gros Ventre Wilderness
Caribou-Targhee National Forest <ul style="list-style-type: none"> • Winegar Hole Wilderness • Jedediah Smith Wilderness
Medicine Bow-Routt National Forest <ul style="list-style-type: none"> • Encampment River Wilderness • Huston Park Wilderness • Platte River Wilderness • Savage Run Wilderness
Shoshone National Forest <ul style="list-style-type: none"> • Absaroka-Beartooth Wilderness • Fitzpatrick Wilderness • North Absaroka Wilderness • Popo Agie Wilderness • Washakie Wilderness
Thunder Basin National Grassland
Wasatch-Cache National Forest

Public Lands

The SSC system provides the primary connections to national parks, forests, and recreation areas throughout the state. Visitors from around the world travel to Wyoming for breathtaking views and pristine landscape. Preserving these resources is key to securing the longevity of these areas which can deteriorate quickly through the construction of infrastructure and over-exploitation of resources. Figure 6-2 displays the public lands within Wyoming and below is a description of these areas.

United States Forest Service (USFS)

National Forest lands within Wyoming total nearly 8.8 million acres of Wyoming's approximately 330 million acres, or about 2.5 percent. These lands comprise 25 percent of the total public lands within Wyoming. The Bridger Teton National Forest is the largest area with approximately 3.4 million acres, followed by the Shoshone National Forest with approximately 2.4 million acres. Within Wyoming, the USFS also administers the Thunder Basin National Grassland which comprises 572,518 acres of public land.

There are 15 designated roadless Wilderness Areas and one Wilderness Study Area in Wyoming. Wilderness areas provide areas for dispersed, primitive recreation experiences including hiking, horseback riding, hunting, backpacking and skiing. Wilderness areas are a destination for Wyoming residents as well as out of state visitors.

The Washakie Wilderness Area is the largest Wyoming wilderness with 704,274 acres. Teton and Bridger Wilderness Areas are second and third largest, respectively, and consist of 585,238 and 428,169 acres. The USFS managed lands and wilderness areas are listed by administrative unit.

WYDOT currently has two liaisons with the USFS: one liaison is assigned to a statewide level and the other at a project level. This program was created in 2002 to improve coordination for highway projects on USFS lands.

The statewide liaison coordinates WYDOT work with eight national forests in Wyoming. The frequency of projects in some areas is quite low and it has been advantageous to have a liaison familiar with all eight forests.

PUBLIC LANDS

Figure 6-2

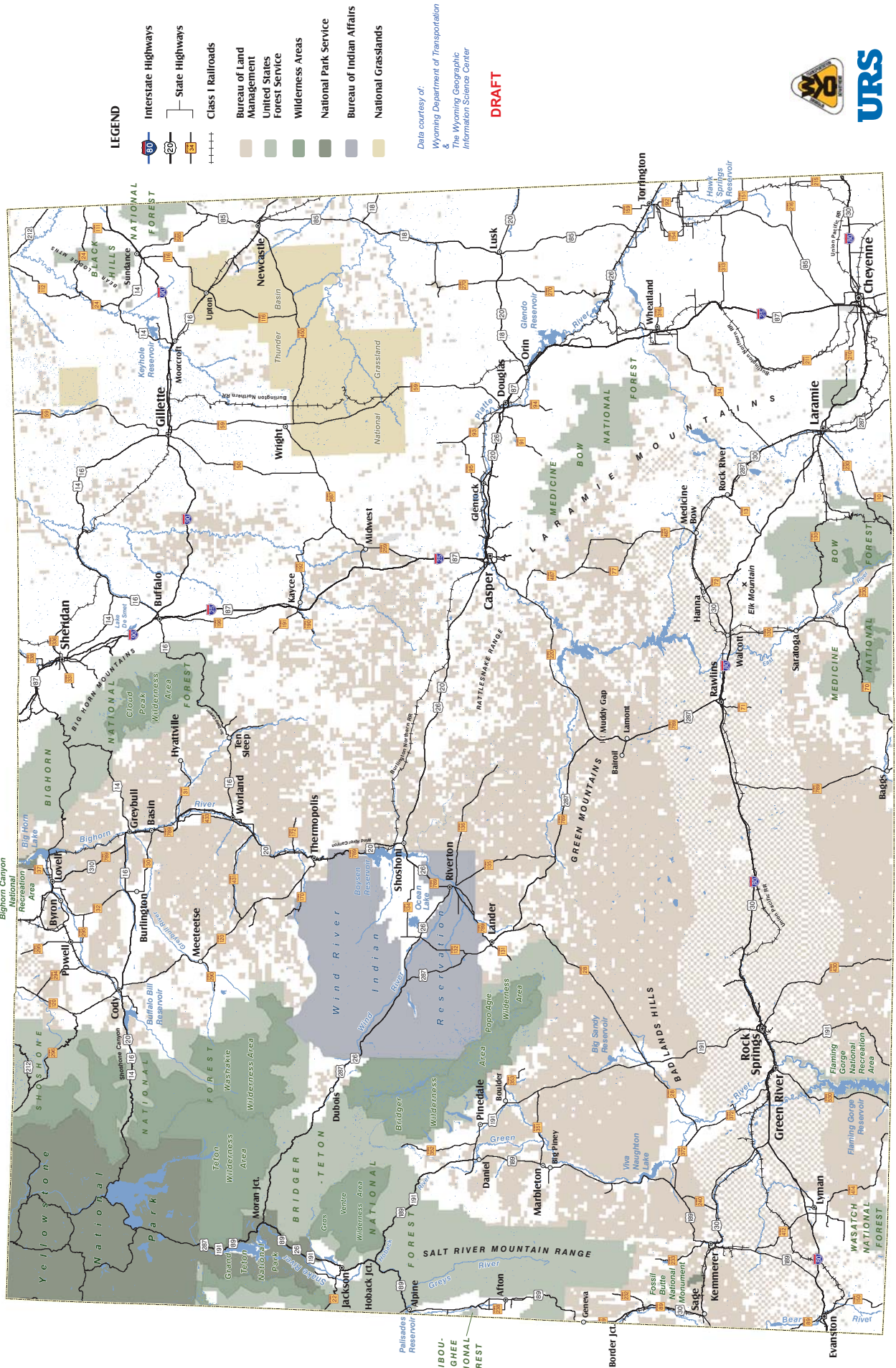


Figure 6-3

Forest Name	Related SSC	Highway	US Forest Service Interest							
		Source: United States Forest Service	Scenic Byway	Cultural, Paleontological & Historic Resources	Visual Resources	Recreational Management (ingress/egress, signing, public safety -- bicycle use, heavy use area, winter use, wildlife viewing)	Travel Management (OHV/ ORV, Roadless areas)	Wildlife Connectivity, Habitat Fragmentation, Wetlands, Fens	Wild & Scenic Eligible River	T&E Species
Ashley National Forest	1	WYO 530 (Green River - Manila; Flaming Gorge - Green River Basin Scenic Byway)	•		•	•	•	•		
Bighorn National Forest	6	US 14/14A (Greybull/Lovell - Dayton; Big Horn Scenic Byway, Medicine Wheel Scenic Byway)	•	•	•	•	•	•		
	9	US 16 (Tensleep - Buffalo; Cloud Peak Scenic Byway)	•		•	•	•	•		
Black Hills National Forest	13	WYO 24 (Alva - Aladdin)			•	•	•	•		
		US 14 (Sundance - Devils Tower Jct.)			•	•	•	•		
Bridger-Teton National Forest	2	US 89 (Afton - Geneva)			•	•	•	•		
	4	US 189/191 (Hoback Jct. - Daniel Jct.)			•	•	•	•	•	
		US 89/191 (Hoback Jct. - Jackson)			•	•	•	•	•	
	4/5	US 26/287 (Dubois - Moran Jct.; Centennial Scenic Byway; Transcontinental Bicycle Route)	•		•	•	•	•		•
	5	US 26/89 (Snake River Canyon; Alpine - Hoback Jct.)			•	•	•	•	•	
WYO 390 (Jct. WY 22 - Teton Village)				•	•	•	•	•		
Caribou-Targhee National Forest	5	WYO 22 (Teton Pass)			•	•	•	•		
Medicine Bow-Routt National Forest	1	I-80 (Laramie - Cheyenne)			•	•	•	•		
		WYO 130 (Centennial - Saratoga; Snowy Range Scenic Byway; State-designated bicycle route)	•		•	•	•	•		
		WYO 230 (Laramie - Mountain home)			•	•	•	•		
	2	WYO 71 / Sage Creek Road (Rawlins - Battle Highway)			•	•	•	•		
Shosone National Forest	4/5	US 26/287 (Dubois - Moran Jct.; Centennial Scenic Byway; Transcontinental Bicycle Route)	•		•	•	•	•		•
		WYO 28 (Lander - Farson; South Pass)		•	•	•	•	•		
	6	US 14/16/20 (Cody - Yellowstone; Buffalo Bill Scenic Byway)	•		•	•	•	•		•
		WYO 296 (Cody - Cooke City; Chief Joseph Scenic Byway)	•	•	•	•	•	•		•
		US 212 (Red Lodge - Cooke city; Beartooth All-American Road & Scenic Byway)	•	•	•	•	•	•		•
Thunder Basin National Grassland	14	WYO 59 (Bill - Reno Jct.)		•	•	•	•	•		
	14/15	WYO 450 (Reno Jct. - Newcastle)		•	•	•	•	•		
		WYO 116 (Crook County Line - Hwy 450)		•	•	•	•	•		
	15	US 16 (Newcastle - Moorcraft)	•	•	•	•	•	•		

The USFS is dedicated to collaborating with WYDOT in the planning, development, and implementation of future transportation projects. Appropriate consideration of the environment and integration of forest management objectives during project development are goals for the Forest Service. Figure 6-3 identifies USFS interests for highways passing through or close to Forest Service land.

National Parks Service (NPS)

The NPS administers Wyoming’s most popular and renowned outdoor recreational resources. It is responsible for seven different sites that total approximately 2.4 million acres, or about 8 percent of the state. Yellowstone is the largest site administered by NPS consisting of 2.2 million acres. Grand Teton National Park is the second largest, consisting of approximately 300,000 acres.

Bureau of Land Management (BLM)

In Wyoming, the BLM administers approximately 17.5 million acres of land, almost one-third of the state. Not all of this land is used for recreation activities. Other activities include livestock grazing, mineral, oil, and gas extraction. The dominant land use activity is based on a combination of factors including resource values, public demand, accessibility, and economic considerations.

In addition to providing almost unlimited opportunities for dispersed outdoor recreation, the BLM administers a number of improved recreation sites where fees are collected, as well as a non-fee trail system.

