



Montana's Transportation Future Opportunities Around the Next Curve

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WTI Facts and Figures

- Founded in 1994 by Caltrans, MDT and MSU
- Part of the College of Engineering, MSU
- National University Transportation Center (UTC) since 1998
- About 80 staff, affiliated faculty and students
- Approximately \$8 million annual funding
 - 4% Montana,
 - 20% California
 - 14% other states
 - 6% Foundation, industry, and other
 - 15% other federal
 - 41% University Transportation Center (USDOT)
- Projects with 35 states and the Federal government
- ***“Conducting Research to Solve Everyday Challenges”***





communications needs

Winter problem areas

Future rest area

Railroad tracks

wildlife considerations

safety study

Runoff?

Pavement=recycled

Bus route



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Driver



Vehicle



Traffic



Infrastructure



Environment



Society

Overview

- Transportation and the Economy
- Key Factors Driving Transportation Demand
- Challenges We Face
- Opportunities for Future



Transportation History

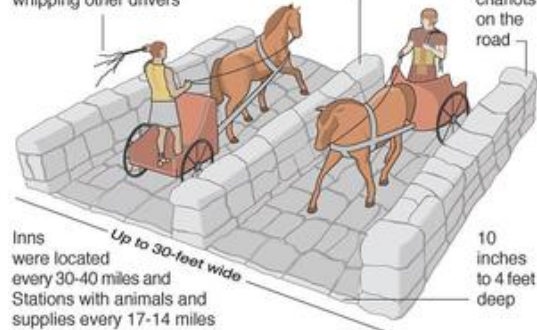
Roman roads

The Roman road Via Egnatia, built between 146 and 120 B.C., stretches 535 miles from the modern Albania's Adriatic sea coast to modern Turkey.