The National Trails System Act of 1968 established a national system of trails including national recreation trails, national scenic trails, national historic trails, and connecting or side trails. The National Park Service and Bureau of Land Management have developed management plans and provide administration for the trails. National Trails pass through the state as listed in Figure 6-5.

Figure 6-4

**NATIONAL PARKS
in Wyoming**

Yellowstone National Park
Grand Teton National Park
Devils Tower National Monument
Fossil Butte National Monument
Bighorn Canyon National Recreation Area
Fort Laramie National Historic Site
John D. Rockefeller Memorial Parkway

Figure 6-5

**NATIONAL TRAILS
in Wyoming**

California National Historic Trail
Continental Divide National Scenic Trail
Mormon Pioneer National Historic Trail
Oregon National Historic Trail
Pony Express National Historic Trail
Texas Trail

Figure 6-6

AREAS MANAGED by the USFWS

Bamforth National Wildlife Refuge
Cokeville Meadows National Wildlife Refuge
Hutton Lake National Wildlife Refuge
National Elk Refuge - Jackson
National Fish Hatchery - Jackson
National Fish Hatchery - Saratoga
Pathfinder National Wildlife Refuge
Seedskafee National Wildlife Refuge

United States Fish and Wildlife Service (USFWS)

The USFWS manages federal lands specifically for wildlife including elk, waterfowl and even toads. The refuges provide opportunities to hunt, fish, view wildlife, and hike. There are five National Wildlife Refuge Areas and two National Fish Hatcheries which comprise a total of approximately 81,293 acres in Wyoming. The largest refuges are Pathfinder with 16,807 acres and Seedskafee with 26,400. Areas managed by the USFWS include those listed to the left.

Cultural Resources

The Division of State Parks, Historic Sites, and Trails (SPHST) has legislative authority to manage recreation and historic sites and provide assistance to communities to develop recreation opportunities in Wyoming. Currently 51,326 acres of land and 69,375 surface acres of water for public recreation purposes are managed by SPHST. Amenities on SPHST managed properties include over 1400 campsites, group picnic areas, nearly 200 picnic sites and shelters, over 30 playgrounds and over 30 boat ramps. The SPHST system includes eleven state parks, one state recreation area, over twenty historic sites and two state archaeological/petroglyph sites

Bureau of Reclamation (BOR)

The primary responsibility of the BOR in Wyoming is to develop and maintain structures that provide flood control, hydropower, and irrigation. As a secondary function, BOR also helps to plan and develop recreation facilities at their reclamation sites. The administration of these recreation sites, however, is generally assigned to other agencies which assume responsibility for day-to-day operation. The NPS, the SPHST, local governmental units, and in some cases the USFS, all have agreements to manage BOR recreation areas. In total, the BOR administers and/or leases approximately 954,680 acres in Wyoming.

This group of Wyoming agencies also emphasize the importance of a diverse economy to Wyoming's well-being, and stresses the need to balance the demands of a growing population and increased energy production with protection of the state's land, air, and water resources

Mining

Wyoming produces 13.2 percent of all U.S. energy, providing more coal and uranium than any other state. Wyoming is the second leading producer of natural gas among the 50 states and the seventh largest producer of oil. The state is also a major provider of wind energy. There are currently at least 30 proposals for wind energy development in Wyoming, and most are in Converse, Carbon, and Uinta Counties. One of the most significant of these is the Chokecherry-Sierra Madre proposal near Rawlins, just south of I-80 (SSC 1), which would be constructed largely on BLM lands. As many as 1,000 wind turbines are proposed for construction. Additional associated considerations include pipelines for natural gas and transmission lines for electricity.

Compliance with the National Environmental Policy Act

Environmental protection is a priority for WYDOT through all phases of project planning, design, construction, and maintenance. For highway projects undertaken by WYDOT, environmental resources are carefully considered before construction begins. Those projects with a federal nexus must comply with the National Environmental Policy Act (NEPA). A NEPA document (Environmental Impact Statement, Environmental Assessment, or Categorical Exclusion) is completed to address environmental laws, mandates, and public concerns. Figure 6-7 illustrates how WYDOT projects flow through the NEPA process. A description of environmental resources considered during the NEPA process are described below.

Cultural Resources

To ensure compliance with the National Historic Preservation Act and Archeological Resources Protection Act, WYDOT surveys for cultural resources prior to construction, typically during the planning process. Consultation with the State Historic Preservation Officer (SHPO) is then conducted. If cultural resources would be impacted by a project, appropriate mitigation strategies are developed to ensure protection of the resource. WYDOT also consults with Tribal governments regarding the protection of cultural resources on behalf of FHWA. All data derived from WYDOT cultural resources surveys are incorporated into the SHPO Geographic Information System to assist with future cultural resource investigations.

To promote cultural resources coordination between WYDOT and federal agencies, Memorandums of Understanding have been established with the BLM and the USFWS.

Figure 6-7

NEPA PROCESS



Figure 6-8

AREAS OF ENVIRONMENTAL CONCERN
Compliance with the National Environmental Policy Act
Cultural Resource Protection
Wetlands and Water Quality Protection
Endangered Species and Biological Resource Protection
Air Quality
Noise

Wetlands and Water Quality

Wetlands are important biological resources that perform many functions, including groundwater recharge, flood flow attenuation, erosion control, and water quality improvement. They also provide habitat for many plants and animals, including threatened and endangered species. Wetlands are defined by the U.S. Army Corps of Engineers (USACE) and U.S. Environmental Protection Agency (USEPA) based on the presence of wetland vegetation, wetland hydrology, and hydric soils. Many wetlands and other aquatic features, including ephemeral, intermittent, and perennial streams, are considered “waters of the United States” by the USACE and these “jurisdictional” areas are protected under Section 404 of the Clean Water Act (CWA).

Once identified during a reconnaissance inspection, wetlands within the project corridor will be delineated (again, typically during the planning process). During the planning and design process, avoidance, minimization, and mitigation measures are considered to reduce wetland impacts. Compensatory wetland mitigation sites are developed for wetland impacts that cannot be avoided. Prior to construction and placement of fill in jurisdictional wetlands, the necessary Section 404 Permit from the USACE, as well as Section 401 Water Quality Certification, will be obtained.

Water quality issues can affect the development and use of water in a river basin. Permanent and temporary best management practices are designed on every WYDOT project to ensure erosion control measures are implemented.

Threatened and Endangered Species and Biological Resources

Wyoming has a wide variety of wildlife. Several species within Wyoming are protected by the Threatened and Endangered Species Act and/or the Migratory Bird Treaty Act. Bald eagles and Golden eagles are also protected by the Bald and Golden Eagle Protection Act.

WYDOT Environmental Services arranges for the necessary biological assessments of proposed construction projects and with the FHWA consults with the USFWS in order to comply with the Endangered Species Act and the Migratory Bird Treaty Act. As an aid to this process, WYDOT has compiled range maps of where habitat for each endangered species occurs in Wyoming. These maps are periodically updated to reflect new listings or de-listings of threatened and endangered species.

WYDOT also consults with the Wyoming Game and Fish Department, and where practical takes steps to protect the state’s wildlife resources.

WYDOT has recently supported limited research projects to better define wildlife movement corridors. To continue this effort, WYDOT has submitted a Transportation Investment Generating Economic Recovery (TIGER) Grant proposing a statewide wildlife connectivity project. As part of the American Recovery and Reinvestment Act of 2009, WYDOT submitted five potential locations to enhance wildlife migration corridors. Two areas along SSC 4 were identified for possible mitigation. One area is known as Trappers Point and would provide an opportunity to reduce migration disruption. Another site, Dry Piney Creek, has also been proposed and is located along US 189 near Mableton.

Three areas along I-80 are potential locations for the statewide wildlife connectivity project. These areas are known as the Evanston Section, Wamsutter Section, and Halleck Section. All three of these sections have seen high vehicle versus animal crashes, which has severed historical pronghorn antelope habitat connectivity. In the future, efforts will continue to better define this issue and develop practical and effective mitigation strategies.

A Programmatic Biological Opinion (PBO) has been created through coordination with the USFWS. Projects are evaluated by WYDOT for wildlife issues as they are programmed into the Statewide Transportation Improvement Program. If applicable, projects are programmatically cleared in accordance with the PBO.

WYDOT has also developed a Fish and Wildlife Assessment Tool for the means to identify wildlife connectivity issues on projects. This is used in the preparation of planning study reports, which are then distributed statewide. This assists the agency in identifying fish and wildlife migratory issues during the planning process. This ensures coordination with the appropriate agencies early in the project development process, prior to the start of design.

Figure 6-9

THREATENED AND ENDANGERED SPECIES in Wyoming

Bonytail Chub (<i>Gila elegans</i>)
Kendall Warm Springs Dace (<i>Rhinichthys osculus thermalis</i>)
Black-footed Ferret (<i>Mustela nigripes</i>)
Canada Lynx (<i>Lynx Canadensis</i>)
Preble's Meadow Jumping Mouse (<i>Zapus hudsonius preblei</i>)
Wyoming Toad (<i>Bufo baxteri</i>)
Colorado Butterfly Plant (<i>Gaura neomexicana</i> var. <i>coloradensis</i>)
Ute Ladies'-tresses (<i>Spiranthes diluvialis</i>)
Blowout Penstemon (<i>Penstemon haydenii</i>)
Desert Yellowhead (<i>Yermo xanthocephalus</i>)

Air Quality

Air quality is perhaps the most dynamic environmental factor being evaluated by WYDOT. Ozone, Volatile Compounds (VOC), Oxides of Nitrogen (NO_x), Particulate Matter (PM) and Carbon Monoxide (CO) are monitored for their effects on air quality. Currently, Wyoming has one non-attainment county, Sheridan County, for PM₁₀. Ozone and PM_{2.5} could be greater non-attainment issues in the future.

According to the USEPA Green Book, as of January 6, 2010, a portion of Sheridan County has a nonattainment status of “moderate” for PM10 (particulate matter with a diameter of 10 micrometers or less). The Powder River Basin, as a region, has exceeded the national PM10 standard. The Wyoming Department of Environmental Quality (WDEQ) has classified these PM10 incidents as “high-wind events,” arguing that dust is often kicked-up by exceptionally high winds, and not considered as a violation of national air quality standards. This issue will continue to be monitored since Wyoming continues to be the nation’s leading coal producer. There are several coal-fired power plants in Wyoming, and others are proposed or under consideration.

CLIMATE CHANGE

***“There is general scientific consensus that the earth is experiencing a long-term warming trend and that human-induced increases in atmospheric greenhouse gases (GHGs) are the predominant cause.*”**

The combustion of fossil fuels is by far the biggest source of GHG emissions. In the United States, transportation is the largest source of GHG emissions, after electricity generation. Within the transportation sector, cars and trucks account for a majority of emissions.

Opportunities to reduce GHG emissions from transportation include switching to alternative fuels, using more fuel efficient vehicles, and reducing the

total number of miles driven. Each of these options requires a mixture of public and private sector involvement. Transportation planning activities, which influence how transportation systems are built and operated, can contribute to these strategies.

In addition to contributing to climate change, transportation will likely also be affected by climate change. Transportation infrastructure is

vulnerable to predicted changes in sea levels and increases in severe weather and extreme high temperatures. Long-term transportation planning will need to respond to these threats.”

(Source: Integrating Climate Change into the Transportation Planning Process; ICF International, Federal Highway Administration; July 2008.)

Due to the active oil and gas fields in Wyoming, Jonah Field and the Pinedale Anticline in the Green River Basin have become the center of attention for exceeding the 8-hour ozone standard. The Governor of Wyoming has asked USEPA, Region 8 to designate all areas of Wyoming as attainment/unclassifiable except for Sublette County and portions of Sweetwater and Lincoln Counties. The WDEQ has identified sources such as drill rigs, pneumatic pumps, dehydration units, and small heaters as primary contributors to the problem. WDEQ recognizes the importance of this issue and in response has implemented stringent air pollution permitting and mitigation requirements.

Program level air-quality conformity is managed by the WYDOT Planning Department and at the project level by WYDOT Environmental Services. Project specific air quality issues are addressed during the planning process for each project. All air quality permits for new pits and plant sites are secured by WYDOT's Contracts and Estimates Program. This arrangement is expected to be maintained in the foreseeable future.

WYDOT will meet with FHWA, WYDEQ, and EPA to discuss and plan for Wyoming's future air quality conformity.

CLIMATE CHANGE

New Focus On Climate Change

The anticipated Federal transportation reauthorization, and accompanying planning regulations, are expected to address climate change as a focus area of long range planning. There remains uncertainty about both the potential legislation and the effects of climate change on Wyoming. Current planning regulations already include a number of requirements that generally align with climate change mitigation and adaptation. For example, provisions that relate to efficient management and operation of the transportation system,

coordination with land use plans, and congestion mitigation can all be related to reducing GHG emissions. For adaptation, the requirements for infrastructure preservation and maintenance, as well as corridor preservation and connectivity of the system, can provide direct avenues for consideration of adaptation strategies in planning. Energy and environment are already among the eight required planning factors.

Currently, Wyoming is able to respond in some way to these issues as part of its normal course of business, as noted above. Future federal transportation climate change initiatives may have limited application to Wyoming. Because Wyoming has such a low population and density, many of the new initiatives may apply only minimally to the state. Since the legislation is not yet written, it is difficult to be more specific; however, states with larger and denser populations may have greater opportunities to achieve the desired benefits.

Noise

Roadway noise is not a widespread concern in Wyoming, with complaints reported on the frequency of one to two per year. WYDOT has a noise policy regarding the noise analysis process, when noise mitigation is to be considered reasonable and feasible, and public involvement activities. Noise is predicted for all construction projects during the planning process.

WYDOT is currently in the process of creating a statewide noise plan. The plan will create a system of noise contours statewide based on the Wyoming Transportation System, which will then be used to support project level noise analysis.

CLIMATE CHANGE

Climate Change Vulnerabilities in Wyoming

- **The high per capita VMT** in Wyoming, largely a result of the expansive nature of the geography, presents a challenge to one of the primary emerging strategies - to reduce the increase in transportation related CO₂. It is likely that substantial development of public transportation alternatives, to the extent that VMT would be significantly reduced, is financially unobtainable.
- **Consolidating development and land use patterns** is shown to reduce the need for trips and ever-increasing VMT, however the availability of inexpensive land and fuel counters any movement to more compact development. It is important to note that local land use decisions often include tradeoffs among community goals. For example, maximizing highway mobility may increase GHG emissions.
- **Coal, gas, and oil production** provide a high percentage of employment in the state. Coupled with the mineral severance tax, which supports much of the state's budget, including WYDOT, the institutional and political obstacles to adopting aggressive climate change policies are significant.
- **Other tangible risks exist.** Studies show that there may be an accelerated aging of infrastructure, including highway pavements and bridges, from the temperature extremes and weather events predicted to be symptoms of climate change. Other symptoms that may affect Wyoming to a greater extent in the near future include the potential for drought, insect epidemics in forests, wildfires, and more frequent flooding following heavy snow or rain.

Mitigation Activities

- **Quantification of GHG emissions** will likely be a key component of transportation planning in the future. While few tools or guidance are now available to quantify the impacts of transportation plans, especially at the statewide level, Wyoming or subareas could consider a simple calculation of emissions based on VMT, vehicle type, and average emissions values.
- **Many transportation improvements already in common use** have some demonstrable benefit to GHG. Intelligent Transportation Systems and other technological applications can be used to monitor weather events, thus reducing accidents, congestion, and other factors contributing to increased emissions.
- **WYDOT actively engages environmental, local government agencies, and other organizations involved in climate action planning.** Private industries with a large impact on transportation GHG emissions, such as those with large vehicle fleets, have also been contacted.
- **The connections between transportation and land use** should be formally considered as part of every planning activity. Plans should seek to integrate transportation and land use with more efficient land use patterns. Such land use patterns are more conducive to increased transit and non-motorized transportation mode shares.
- **WYDOT should aggressively pursue the acquisition of alternative fuel vehicles and related infrastructure** for all transportation agencies it supports, including its own fleet. Other mitigation activities include materials engineering to allow better adaptation to temperature extremes, continuing to explore the feasibility of using recycled materials for pavements, and the reduction of diesel emissions on construction sites. Truck stop electrification that allows truckers to depend on AC current rather than a running vehicle to provide power during extended stops also holds significant promise to reduce emissions.

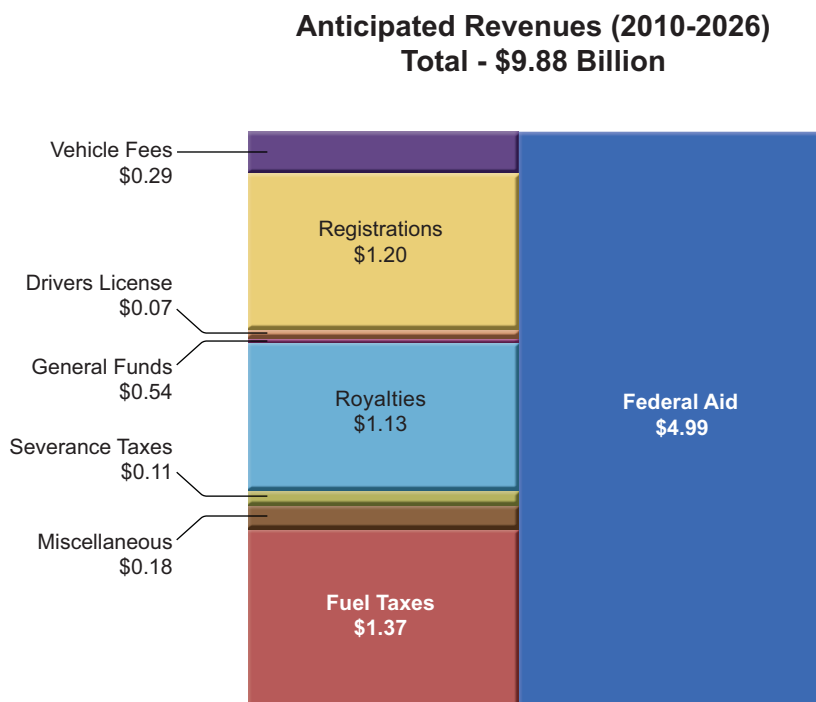
7 FINANCIAL OUTLOOK

Anticipated Revenue 2010-2026

Anticipated revenue available to WYDOT from all current sources from 2010 to 2026 totals \$9.88 billion, or about \$581.1 million annually. The largest category, Federal Aid, is primarily derived from the Highway Trust Fund, the mechanism that receives funds from the Federal motor fuel tax and other transportation related sources. One and one-half billion dollars is raised annually nationwide for every penny of Federal Motor Fuel Tax collected on each gallon sold. Federal aid also includes dedicated funds from the Federal Transit Administration and aeronautics sources. Fuel taxes are by far the largest part of the state’s Highway Account income, which also receives various truck, tire, and other vehicle fees.

The largest State sources of revenue include royalties and other severance taxes on oil, natural gas, and coal; fuel taxes; and vehicle registrations and commercial vehicle fees. State funds also include legislative appropriations for aeronautics as well as matching funds from cities, counties, and transit providers that enable the State to receive certain Federal funds. General fund allocations to transportation, other than aeronautics, were terminated in 2009 and not included in the projection of available revenues.

Figure 7-1

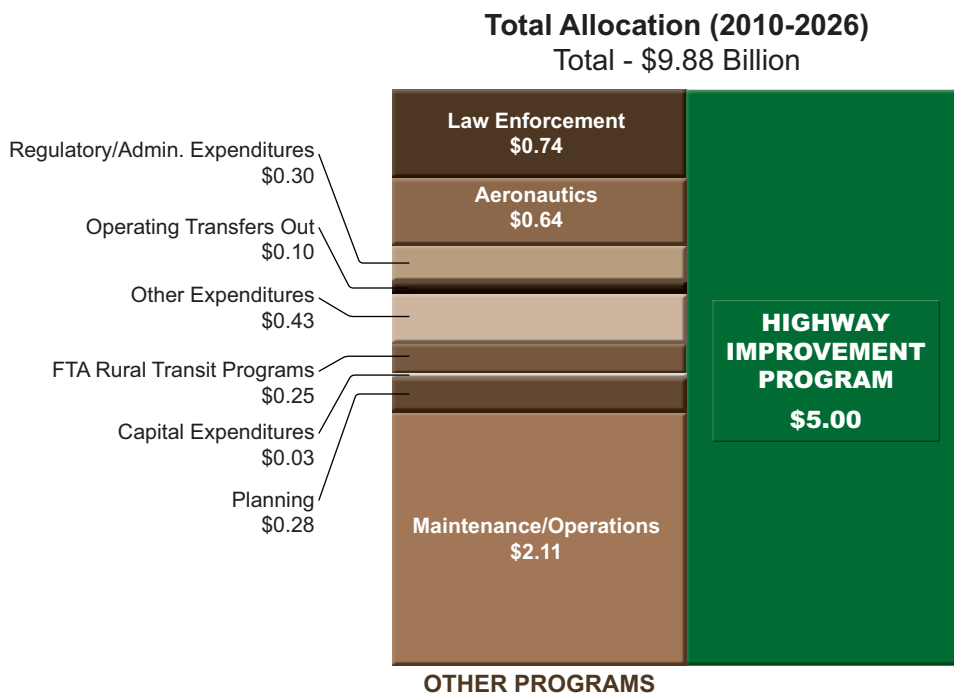


* General Funds – approximately \$2 M per year dedicated to Air Service Enhancements and Communications Program.