Romans drove on the left side of road, to avoid whipping other drivers

Central partition protected travelers from oncoming traffic

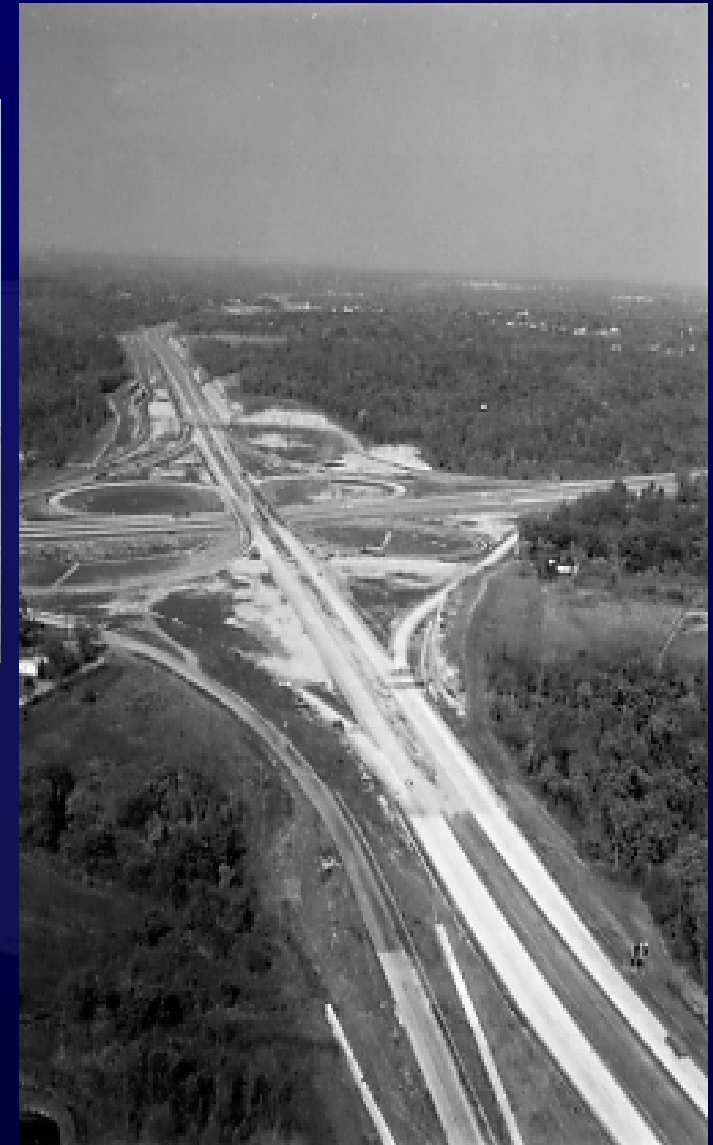
Barrier kept chariots on the road



Source: The Mainframe Weblog

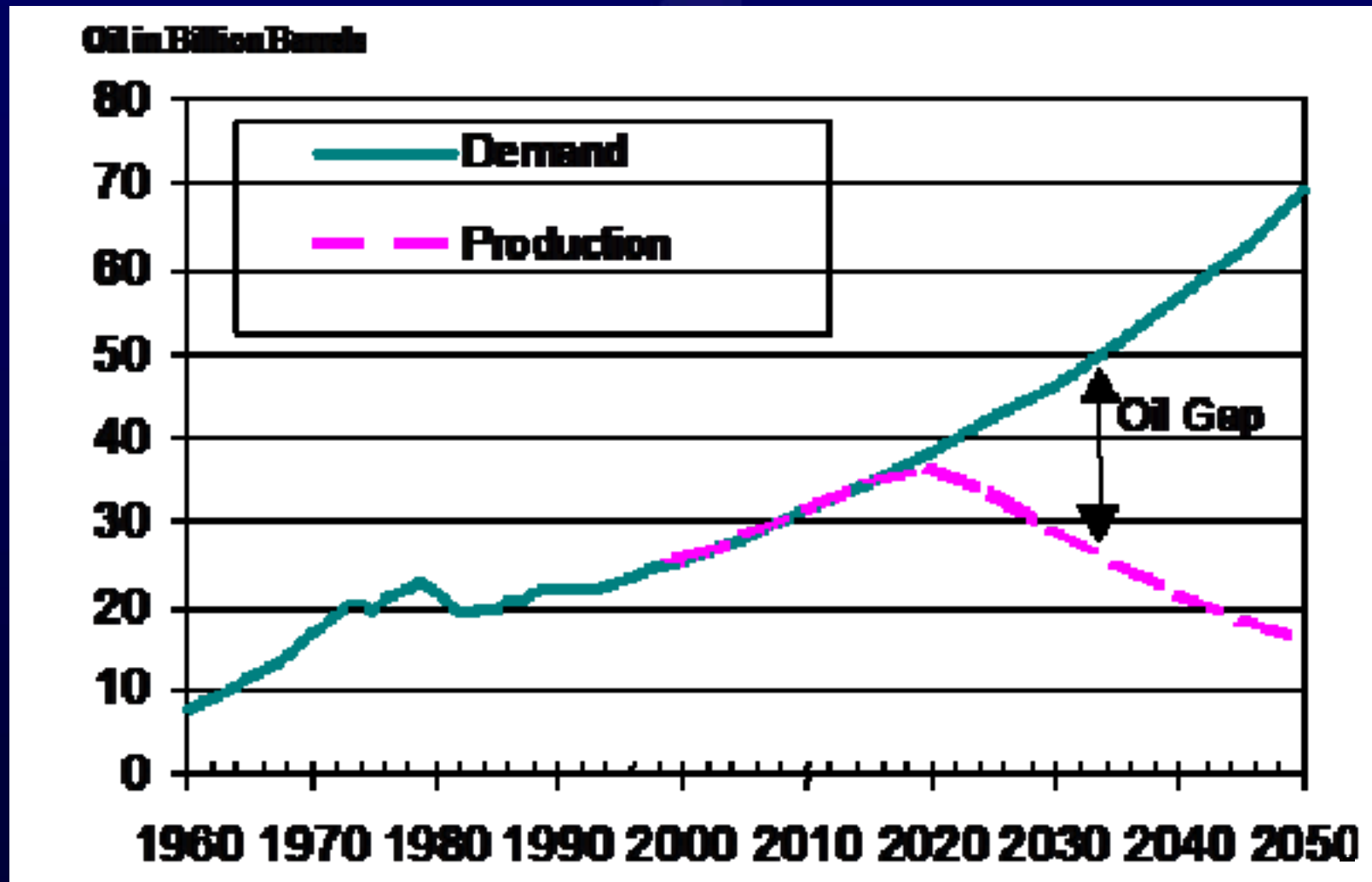


www.wilsonsalmanac.com



Source: www.modot.org

America's Oil Trends



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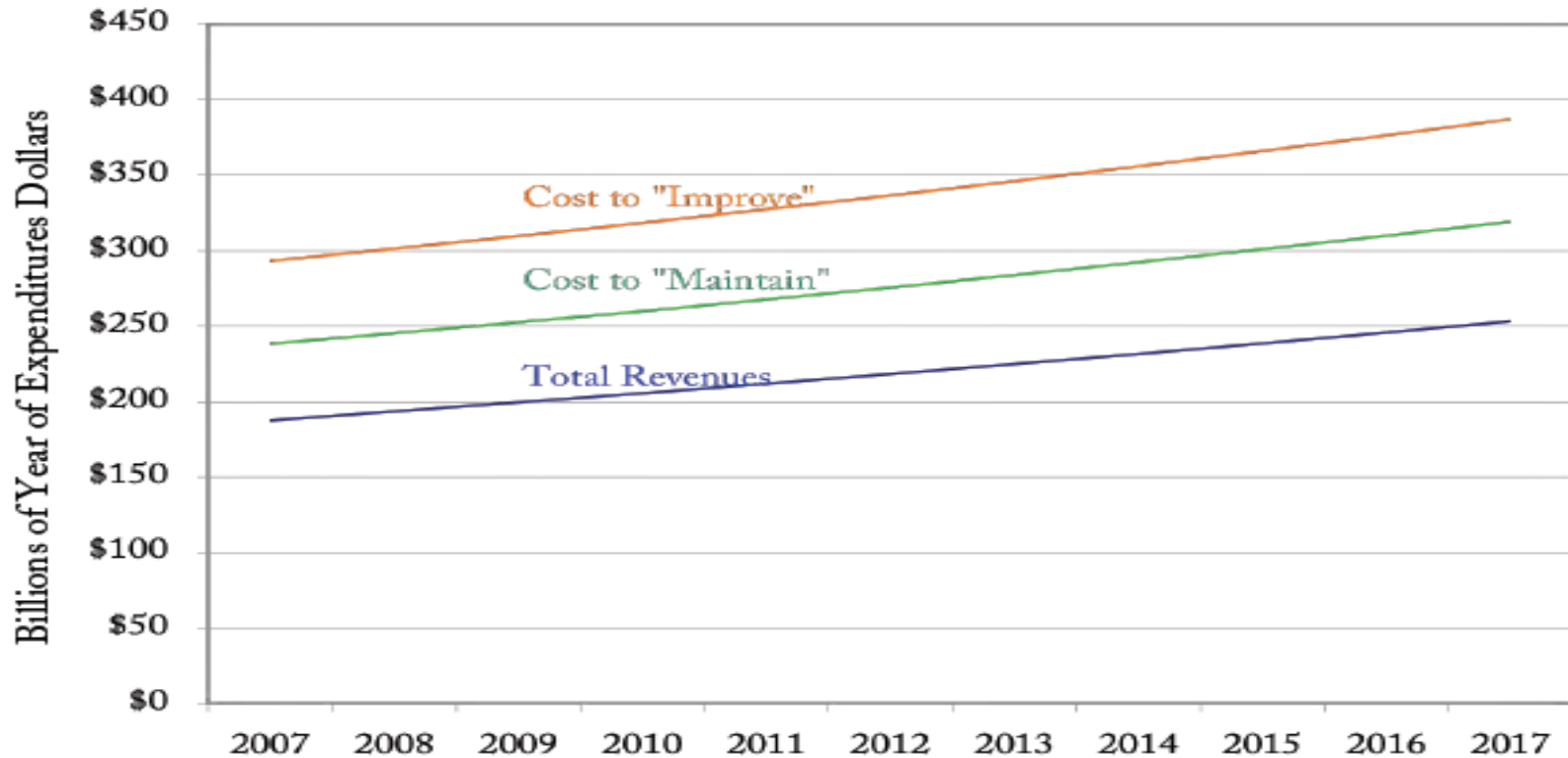
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Source: www.eia.doe.gov/

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Highway Trust Fund

The Projected Funding Gap



SOURCE: Future Financing Options to Meet Highway and Transit Needs, NCHRP Web-Only Document 102, National Cooperative Highway Research Program, Transportation Research Board of the National Academies, Submitted December 2006, 2-5, A-10

Transportation and Economics

- **Economic Activity**

Support 27 jobs per million dollar investment

- **Economic Productivity**

Vehicle manufacturing, freight movement

* Approx. \$44 millions worth of goods move on Montana Roads

- **Household economy and mobility**

Provide mobility to access economic resources, tourism, economic development

* In 2007, non-resident travelers pumped \$ 4.3 billion into Montana's economy



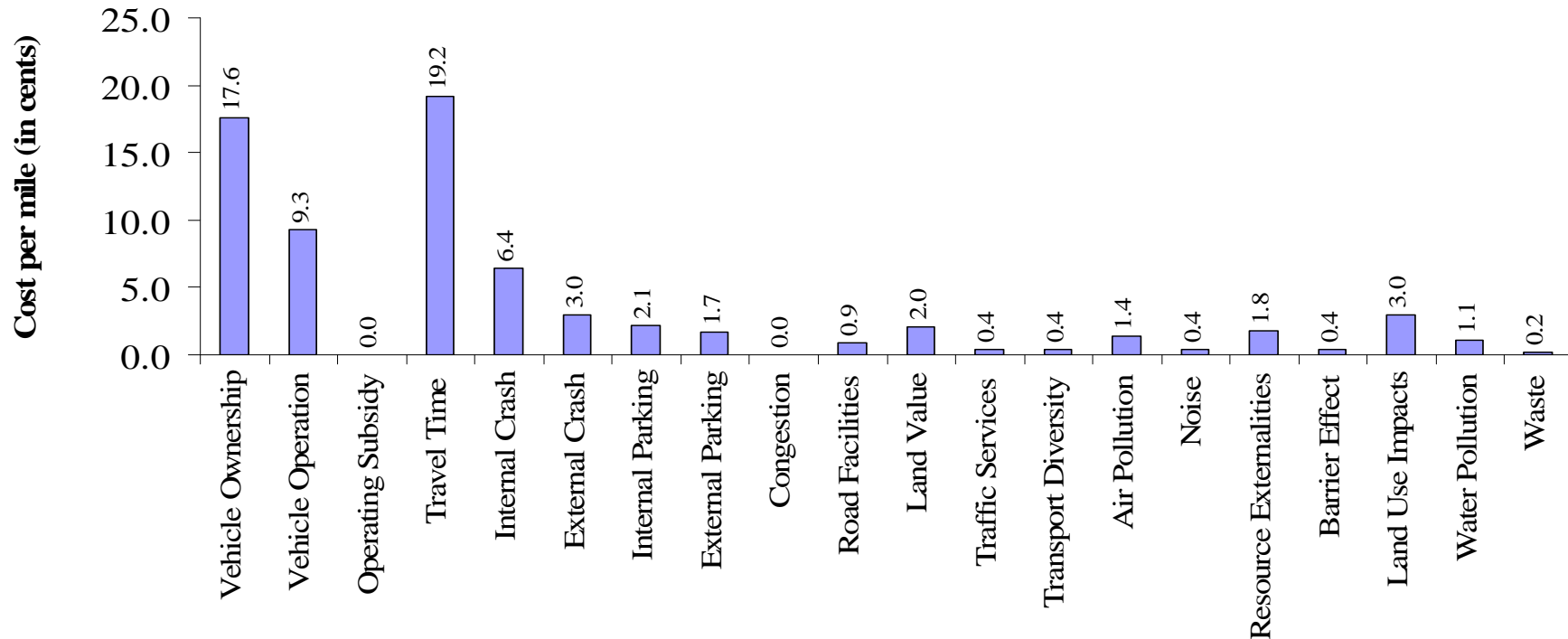
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Travel Cost

**Cost Per Vehicle Mile For Average Car
(Rural Travel)**



Transportation Cost Variables

Data Source: Victoria Transportation Institute

Note: A cost value is converted from 1996 dollar to 2007.

Key Factors Driving Transportation

- Aging Population 25% by 2030



42 million more people (cars) by 2030



Total domestic US freight projected to increase 67% by 2020



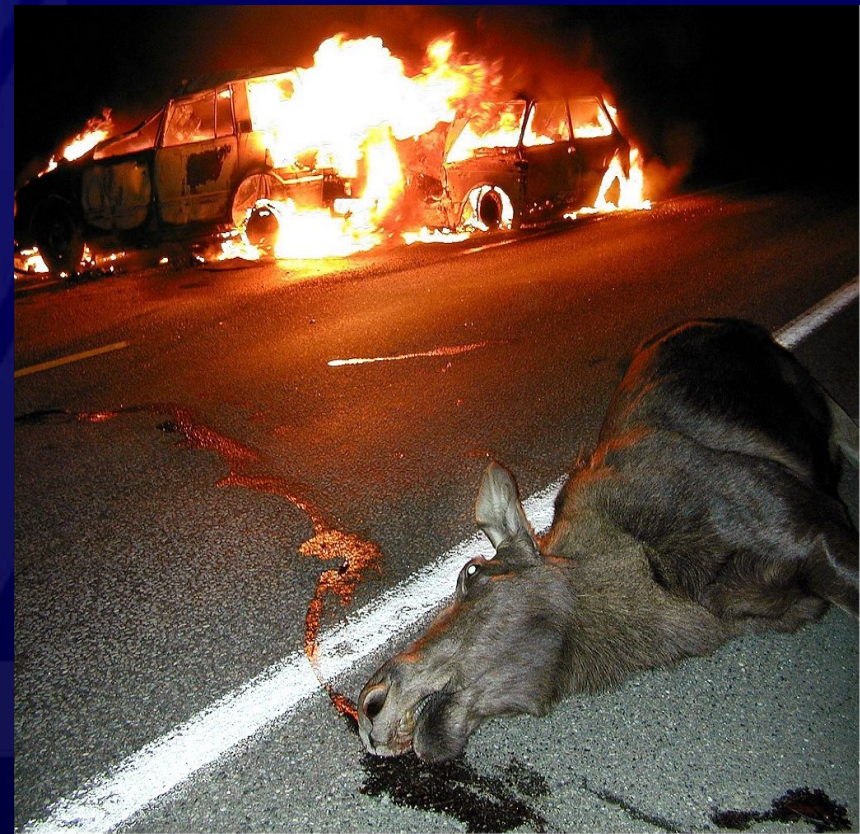
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Challenges