Allocation of Revenue 2010-2026

The following chart (Figure 7-2) shows the current plan to allocate expected revenues to WYDOT programs over the next 17 years. About 50 percent of the total budget is directed to the Highway Improvement Program. Other Programs include Maintenance and Operations (about 21 percent of the budget) and various administrative and transit programs (39 percent of the budget).

Figure 7-2



HOW IS THE STATE FUEL TAX ALLOCATED?

Wyoming collects the State Motor Fuel Tax from a variety of sources, which are available for transportation improvements and maintenance.

Each tax source is directed to an account for that source, then transferred to WYDOT for expenditure. Wyoming's state fuel tax rate has been unchanged since 1998. The state's gasoline tax of \$0.14 per gallon is lower (by an average of approximately \$0.10) than surrounding states. Wyoming's gas tax is the third lowest in the nation, following Alaska at \$0.08 and Georgia at \$0.124. Most states charge different amounts for gasoline and diesel. The Wyoming Diesel Fuel Tax is \$0.14 per gallon, the same as the gasoline tax.

One cent of Wyoming's fuel tax is taken off the top to fund an environmental program to clean up leaking underground gasoline or diesel storage tanks. An additional small portion of the fuel tax is earmarked for the Department of Parks and Cultural Resources for snowmobile trails and motorboat costs. Of the remaining tax (nearly \$0.13), 67.5 percent is available to WYDOT. The remaining 32.5 percent is available to city and county roadway projects.

Figure 7-3 shows the currently projected total annual allocation of funds (\$581.1 million) to WYDOT programs. The allocation includes the Highway Improvement Program (\$294.0 million) for major construction, and Other Programs (\$287.1 million) including Maintenance and Operations, Law Enforcement (Highway Patrol), Aeronautics, Transit, and administration.

Figure 7-3

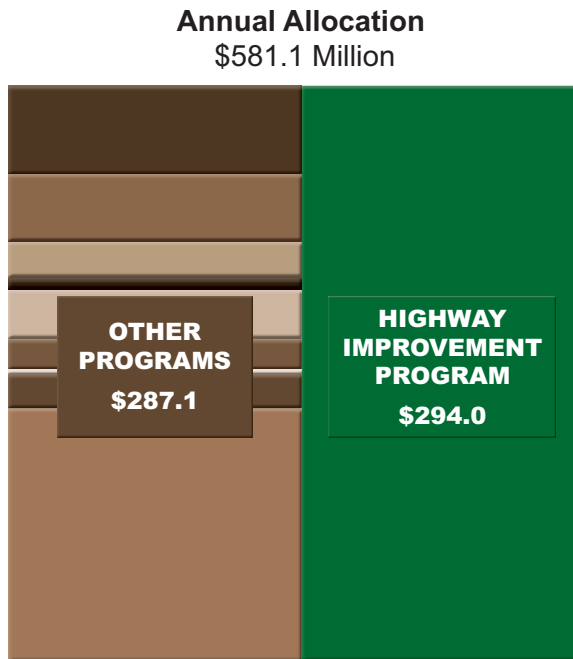
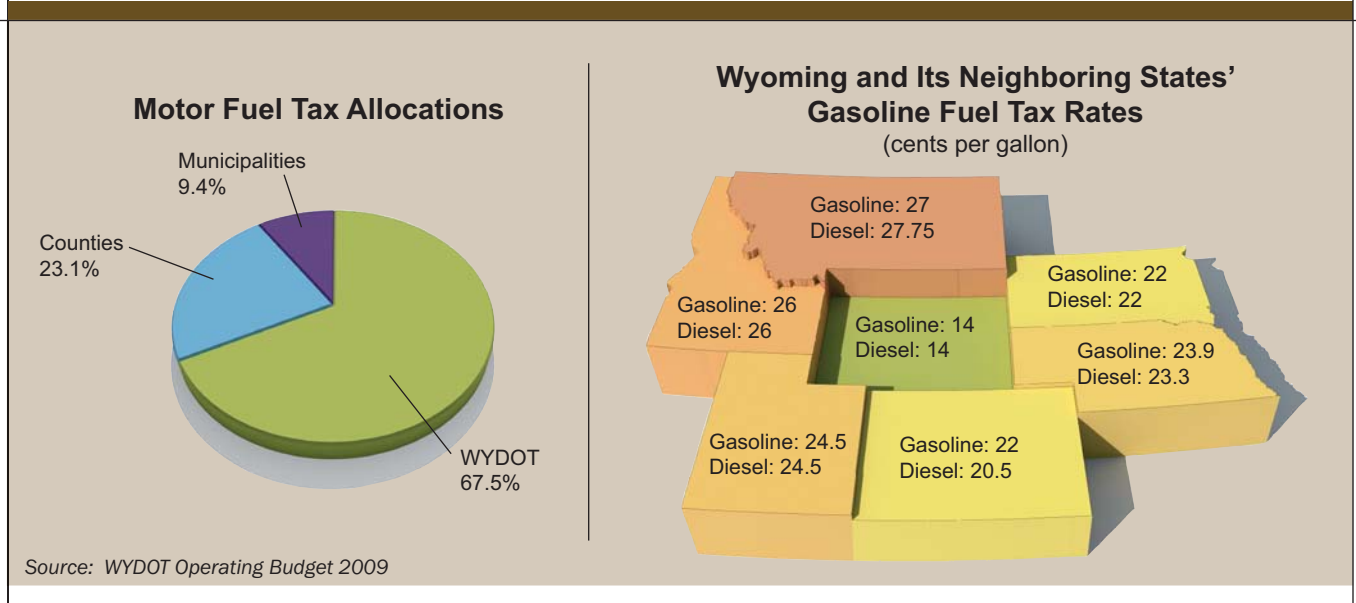


Figure 7-4

HOW IS THE STATE FUEL TAX ALLOCATED?



FINANCIAL OUTLOOK SUMMARY

Figure 7-5

Nearly one-half of WYDOT's budget is spent on highway improvements. Maintenance and operations, including resurfacing and snow removal, require another 22 percent.

67.5 percent of State Fuel Taxes collected go to WYDOT. The remaining goes to municipalities and counties for local roadway programs. 54% of the diesel fuel tax is collected from out of state users.

Wyoming's \$0.14 State Fuel Tax is 30 percent, or more, lower than surrounding states and is third lowest in the country after Alaska (\$0.08) and Georgia (\$0.124). The average state fuel tax is \$0.231 per gallon.

Aging infrastructure, delayed maintenance, increasing travel, rising costs, and budget cuts at the state and federal levels mean that available funds will continue to shrink dramatically relative to transportation system needs.

The effects of inflation continue to reduce the buying power of transportation resources. More than \$3.50 today is needed to purchase what \$1 bought in 1987.

8 THE STATEWIDE TRANSPORTATION VISION

Strategic Performance Measures

WYDOT utilizes a series of strategic performance measures to track how well it meets its mission over time. These measures help focus on what is important today and provides direction for the future. The performance measures are described in detail in the Strategic Plan which can be found at http://www.dot.state.wy.us/wydot/administration/strategic_performance/strategic_plans.

There are three main levels to the Strategic Plan. The first level includes the overall vision, values, mission, goals and performance measures for the entire agency. The vision inspires WYDOT to reach “excellence in transportation” and the mission helps to concentrate on the day to day activities of “providing a safe, high quality, and efficient transportation system.” These organizational values help provide a code of conduct for WYDOT employees.

The Strategic Plan also includes six broad goals focusing on what is important for WYDOT to achieve as an agency. The Strategic Goals and Performance Indicators in the plan communicate important information to the public and other stakeholders.

WYDOT takes great pride in striving to achieve and maintain the stated targets for the performance indicators. *Wyoming Connects* provides the long-range tool to plan for appropriate expenditures to accomplish its mission.

WYDOT GOALS FOR THE SYSTEM	<i>Figure 8-1</i>
Keep People Safe on the State Transportation System	
Serve Our Customers	
Take Care of All Physical Aspects of the State Transportation System	
WYDOT ADMINISTRATIVE GOALS	
Develop and Care for Our People	
Respectfully Perform Our Lawful Responsibilities	
Exercise Good Stewardship of Our Resources	

Figure 8-2

KEY SYSTEM PERFORMANCE INDICATORS 2006 - 2010

Goal	Indicator	2006	2008	2010 Target
1	Number of Fatalities	195	159	142
	Fatality Rate per 100 Million Vehicle Miles Traveled (State Highways)	2.66		2.53
	Crash Rate per 1 Million Vehicle Miles Traveled (State Highways)	1.61		1.53
	Seatbelt Usage (All Drivers)	63.5%	68.6%	77.0%
2	Overall Satisfaction with WYDOT	75.2%	78.6%	80.0%
	Maintenance of Highways	62.8%	76.8%	75.0%
	Snow Removal	74.7%	74.3%	80.0%
3	Good/Excellent Condition of Road Pavements	49.0%	51.0%	51.0%
	Acceptable Condition of Airport Pavements	83.0%	81.0%	85.0%
	Acceptable Condition of Bridges	96.0%	96.3%	83.0%

Relationship of Strategic Performance Measures to Wyoming Connects and the LRTP

Wyoming Connects is the umbrella process that includes the Strategic Plan and the LRTP. One goal of the LRTP is to institutionalize the use of the performance measures into all aspects of WYDOT's programs, including planning. In this way, WYDOT can closely and accurately assess its achievements and correct its deficiencies. To accomplish this, the LRTP has established three future investment scenarios that illustrate how investment choices affect system performance.

MEASURING MOBILITY IN WYOMING

“AASHTO’S recently adopted Authorization Policy calls on each state to develop a process to track and report on performance results in six key national goal areas. The process must include the adoption of specific performance measures for preservation, freight/economic development, safety, congestion, system operations, and environment. While the AASHTO policy suggests a set of measures that states consider adopting for each area, it leaves it to the states to align the measures with national goals, [and] to determine the appropriate scale for application.”

(Factors Influencing the Effectiveness of Performance Measures, AASHTO, 2009)

WYDOT is currently developing a strategy to apply performance measurement to mobility.

Several challenges are apparent:

- 1) Mobility performance measures are generally most applicable in congested urban corridors,
- 2) Wyoming has few examples of true urban congestion,
- 3) The typically long travel distances and seasonal disruptions to travel (winter conditions) are not conducive to accurate measurement of system level improvements to travel time, and
- 4) Difficulty in implementing significant alternatives to traditional travel modes (i.e., public transportation) in this geography.

Models to address these issues are in the works, including potential application of models to measure delay by VMT and/or a Travel Time Index. While a Mobility Performance Indicator has not been established in Wyoming, increasing investment above current projections will undoubtedly yield improvements to general mobility, congestion, and access to all modes of transportation.

Choices for Today

Wyoming Connects provides the vision for Wyoming’s transportation system – what it can and should become. The challenges for WYDOT to build, operate, and maintain a system that fully meets the needs of the State have never been greater. To meet these challenges, *Wyoming Connects* presents choices. The choices center on the level of investment required to achieve the best balance between the optimal system and investment value.

The aging transportation infrastructure in Wyoming requires some costly repairs just to bring the system up to expectations for today and tomorrow. Given the increased costs to preserve the existing system, little remains for new capital improvements. Transportation problems in Wyoming are not yet insurmountable, but action is required right away. Wyoming has a rare opportunity to invest in its future in a way that sustains it as a desirable place to live, visit, and do business before the costs become too great. The gap between transportation system needs and available funding will likely continue to grow over time

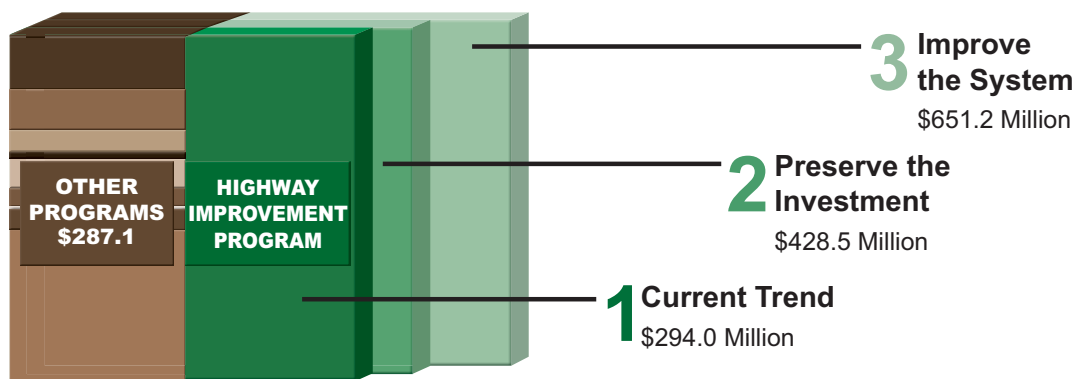
unless Wyoming makes a financial commitment to the future.

Wyoming Connects identifies three potential funding scenarios, or levels of investment. The scenarios have been developed to illustrate total annual funding required through the year 2026. The scenarios use the current trend in funding projected to 2026 compared to the amount needed to maintain the system at today’s performance levels and the amount needed to achieve necessary improvements for today and the future. Each scenario describes the conditions expected with that level of investment.

Each scenario on the following pages shows a dashboard view of how the system performance indicators would be affected at a given level of investment in a series of gauges indicating poor, fair, or good performance for each measurement. While a Mobility Performance Indicator has not been established, increasing investment above current projections will undoubtedly yield improvements to general mobility, congestion, and access to all modes of transportation.

Figure 8-3

THREE FUNDING SCENARIOS Average Annual Investment



The funding scenarios are built on the assumed average annual funding available for WYDOT to invest in the system. Current projections (\$581.1 million average annual) form the base case, or Current Trend. Two additional scenarios are presented here with supplementary funds from an enhanced revenue stream. The enhanced revenues shown in

Scenarios 2 and 3 are directed only to on-the-ground, constructed improvements. Other programs and administrative costs have been held at current levels throughout the planning period. The source of funds to enhance the highway improvement program is not identified here. Several options to increase funding are discussed in Chapter 9.

Figure 8-4



Investment Scenarios

Scenario 1 - Current Trend

Using the current funding projections through 2026, WYDOT will have about \$9.88 billion, or about \$581.1 million annually, from all sources to maintain and operate the system. There is no assurance this level of funding will be met over the long term.

Assumptions

- This scenario assumes no growth in state general fund revenues and a continuation of current federal funding levels.
- The status quo for WYDOT funding will continue at both the federal and state levels assuming no growth in state general fund revenues or federal funds. There is no assurance even these levels will be met.
- The currently approved STIP remains in place and unchanged through 2015 for all scenarios.
- There will be no increases in taxes of fuel, vehicle registration, or other fees associated with vehicles.
- The highway improvement program, the bridge program, and other programs remain at current levels through 2026.

Statewide System Performance Indicators

- Major highway improvements to accommodate increased truck traffic, maintain highway surfaces to historic levels, and other improvements associated with economic development such as the mining and energy industry or population growth in urban areas will not be built.
- Roadway surfaces will begin to deteriorate from historic levels due to lack of resources for basic and necessary maintenance to fix underlying problems.
- Needed bridge repairs, interchanges, and other capital intensive infrastructure will not be built, compromising connectivity, travel time, and safety.
- New businesses could be dissuaded from locating in Wyoming because of transportation problems.

Budget Advantages and Challenges

- The state will not need to identify new revenue sources for transportation.
- Because problems such as drainage and poor road surface condition are not addressed early through ongoing maintenance, WYDOT expects that delayed maintenance will cost four to eight times as much due to roadway surface deterioration, inflation, and construction cost increases.

Figure 8-5

Scenario 2 - Preserve the Investment

The state’s transportation system comprises the largest infrastructure investment by the state and federal governments in Wyoming. Scenario 2 preserves the investment in pavement and bridge assets, by maintaining current conditions. Under this scenario, few major capacity improvements to the system will be made. It is, in short, the status quo for the system, but at a higher cost. All additional funds in this scenario are directed to the pavement and bridge programs.

Assumptions

- Increased levels of funding will be necessary, most likely from state sources.
- All enhanced funding is invested in existing pavement and bridge infrastructure.
- Includes \$97.0 million annual increase to the pavement resurfacing program.
- Includes \$37.5 million annual increase to the bridge program.
- Other programs remain at current funding levels.

Statewide System Performance Indicators

- The state highway system will receive routine maintenance and maintain surface conditions and operating levels as they are now. This will largely prevent the need to delay maintenance.
- Needed bridge repair and replacement will go forward on a planned schedule that maintains the high level of performance experienced today.
- Major highway improvements to accommodate increased truck traffic, maintain highway surfaces at historic levels, and other improvements associated with economic development such as the mining and energy industry will not be built.
- High cost improvements such as the new interchange at I-25/I-80 in Cheyenne or other major capacity improvements on I-80 are not likely to be built.
- Other limited major construction projects to preserve existing operating characteristics may be possible.

Budget Advantages and Challenges

- The state will need to find new sources of revenue for WYDOT which must compete with other state programs for funding.
- Roadway surface conditions on state significant corridors will be maintained at a level that mitigates expensive future costs for reconstruction. The existing infrastructure investment will be better protected. As is currently the case, local and regional routes will not be maintained at the same level as the State Significant Corridors.



Figure 8-6



Scenario 3 - Improve the System

Under Scenario 3, Wyoming pursues its vision to both preserve the transportation investment and improve the system to meet expectations of the traveling public, commerce and business, and interstate travel. WYDOT will meet or exceed its goals for roadway surface condition, including on the Regional and Local Routes, fully address bridges that require repair or replacement, and make limited capacity improvements – such as auxiliary lanes for passing trucks, new interchanges, and improved public transportation. The investments under this scenario are sufficient to improve the system in a reasonable and attainable way. While it is important to achieve these improvements, Scenario 3 does not describe costs to achieve the most ideal system, but rather one that makes strategic, incremental improvements over time and avoids major expenses resulting from delayed actions. Additional funds in this scenario are directed to major mobility or capacity projects as well as the pavement and bridge programs.

Assumptions

- Increased levels of funding can be found and most likely will need to come from a variety of sources, including state and local sources. Significant or increased federal funding is not anticipated. However, private contributions, public/private partnerships, or increased state investments will be necessary.
- Includes \$194.0 million annual increase to the pavement resurfacing program.
- Includes \$63.2 million annual increase to the bridge program.
- Includes \$100 million annual investment in major mobility or capacity projects.
- Other programs remain at current funding levels.
- Wyoming citizens will support improving their state transportation system because of its effects on commercial and business growth, improvements to mobility, and improvements to the personal driving experience.

Statewide System Performance Indicators

- Improvements to accommodate truck traffic associated with the mining and energy industry will be made.
- The entire state highway system will receive routine surface and other maintenance to meet or exceed WYDOT goals.
- Needed bridge repair and replacement will go forward on a planned schedule that maintains the high level of performance experienced today.
- Some key interchanges and other major intersections will be improved or replaced on a limited basis.
- Some major projects to support increased traffic demand and improve access to transportation will be constructed.
- Local and regional routes will be maintained at a higher level, better serving Wyoming's predominantly rural population better.

Budget Advantages and Challenges

- The state and its citizens will need to find new sources of revenue for WYDOT.
- Enhanced revenue streams such as private contributions are required for system improvements made at the time of new or expanded development are required.

9 KEYS TO THE VISION: PLAN OF ACTION

Figure 9-1

Wyoming faces a certain challenge in the mid- to long-term. The costs to maintain and operate the state highway system to meet expressed goals will continue to exceed available public resources. The public costs of the current downward funding trend are damaging in many ways – deteriorating roadways, bridges nearing the end of design life, failure to provide adequate responses to growing energy industry needs, unmet safety objectives, an inability to support growing communities, and underfunded transportation alternatives. With the challenges come opportunities to change the trajectory in ways that will allow the State to meet public expectations. *Wyoming Connects* proposes a series of positive actions to improve transportation, the keys to the vision.

1 - Focus on System Priorities

All parts of the system play a role in supporting the transportation requirements of the state, whether for daily commuting, interstate commerce, tourism, or resource delivery. WYDOT is committed to allocating resources in the most beneficial way and will focus the greater part of its expenditures on the State Significant Corridor system due to its role in carrying the greatest traffic volumes and its significance to the state’s economy. WYDOT will also continue to maximize efforts to preserve the existing system on all roadway classifications in order to make the best use of funds.