Wildlife Collision Economy



- Cost \$ 8,000 to 30,000 per crash

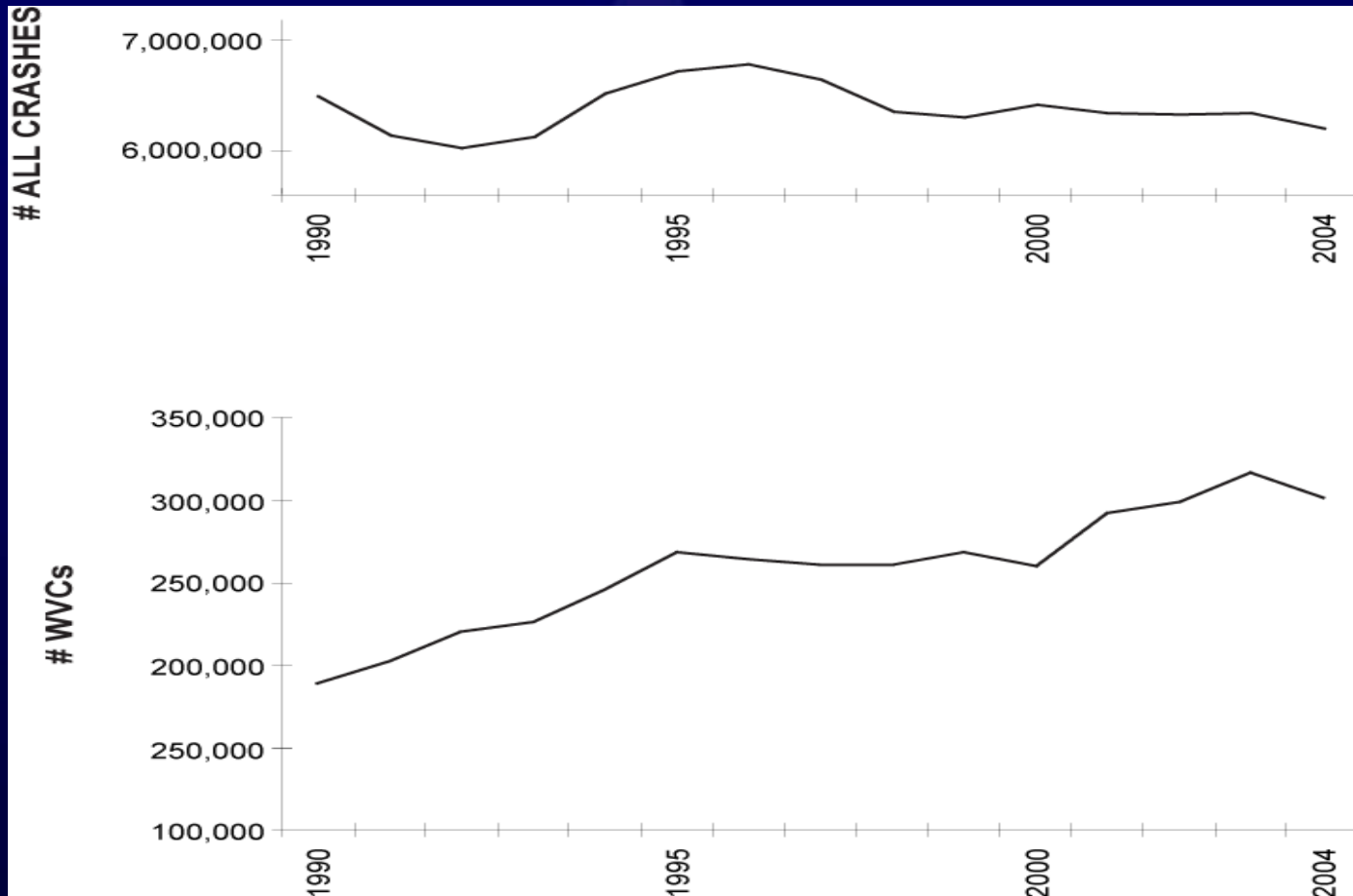


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Wildlife Collision



- WVCs represent 5% of the total motor vehicle collisions



Rural Transportation Infrastructure



- Rural Roads comprise 80% of national miles (3.1 million rural roads miles)
- Carry 40% of vehicle miles traveled.
- 80% of rural roads are 2-lanes or less
- Over 45,000 rural bridges



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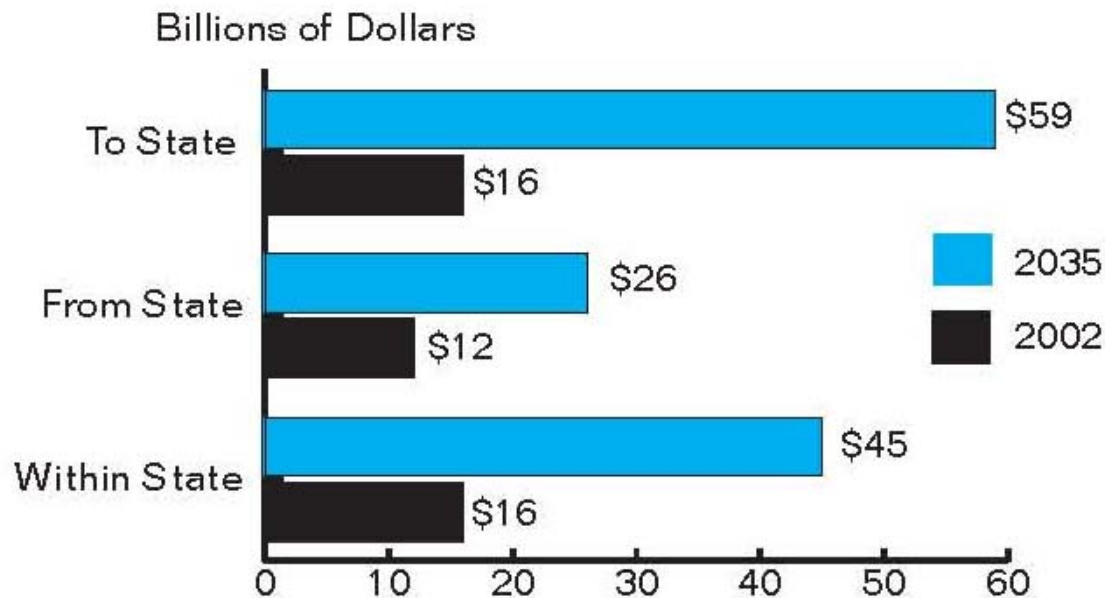
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Rural America Travel Behavior

	Rural Areas	Urban Areas
Trip Frequency	3.8 trips per day per person	4.0 trips per day per person
Trip Distance	37.1 miles per day per person	26.9 miles per day per person
	9.8 average miles per trip	6.8 average miles per trip
Vehicle Ownership	74.4% of household with two or more cars	58.5% of households with two or more cars
	3.3% of households without automobiles	8.3% of households without automobiles
Mode Choice	91% of all trips are by automobile	86% of all trips are by automobile
	0.1% of all trips are by transit	1.7% of all trips by transit
	6.1% of all trips are non-motorized	10.4% of all trips are non-motorized

Freight Movement in Montana

Freight Shipments by Value All Modes of Transportation 2002 and 2035



Source: Office of Freight Management and Operations, FHWA.

69 % to state, 32 % from the state, 89 % within the state



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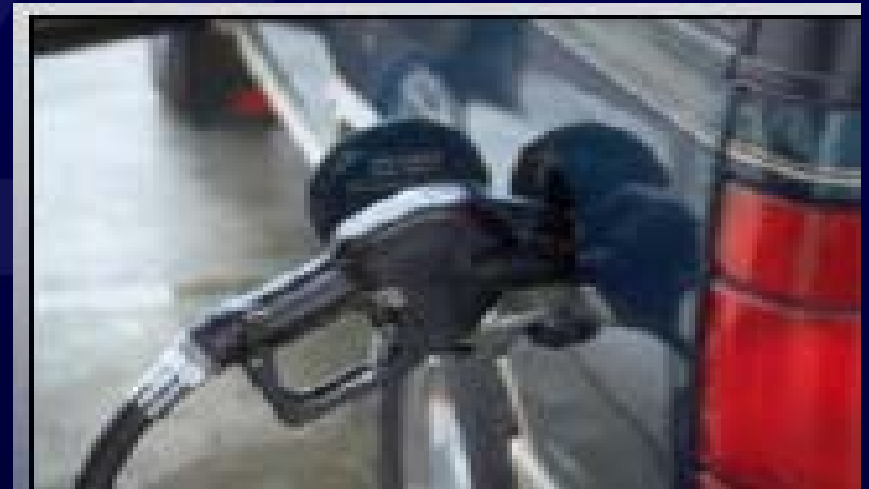
Strategies for Montana's Future

Vehicle Infrastructure Integration and System Management

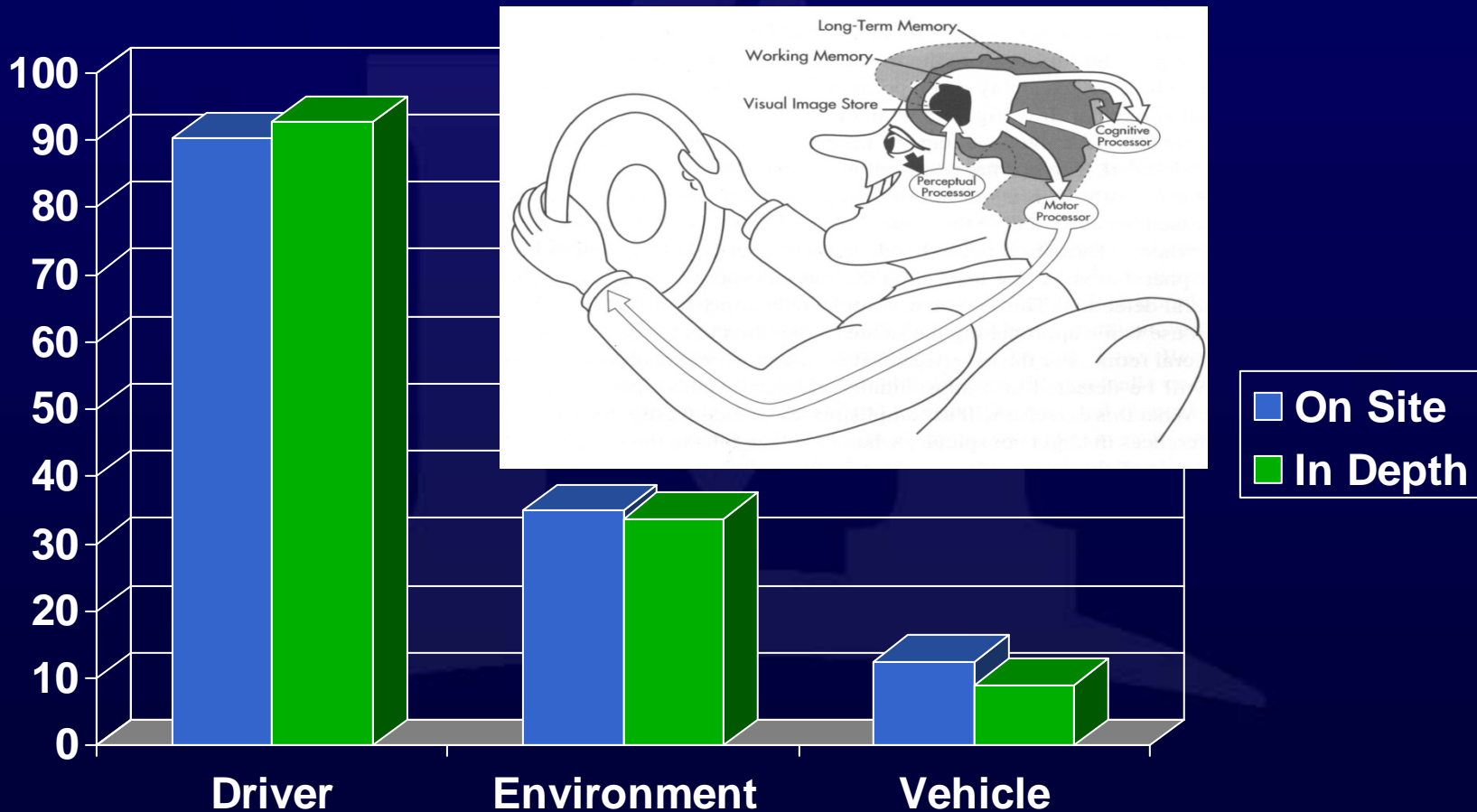


OR Road User Fee Pilot Program

- One year pilot spring '06
- Replaced fuel tax with per-mile charge, paid at gas pump by short range radio frequency
- Proved concept is feasible alternative for revenue collection