2 - I-80 Programming

Because of its function as a major national east/west route, I-80 consumes a disproportionately large slice of WYDOT’s total budget, both in terms of maintenance/resurfacing and major construction or reconstruction to meet current and future needs. Even more funds than are currently programmed on I-80 could be easily directed to this major corridor. WYDOT has a responsibility to provide services throughout the state and must evolve a strategy that addresses the tendency of this single corridor to shape all funding decisions. Wyoming Connects recommends that I-80 should receive a special designation that caps state funding directed to the corridor at a level that allows continued service to the rest of the State Significant Corridor system. One benefit of this designation would be to heighten the awareness of this corridor as the state’s number one priority – and problem – and its role as a critical link in the national system. This will enable potential future federal programs to consider I-80 for special programming typically awarded to corridors and projects of national significance.

Plan of Action

- 1 Focus on System Priorities
- 2 I-80 Programming
- 3 Flexibility to Meet Changing Conditions
- 4 Create Partnerships
- 5 Approach to Urban Corridor Development
- 6 Enhance Funding
- 7 Build the Future

3 - Flexibility to Meet Changing Conditions

One of the biggest challenges for Wyoming Connects will be to maintain the flexibility required to meet changing conditions. One area of focus for the planning process has been to identify emerging trends that affect the transportation system, which help to define future needs. Challenging trends in recent years include the rapid expansion of energy development and associated transportation needs, cost escalation due in part to oil price increases, evolving environmental considerations, a growing shift in emphasis toward the value of transportation alternatives at the local level, and funding instabilities. Those challenges will continue for the foreseeable future. Long-range plans are undeniably skewed to meeting the needs of today, given that future projections are notoriously difficult to make and accept. Future needs, known or unknown, take a backseat to the most pressing of today's problems. Therefore, Wyoming Connects sets goals and strategies that WYDOT must manage effectively to meet challenges as they arise, rather than becoming locked in to a project level plan that attempts to allocate resources precisely over a long period of time. The LRTP sets the process in motion.

4 - Create Partnerships

One of the most promising paths to a secure financial future is to create partnerships at all levels – with local agencies, the private sector, and industry – to pursue mutually beneficial goals. With currently projected resources, WYDOT will be challenged to deliver the transportation excellence to which residents are accustomed. WYDOT must take a proactive role to identify partners to share future costs. WYDOT should foster an effective public communication and information exchange to facilitate the full understanding of the costs and benefits of collaboration on major projects.

Key partners include communities, industries, and developers where rapid growth creates additional pressure for the state system to absorb ever increasing demand for expensive improvements. This key interrelationship between land use and transportation must be explored for shared costs and benefits in order to identify viable long range funding strategies. A successful partnership must include the energy industry, with its high level of need - and impact on - infrastructure. Recent dramatic increases in the transportation of heavy loads and the associated impacts to pavement, bridges, and traffic volumes contribute to backlogs; a viable system requires additional support from industry. The trucking industry, aside from its role in the energy fields, also bears a common need for a well-maintained and developed system and should be considered a partner with a great deal at stake. Lastly, opportunities exist to transfer additional emphasis to the capability of the freight rail system to move long distance loads, especially trans-state loads, thereby reducing needs on strategic corridors, especially I-80.

5 - Approach to Urban Corridors Development

Urban communities and WYDOT sometimes have conflicting goals for improvements in an urban setting. Urban areas may be most interested in calming traffic, developing streetscapes and pedestrian facilities, maintaining parking, providing access to commercial properties, increasing transit options, and developing a sense of place. WYDOT, with its statewide perspective, may be most focused on moving traffic efficiently and safely.

Roadway improvements in densely developed areas are very expensive. The expense stems from the high cost of right of way property purchases, cost of underground and overhead utility relocations, and the need to satisfy highly interested customers. High costs often means that improvements will be delayed pending adequate funding, or considered not feasible. As urban areas grow, some congestion is inevitable and may become a part of urban life. Major capacity projects beyond the ability of WYDOT to fund on a timely basis should become the responsibility of joint public-private partnerships or other innovative local funding strategies in order to be successful.

6 - Enhance Funding

Funding for transportation improvements has been unstable for several years. State general fund allocations are subjected to the peaks and valleys of annual competition for scarce resources among state agencies. Political leadership is forced to balance competing needs in an increasingly challenging environment. Further, federal funding under the impending transportation reauthorization is expected to shift national priorities to major metropolitan areas, the National Highway System, and public transportation alternatives, all with negative implications to Wyoming's system. The instability and uncertainty for the future point to the need to take matters into our own hands and develop stable, reliable revenue streams that support Wyoming. The various methods available to enhance resources should be pursued.

Options to Enhance Funding

Without funding, nothing gets done. The funding amount projected for WYDOT from now through 2026 will not adequately maintain the existing system, will not pay for significant new improvements, and will place the state highway system in a situation that requires a large investment to get back to the 2009 condition. Understanding funding mechanisms is critical to resolving this problem even if, in the final analysis, leaders and the community make the informed decision not to pursue additional funding.

As of this writing, funding for transportation improvements comes from a variety of sources, including:

- Federal aid
- Motor fuel taxes
- Registration and license fees
- Severance taxes and royalty fees associated with mineral extraction
- City and county matching funds
- Miscellaneous sources

Figure 9-2

WYDOT's approximate past and projected budgets for construction and maintenance are as follows:	
2007	\$417 million
2008	\$473 million
2009	\$200 million
2010 - 2026	\$225 to \$250 million per year

A recent decline in the construction and maintenance numbers reflect a loss of general fund revenues after 2008 and the one-time American Recovery and Reinvestment Act (ARRA) federal stimulus package WYDOT received in 2009.

The decline in funding, starting in 2009, is largely due to:

- competition among state agencies for scarce resources and no general funds projected for WYDOT 2010 through 2026;
- a small percentage of funding sources being dedicated to WYDOT; and,
- the anticipated decline of federal funds, which are expected to be shifted to transportation problems in large urban areas throughout the United States.

Coincidentally, the cost of construction and construction materials rose 20 to 30 percent in recent years, further depleting the number of projects that can be completed with diminishing budgets. Therefore, a 25 percent increase, approximately \$63 million, in the existing and projected construction budgets will be needed just to maintain 2009 conditions on the WYDOT highway system.

The effect of diminished funding is that WYDOT is experiencing a challenge in keeping up with even the maintenance of the current transportation system. While the

maintenance problem has grown, it is in the background. Users of the system have not yet experienced the direct effects. In the first several years of this dilemma, the problems have been masked by “band-aid” solutions to maintain surface pavement conditions. Thinner overlays and deferred maintenance have kept highway surfaces in acceptable drivability to date. However, this is not a long-term solution. In fact, it leads to a cliff of rapidly deteriorating future conditions.

In 2009, 49 percent of the state system’s roads are rated Fair or Poor –denoting cracked pavement, ruts, rough surfaces, and potholes. This meets WYDOT’s Performance Standard of 51 percent of roads in the Good to Excellent category. As of this writing, WYDOT’s projections show that by 2015, only 39 percent of the state roadway’s pavement will be in the Good to Excellent category and that 61 percent will be in Poor or Fair condition. To reverse this trend after 2015 and bring the roadway pavement surfaces back up to where they are today, 51 percent Good or Excellent, will take 10 years and require an additional 25 percent increase in the pavement and maintenance budget. In short, keeping the roads in good condition costs less than repairing them later.

Options to increase funding include enhancing existing revenue or finding new funding sources. Below are a series of funding options for public consideration. The examples noted are for illustrative purposes only to allow the reader to understand the magnitude of the problem and to envision a solution.

Increase the Vehicle Registration Fee

The state currently collects \$7 from each registration for WYDOT expenditures. In Colorado, where similar financial challenges were faced, a \$25 fee was recently added to vehicle registrations. A similar initiative in Wyoming for passenger vehicles, trucks, motorcycles, multipurpose vehicles, trailers, and others – excluding vehicles for the University and handicapped – would yield about \$23 million annually.

Increase the Fee on Drivers Licenses

Wyoming licenses currently cost \$20 each for new licenses, \$23 for new motorcycle licenses, \$25 for new commercial licenses, and \$15 for renewals. Only three dollars of the fee is currently allocated to WYDOT. Licenses are renewed every 4 years. If a \$10 charge were issued to every license (a 66 percent increase in total fees), both commercial and non-commercial, it would raise approximately \$1 million per year.

For every extra penny charged for the state fuel tax, WYDOT would receive approximately \$4 million. Therefore, a 10 cent increase would increase WYDOT's budget \$40 million.

Increase the Fuel Tax

Wyoming's state fuel tax rate has been unchanged since 1998. The state's gasoline tax of \$0.14 is lower (by an average of approximately \$0.10) than surrounding states. Some states have differing rates for gasoline and diesel. Fifty-two percent of the fuel tax is collected from out of state vehicles.

One cent of Wyoming's fuel tax is taken off of the top for an environmental cleanup program to repair leaking underground gasoline or diesel storage tanks and conduct clean up activities. A small portion of the fuel tax, determined by formula, is earmarked for the Department of Parks and Cultural Resources for snowmobile trails and motorboat costs. Of the remaining gasoline tax (nearly \$0.13), 57.5 percent goes to WYDOT with two percent of that being used for administration of the tax itself. The remaining 42.5 percent goes to city and county roadway projects. The fuel tax is not indexed to other costs such as inflation or increasing average vehicle efficiency causing it to be less and less effective over time.

Of the state diesel fuel tax, 75 percent goes to WYDOT and 25 percent goes to the cities and counties. Wyoming's gas tax is the third lowest in the nation following Alaska at \$0.08 and Georgia at \$0.124.

Implement a Toll on I-80

As of this writing, the state has commissioned the Interstate 80 Tolling Feasibility Study in response to shortfalls in revenues necessary to maintain the facility and accommodate increasing traffic using I-80, especially trucks. Currently, I-80 could consume all of WYDOT's available construction funding and still not keep up with maintenance and improvement needs. The amount of funding funneled to I-80 today means that other state highways suffer from loss of attention. The toll would more fairly allocate the cost of maintenance to the highway users, 80 percent of whom are out of state. The legislature is reviewing the study to make an informed decision about the future of tolling on I-80.

VMT Tax

The State of Oregon has implemented a VMT (Vehicle Miles Traveled) tax as a pilot program to enhance transportation revenues. The tax is based on miles driven and is assessed electronically at the gas pump. The tax is calculated and added to the fuel bill in much the same way that the current gas tax works, so the collection, regulation, and distribution system for this type of tax is already in place. However, rather than being taxed on gallons of fuel, the driver is taxed by the mile, which some believe is a more fair tax assessment. The VMT tax relies on an electric transponder and can be enhanced to calculate certain zones and times for variable fees as a method of congestion management.

Truck VMT Tax

The State of New York is implementing a VMT tax, a road user fee, on trucks to enhance their transportation revenues. The tax is based on miles driven and is assessed electronically. Collection, regulation, and distribution of tax revenues are conducted through existing systems. The trucking company is taxed by the mile as directly related to the truck's use of the roadway system. The assessment of miles traveled relies on an electric transponder that accounts for truck movements, times, and routes for all roadways in the state network. Many of the trucking companies that will be affected by the VMT tax are located within the State of New York.

Truck Weight-Mile Tax

This tax is based on overall vehicle weight, number of axles, and distance traveled. Oregon charges a weight-mile tax and no fuel tax to trucks over 26,000 pounds. This is a variation of an older fee system based on the ton-mile tax or the weight-axle tax. The State is testing a global positioning system device that automates the collection of the state's truck weight-mile tax. It provides an equitable way for road users to pay in proportion to the costs they impose on the system. Some form of the tax is also in use in New York, New Mexico, and Kentucky.

Public/Private Partnerships

Transportation projects, particularly those made in response to increased traffic demands are costly. New or replacement interchanges, especially those in heavily developed urban environments, can cost \$40 to \$300 million dollars or more. Clearly, this puts a strain on a construction budget the size of Wyoming's, approximately \$200 to \$250 million. Yet, these projects are often critical not only to mobility, but also to the local and state economy.

The important link between location and transportation can make or break a business. Successful businesses are critical to the local and state economy as well as the local and state governments. Therefore, when there is a clear benefit to businesses, government entities, and WYDOT to make a strategic investment in a capital-intensive project, it is not unusual to see partnerships emerge. The nature of these partnerships is usually very specific to a project, as are benefits.

By definition, public/private partnerships include government and business. Beyond WYDOT, government partners could include municipalities, counties, MPOs, other state agencies, or federal agencies. The private side could include a single business or groups of businesses or developers, private enterprises that set up a special taxing district or mechanism, or some combination. Partnerships are formed for the benefit of those involved. Sharing the costs makes the project feasible. Conversely, the lack of sharing the cost burden may mean the project will be delayed or not built, a lost opportunity for all.

The implementation of impact fees charged to developers to pay for infrastructure required to serve that development provides one example of partnership that has proven highly successful in other states. Land uses, such as businesses, big box retail or several smaller retail operations, and new home developments can singly or collectively increase traffic and compromise roadways and intersections to the point where traffic operations become a problem. WYDOT is then called upon to fix the problem if it involves a State highway.

In some states, local governments impose an impact fee based on the projected traffic generated by the new land use. This fee is used to either improve or contribute to improvements. Funds cannot be collected to address existing problems (not caused by the new development). Many communities believe that this balanced approach puts the burden where it belongs. However, given a choice of locations for a business, the impact fees may compromise potential profits – sometimes to the point where the business is no longer feasible. Businesses may locate elsewhere taking with them jobs, tax revenues, and their beneficial services. Therefore, impact fee programs must be carefully thought out, fairly assessed, and well-planned.

Revenue Bonds

The state could issue revenue bonds to pay for specific roadway improvements. These types of bonds can be scheduled for repayment over 20 to 30 years and are a popular way for states to fund capital-intensive highway projects. Wyoming and Nebraska are the only two states that do not utilize revenue bonds for highway projects. Statutory changes would be required in Wyoming to issue revenue bonds, which is a further complication.

Many state-issued bonds are eligible for federal-aid reimbursement for specific projects or multiple projects. These are called Garvee (Grant Application Revenue Vehicles) Bonds, which can be used to retire debt based on future funding from the federal government. However, this type of financial mechanism does borrow against future highway funds, which could add additional financial strain to the already stretched WYDOT budget.

Dedicated Transportation Fund

WYDOT works with the legislature every year to establish its budget, competing with other worthy and needy programs for limited dollars. Operating the statewide transportation system is costly and WYDOT's budget requests and allocations are often significantly greater than other requests and allocations. As the legislature balances the budget, potential WYDOT funding is often eliminated or rerouted to other needs. This has several effects. Beyond lowering the overall allocation to the point that WYDOT cannot adequately maintain its existing system, it also makes planning for all aspects of WYDOT work very complex due to the length of lead time necessary to implement multifaceted projects. A dedicated WYDOT transportation fund with a predictable budget amount could help alleviate this variable.

Packaging Funding Enhancements Strategies May Be the Best Option

Figure 9-3 illustrates the basic funding mechanisms that can be used individually or combined to increase and stabilize the transportation budget. Other options may emerge, but the fact that more money is needed to maintain or improve the system is inescapable.

FUNDING OPTIONS Comparison

Figure 9-3

Funding Type	Synopsis	Advantage	Disadvantage
Common to all funding types	Any single or a mix of dedicated funding types will increase WYDOT's budget if other sources do not decrease	An increased budget will further address WYDOT's need to maintain and desire to improve the State highway system	Any increase involves collecting more money either through taxes or some other method, which is generally not supported by the public and is politically difficult
Vehicle registration fee Increase	Increase the fee amount to all vehicle registrations	An increase of \$25 per vehicle per year would yield \$23 million	All fees collected from Wyoming residents
	Vehicles registered yearly	System in place for collection and distribution	
Driver's license fee increase	Increase the fee amount on new and renewed licenses	An increase of \$10 would raise \$1 million per year	Difficult to raise significant funding
	Licenses renewed every four years	System in place for collection and distribution	All fees collected from Wyoming residents
Increase state fuel tax	Increase fuel tax on all gasoline and diesel	Tax collected from all users and related to amount of use	Significant resistance from consumers and associations, and politically very unpopular; Measures to increase the fuel tax are introduced and voted down regularly in the legislature.
	Option to collect different amounts on gasoline vs. diesel	52 percent of taxes collected from non-Wyoming residents (pass through and tourist vehicles)	Could cause rerouting of vehicles to avoid Wyoming. However, the surrounding states do not offer lower fuel prices, so this is unlikely
		One penny increase raises approximately \$4 million, or 10 cents raises \$40 million	Not indexed to inflation or other costs
		Cities and Counties also realize increased funding for transportation	
		System in place for collection and distribution	
Implement I-80 toll	Toll vehicles traveling I-80	I-80 would become more self-sufficient and reduce its dependence on existing WYDOT funds	The legislature has not acted to create a tolling authority or conduct a comprehensive tolling plan, which would be required to implement this measure.
	Cars would be tolled less than trucks	80 percent of current traffic not from Wyoming	Needs new authority to collect and distribute funds
			Significant resistance from consumers and associations
			May disperse traffic to other routes, however there are few reasonable alternatives for east to west interstate travel

Figure 9-3 continued

Funding Type	Synopsis	Advantage	Disadvantage
VMT tax	A “per mile” tax added to, or replacing, the State Fuel Tax. It is calculated at the time of fueling and paid as part of the overall fuel bill at the pump.	Assesses tax based on roadway use per mile as a “fee for service” rather than the more general fuel tax.	In Wyoming, where distances between destinations are often long, it might be overly burdensome to rural drivers. May require statutory changes.
Truck VMT tax	A “per mile” tax on trucks on all parts of the state highway system; replaces the truck fuel tax.	Assesses tax based on roadway use per mile as a “fee for service.” Trucking companies may be able to pass this tax onto their customers.	The trucking industry, most of which are not based in Wyoming, may not support VMT Tax. May require statutory changes.
Truck weight-mile tax	Combination mileage and weight tax, also adjustable for number of axles.	Fair and equitable tax based on actual measured impacts to the roadway. Stabilizes funding over time.	Requires reduction or elimination of fuel tax. Requires GPS transponder.
Public/private partnerships	Share costs with cities or other entities, and/ or the private sector	Reduce the cost of large capital projects to WYDOT	Relies on contributions and cooperation from others
		More projects can be implemented in diverse locations	Cities, counties, or private sector may not have the capital to invest
		Capital is raised from the location where the improvement is made	Could discourage business development if a contribution is required
Revenue bonds	A financial mechanism that borrows for large capital projects	Ability to fund large capital projects without significantly depleting budget	Constrains a portion of the budget for repayment over multiple years
	Can be paid over time	Eligible projects can be repaid by allocated Federal funds	Repaying with future Federal funds will reduce WYDOT’s yearly budget
	Can be repaid with the state’s Federal allocation		Statutory changes would be required
Dedicated Transportation Fund		Requires more funding dedication by the state for public transportation	Funding may be set too low for increasing costs
		Locks in a set amount of funding	Ability to increase funding could be difficult

7 - Build the Future

Finally, Wyoming residents and others who depend on the transportation system are urged to take the long view. While today's funding problems seem intractable, and the already-identified needs large, a future awaits that demands more than a system that has seen better days, more than the status quo. Wyoming deserves a fully mobile, accessible, and connected system that delivers the high quality of life and sustainable economic system desired by its people.

To Be Continued...

Other options may be available for the future, including other funding scenarios or means to enhance funding for transportation. This draft plan is available for public review and comment and may be revised before final adoption. Final recommendations will be made at that time.

Transportation Terms

Asset Management System – WYDOT is developing a system to track the performance of bridges, safety, and highway surface condition.

Average Daily Traffic (ADT) – ADT is the number of vehicles on a section of roadway during a 24 hour period. Total ADT may be broken into categories by vehicle classification, such as trucks. ADT is useful to determine needed roadway capacity – lane width, number of lanes, turning lanes, etc.

Average Annual Daily Traffic (AADT) – The total volume of vehicle traffic of a highway or road for a year divided by 365 days. AADT is a useful and simple measurement of how busy the road is.

Average Annual Daily Truck Traffic (AADTT) – Same as AADT applied to large trucks.

BNSF Railway Company (BNSF) – One of two major railroads in Wyoming, providing freight service primarily in the eastern and central parts of the State.

Bureau of Land Management (BLM) – A branch of the US Department of Interior with jurisdiction of large land parcels in Wyoming.

Coal Bed Methane (CBM) – A form of natural gas extracted from coal beds and used for energy product. CBM is the target of significant exploration and development in Wyoming.

Corridor – A transportation corridor is a thoroughfare connecting points on the network and its associated elements for the movement of people, goods, and services. The Wyoming Long Range Transportation Plan is based on multimodal corridors that address needs for highways, trucks, freight rail, aviation, public transportation, and non-motorized transportation (bicycles and pedestrians).

Corridor Plan – The LRTP includes a set of more detailed plans for select State Significant Corridors (SSC) corridors. The plans develop traffic volume, environmental, condition, and safety data as the basis for project development on the corridor.

Corridor Visions – Corridor visions are based on the SSC network that represents high volume routes in the state, connecting major activity centers, traffic generators and traffic attractors to each other and to points external to Wyoming. Each named corridor is associated with a travelshed or system of state routes that feed and distribute traffic to and from the SSC. The visions include future goals and strategies to achieve them.