Percentage of Accidents in which Component is a Definite or Probable Cause



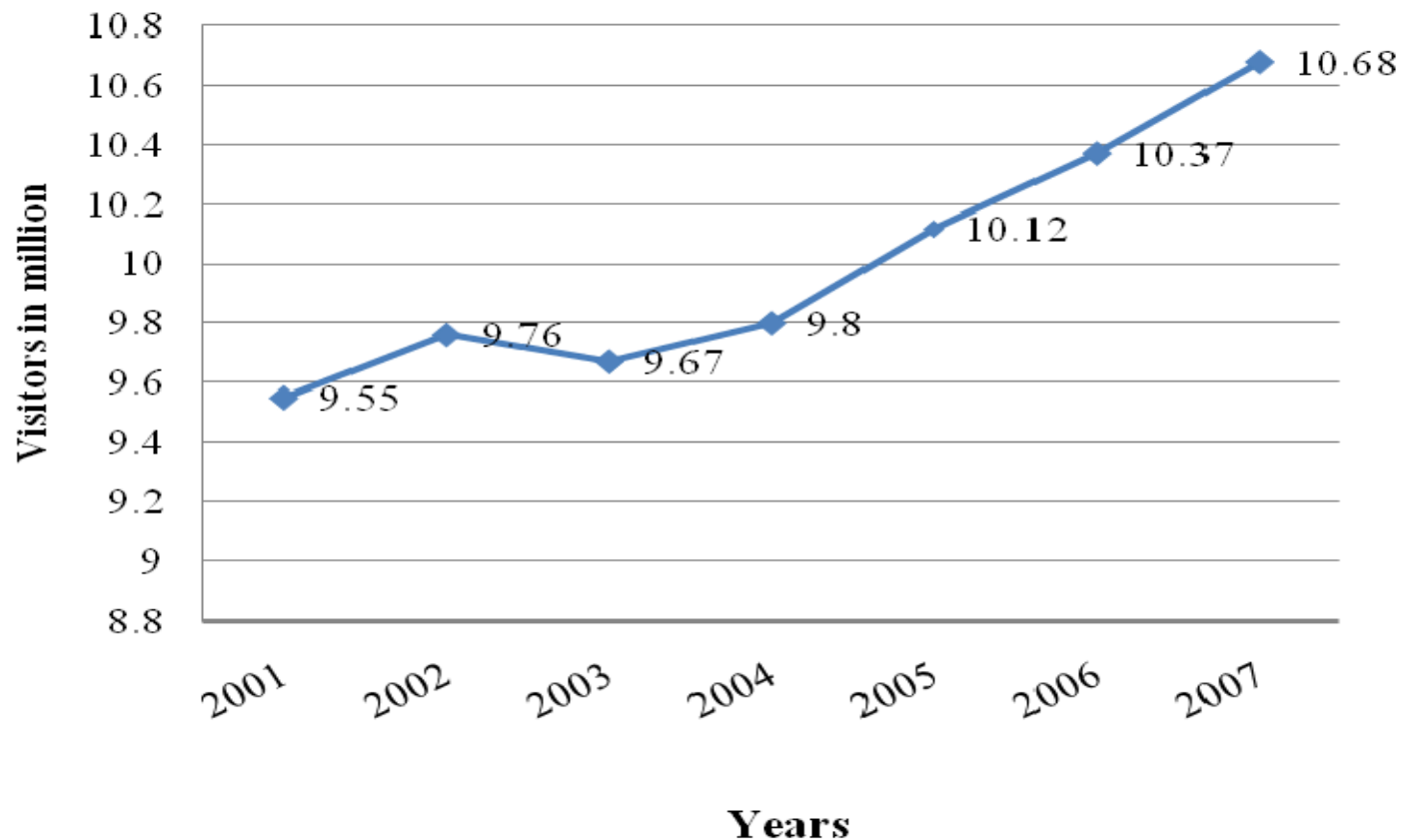
Dynamic Message Signs



Montana Tourism

(\$4.3 billion Industry)