Environmental Protection Agency (EPA) – The Federal agency charged with protecting human health and the environment. The EPA develops water and air quality regulations and for other resources that may be impacted by transportation projects. Oversees or participates in transportation-related NEPA processes.

Federal Aviation Administration (FAA) – The FAA provides air traffic control services, establishes and enforces regulations, and oversees inspections that maintain the integrity and reliability of that system.

Federal Highway Administration (FHWA) – FHWA is a branch within the US Department of Transportation whose mission is to “Improve Mobility on our Nation’s Highways Through National Leadership, Innovation, and Program Delivery.” See <http://www.fhwa.dot.gov/>.

Federal Railroad Administration (FRA) – The purpose of FRA is to: promulgate and enforce rail safety regulations; administer railroad assistance programs; conduct research and development in support of improved railroad safety and national rail transportation policy; provide for the rehabilitation of Northeast Corridor rail passenger service; and consolidate government support of rail transportation activities.

Federal Transit Administration (FTA) – FTA provides stewardship of combined formula and discretionary programs to support a variety of locally planned, constructed, and operated public transportation systems throughout the United States. Transportation systems typically include buses, subways, light rail, commuter rail, streetcars, monorail, passenger ferry boats, inclined railways, or people movers.

Intelligent Transportation Systems (ITS) – Refers to efforts to add information and communications technology to transport infrastructure and vehicles in an effort to manage factors such as vehicles, loads, and routes to improve safety and reduce vehicle wear, transportation times, and fuel consumption.

Level of Service (LOS) – LOS denotes the operating condition that may occur on a roadway. LOS “A” denotes a free flow condition. Level “F” denotes severe congestion.

Long Range Transportation Plan (LRTP) – The statewide plan that serves to create a vision for transportation, provides information, and connects planning goals to investments. It outlines future choices and costs so as to inform decision-making.

Metropolitan Planning Organization (MPO) – A federally designated body for cities with a population over 50,000. Each MPO has the authority to create a transportation plan for its planning area in coordination with WYDOT. There are two MPOs in Wyoming, Casper Area Metropolitan Planning Organization (CAMPO) and Cheyenne Metropolitan Planning Organization.

National Environmental Policy Act (NEPA) – A comprehensive federal law that requires analysis of environmental impacts of federal actions and requires the preparation of environmental impact statements for federal actions which are anticipated to have significant impacts on the environment.

National Highway System (NHS) – The NHS is approximately 160,000 miles of roadway important to the nation’s economy, defense, and mobility. It includes several subsystems: Interstate, Other Principal Arterials, Strategic Highway Network (STRAHNET), Major Strategic Highway Network Connectors, and Intermodal Connectors. See <http://www.fhwa.dot.gov/planning/nhs/>.

National Plan of Integrated Airport Systems (NPIAS) – The NPIAS identifies more than 3,400 existing and proposed airports that are significant to national air transportation and thus eligible to receive Federal grants under the Airport Improvement Program (AIP). It also includes estimates of the amount of AIP money needed to fund infrastructure development projects that will bring these airports up to current design standards and add capacity to congested airports.

National Wildlife Refuge (NWR) – A designation for certain protected areas of the United States managed by the United States Fish and Wildlife Service. Its mission is to manage a national network of lands and waters for the conservation, management, and where appropriate, restoration of fish, wildlife and plant resources and their habitat.

Network Node – A major activity center with significant employment, industry and/or population that attracts and generates high traffic volumes. These nodes are connected by State Significant Corridors.

PM10 – Particulate matter less than ten microns in diameter. Usually either dust or vehicle emissions, this potentially dangerous contaminant is regulated by the EPA.

SAFETEA-LU – Set to expire in 2009, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (2005), is the federal authorizing legislation for transportation expenditures. It is periodically renewed, reflecting the interests, needs, and policies of the nation. It is funded primarily through the federal gas tax, the Highway Tax Fund. The Act identifies programs and projects for implementation, and serves as a funding funnel to the States. WYDOT administers most federal transportation funds for Wyoming.

Transportation Improvement Program (TIP) – Each MPO (city with over 50,000 population) establishes a program of projects that will receive funding over the next six years. The TIP must be consistent with the MPO LRTP. It is updated annually and must be approved by the Governor and FHWA as a requirement for receiving and expending federal transportation funds. The TIP becomes part of the STIP.

Travel (or Transportation) Demand Management (TDM) – Strategy to create policies that reduce or consolidate travel demand, particularly in single occupant vehicles, or manage the time of travel. TDM strategies may include van and car pools, public transit, shuttles to specific work places, tourist transit, flexible working hours, or working from home.

Travelshed – A travelshed for each SSC has been identified as part of the corridor-based plan. Each travelshed consists of the SSC route and a system of feeder routes designated as Regional, Local, Urban, or Intermodal Connector depending on function.

State Significant Corridors (SSC) – The SSC system represents the backbone of Wyoming's transportation system. The SSC routes connect significant activity centers of population, employment, tourism, and industry with each other and with destinations external to the state. The SSC routes carry the majority of the State's travel.

State Transportation Improvement Program (STIP) – The STIP is WYDOT’s program of projects that will receive funding over the next six years. The STIP must be consistent with the LRTP. It is updated annually and must be approved by the Governor and FHWA as a requirement for receiving and expending federal transportation funds.

Union Pacific Railroad Company (UPRR) – One of two major railroads in Wyoming, providing freight service primarily in the eastern and southern parts of the State.

Variable Message System (VMS) – Electronic signs employed by highway authorities to display important information to motorists, usually related to weather, vehicle crashes, or construction zones. The signs can be programmed from a central location.

Vehicle Miles Traveled (VMT) – One VMT can be thought of as one vehicle traveling one mile on a roadway. One vehicle traveling 100 miles is 100 VMT. Two vehicles traveling 100 miles is 200 VMT. Similar to ADT, the measure can be broken into categories of vehicle types. The measure is useful to compare levels of traffic from one corridor to another, growth over time, for a system like all Interstate Highways, or for a geographic region like a county or district.

Vehicles per Day (VPD) – The total number of vehicles passing a given point, or on a segment of roadway, in a 24 hour period.

Wyoming Department of Transportation (WYDOT) – WYDOT is the state agency charged with building, operating, and maintaining the State’s transportation system. It is overseen by the Wyoming Transportation Commission. The largest share of the system are highways, including Interstates and other state highways. Local streets and roads are administered by municipalities and counties. The Wyoming gas tax is the largest source of revenue, and is shared between WYDOT and local governments. The Division of Aeronautics is also a part of WYDOT and is overseen by the Aeronautics Commission. See <http://dot.state.wy.us/wydot/>

Wyoming Office of Homeland Security (WOHS) – WHOS has the statutory requirement for planning and coordinating emergency functions dealing with disasters, both man-made and natural.

Wyoming Connects – WYDOT’s new integrated planning framework links statewide planning processes and ties strategic and long term goals to implemented projects. This integrated planning process or framework includes the statewide long range transportation plan, a corridor vision for each SSC, and a set of more detailed corridor plans. It also includes performance measures to track progress and to identify needed course adjustments over time.

Applicability of Federal Planning Factors to Climate Change (23 CFR 450.206(a) and 450.306(a))

Planning Factor	Applicability of Climate Change Considerations
(1) support the economic vitality of the [United States, the States, nonmetropolitan areas, and] metropolitan area[s], especially by enabling global competitiveness, productivity, and efficiency;	In addition to a physical threat, climate change also poses an economic threat. Climatic changes can damage natural environmental assets as well as manmade assets. Weather-related natural disasters can cause damage worth billions of dollars. These losses have a direct toll on local, regional, and national economies. At the same time, the development of new technology to reduce and prepare for climate change offers economic development opportunities. New transportation technologies can generate new economic activity as they are developed and exported
(2) increase the safety of the transportation system for motorized and nonmotorized users;	A safe transportation system protects users from hazards, including hazards resulting from climate-related stresses on the system. Transportation agencies need to protect the system from potential floods and perform routine maintenance and replacement on infrastructure components affected by extreme temperatures and storms. Other safety enhancements can actually reduce GHG emissions. Enhancements that reduce the risk of crashes and smooth traffic flow reduce GHG emissions from congestion. In some cases, slowing vehicle travel speeds can contribute to improved fuel efficiency and improved safety.
(3) increase the security of the transportation system for motorized and nonmotorized users;	A secure transportation system ensures the protection of critical infrastructure and exposes users to less risk. Infrastructure protection is going to require assessing risk from climate-related stresses on the system. Transportation agencies need to consider security as part of a broader consideration that incorporates planning for natural disasters, emergency response and preparedness and infrastructure preservation.
(4) increase the accessibility and mobility of people and freight;	While accessibility and mobility have often been interpreted as synonymous with more travel by car and truck, these goals can also be achieved with reduced vehicle travel. Multimodal transportation systems can be coordinated with land use patterns such that people and goods need to travel shorter distances and make fewer trips by car and truck. In fact, travel by private car is inherently inaccessible for many low-income, elderly, and young people. The systematic provision of other options both improves mobility for these populations and helps to reduce GHG emissions.
(5) protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns	Mitigating climate change is essential in order to protect the environment from long term shifts in weather patterns. Reducing GHG emissions is virtually equivalent to conserving energy, since most GHG emissions come from the burning of fossil fuels. One of the chief ways that transportation agencies can reduce GHG emissions is to reduce the total amount of on-road travel. When transportation improvements are coordinated with planned growth patterns, the need to travel (and especially the need to travel by car) can be reduced.
(6) enhance the integration and connectivity of the transportation system, across and between modes [throughout the State], for people and freight;	One of the chief ways that transportation agencies can reduce GHG emissions is to reduce the total amount of on-road travel. Shifting passenger trips from cars to public transportation, biking, and walking, and freight trips from trucks to rail (and possibly ships) can help to reduce onroad travel. To the extent that agencies can provide more modal choices and improve the ease of transfers between modes, passengers and shippers are more likely to choose an alternative mode for at least part of each trip.
(7) promote efficient system management and operation	The energy efficiency of the transportation system depends in part on the efficient operation of the system. Travel times can be improved and congestion reduced in many cases through better incident management, realtime information distribution, and traffic flow engineering. Reduced congestion translates to improved fuel efficiency and reduced GHG emissions.
(8) emphasize the preservation of the existing transportation	The transportation system, like other assets of our built environment, is threatened by climate change. Adaptive responses to increased heat, rising sea levels, and higher incidences of flooding must be considered in order to preserve the system.

(Source: Integrating Climate Change into the Transportation Planning Process; ICF International, Federal Highway Administration; July 2008.)

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