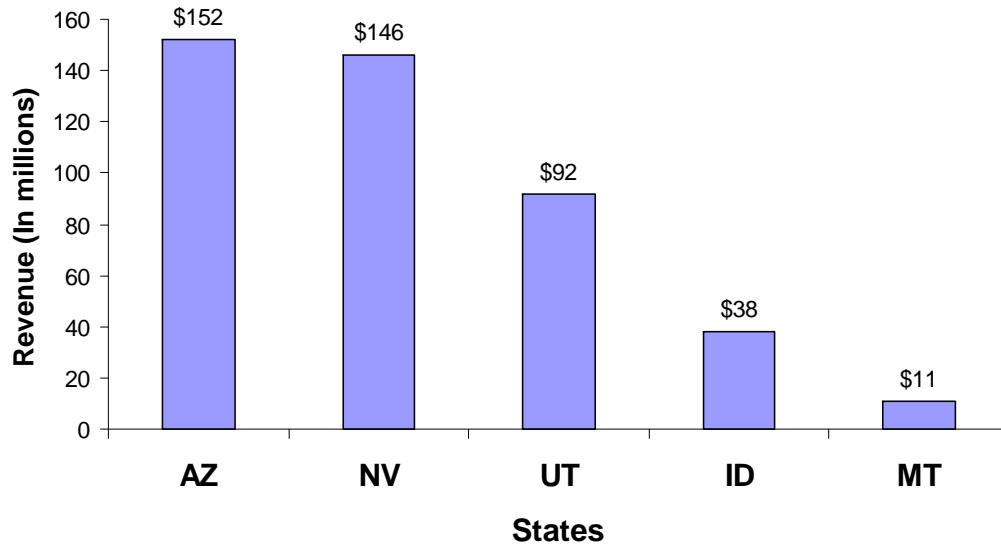
Montana Non-resident Visitors



Traveler Information

CANAMEX Smart Tourist Corridor

Tourism Revenue



The screenshot shows a web browser window titled "TripCheck - Winter Travel Information - Microsoft Internet Explorer". The address bar shows "http://www.tripcheck.com/Winter/winterindex.htm". The page content includes the Oregon Department of Transportation logo and a "TripCheck Winter Travel Info" header. Below the header are navigation tabs: ROAD CONDITIONS, ROAD CAMS, WINTER TRAVEL INFO, OTHER WAYS TO GO, GENERAL INFO, and CONTACT US. The main content area features a section titled "Weather info & forecasts" with a sub-section for "ODOT/OSP Road Condition reports". At the bottom of the screenshot is a large graphic for "511 Montana Travel Info" featuring a map of Montana and a road winding through it.



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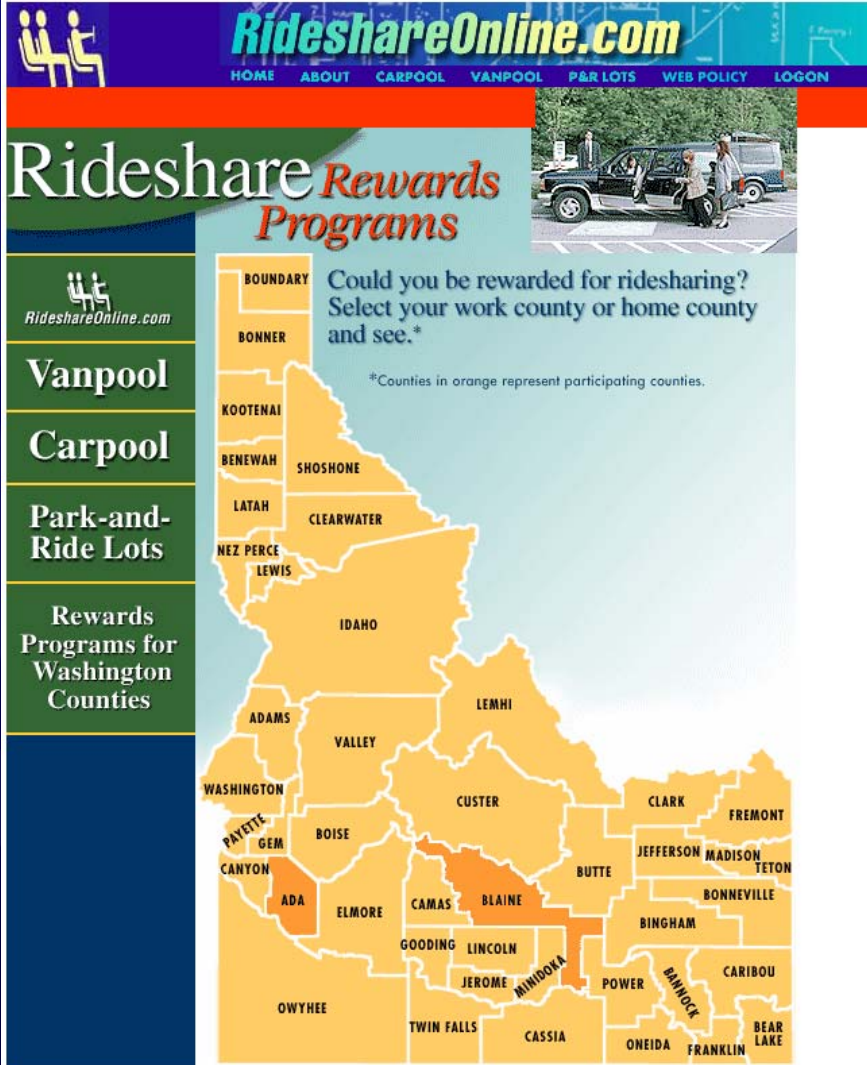
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Rideshare Program

Idaho Statewide

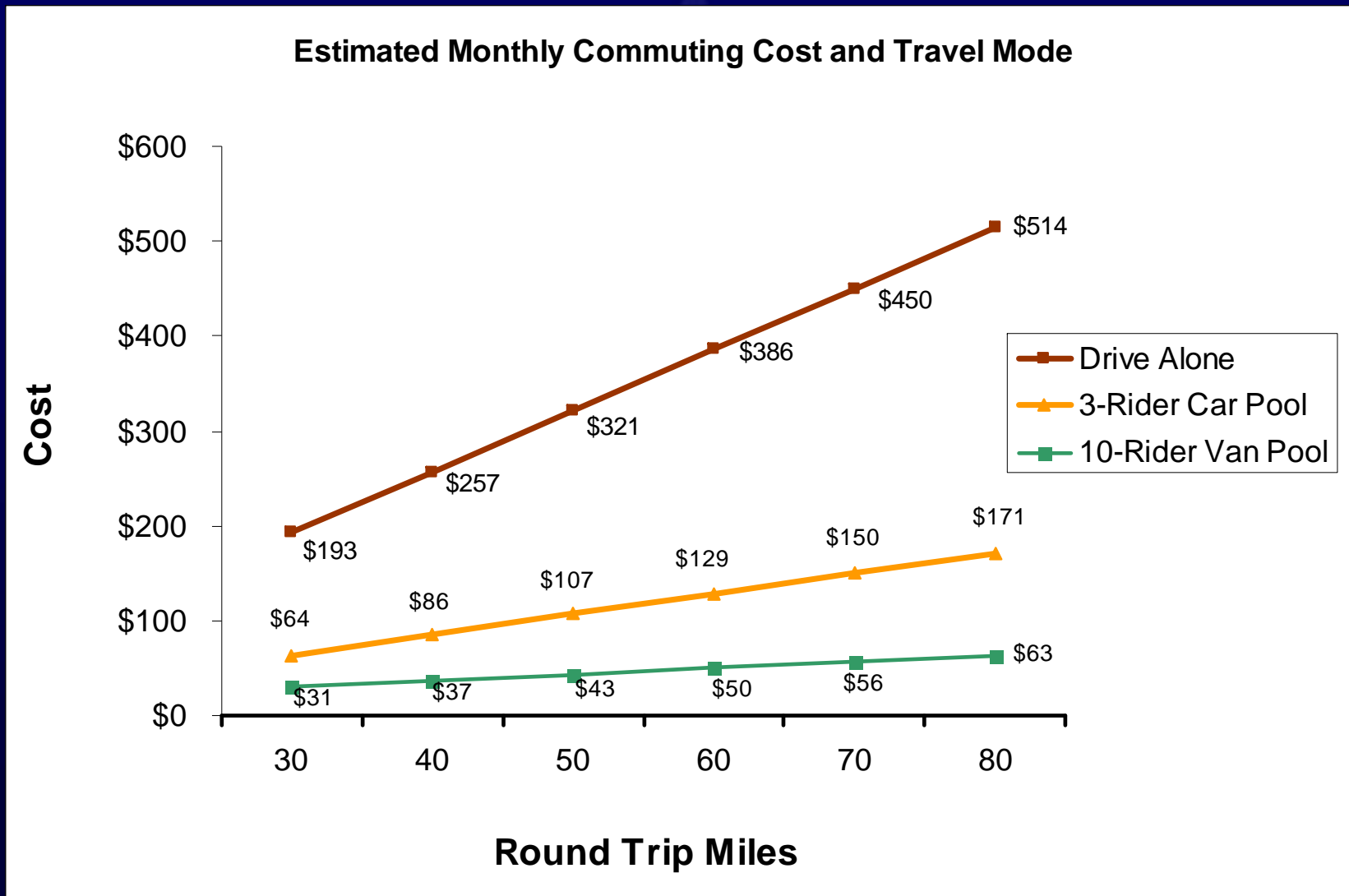
- Attracts 5-15% Commuter Trips
- May attracts 10-30% commuter trips if financial incentives are provided
- Reduce VMT by 50%
- Reduces congestion, road & parking facility costs, crash risk & pollution emissions



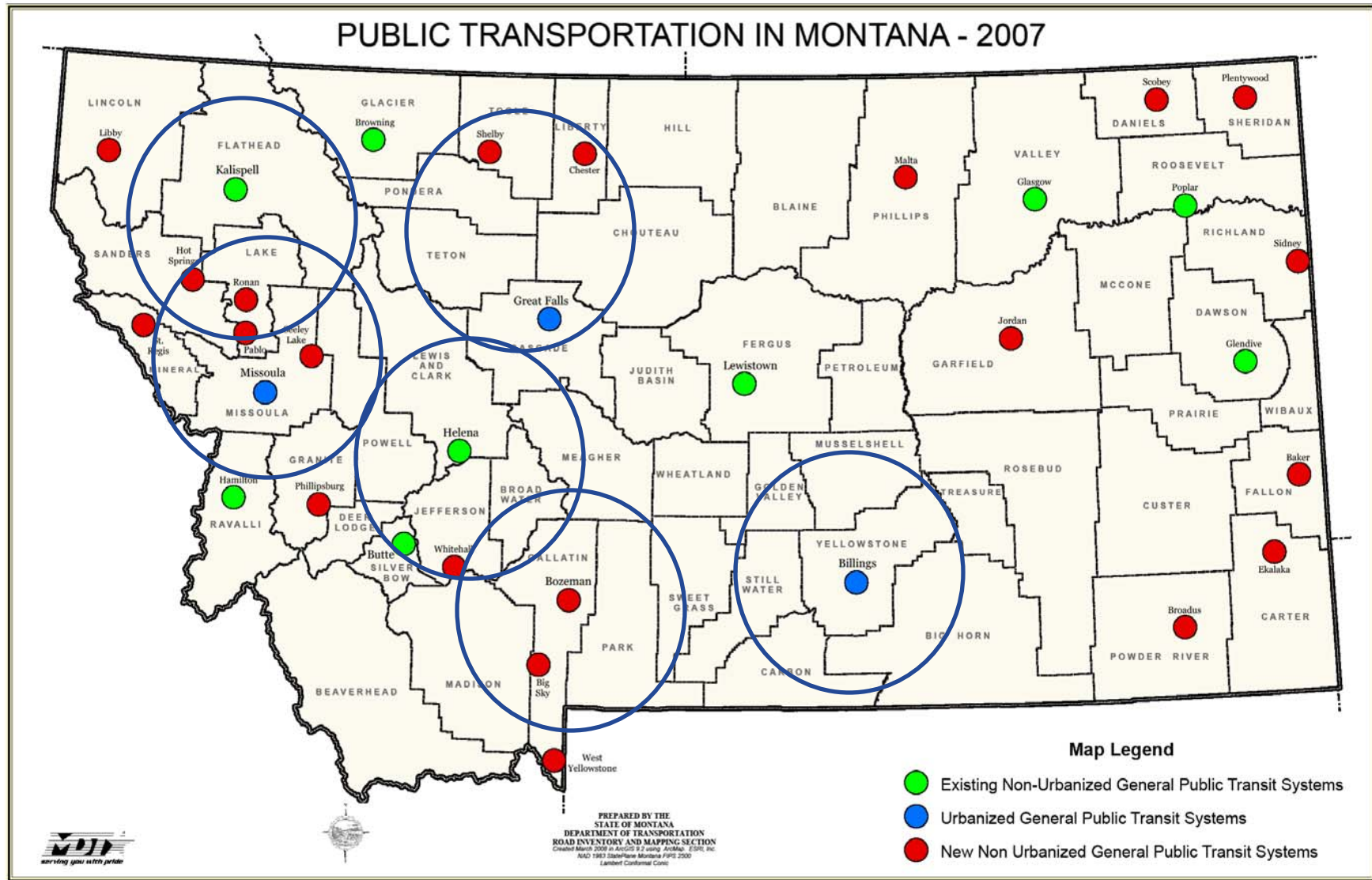
The screenshot shows the RideshareOnline.com website. At the top, there is a navigation bar with links for HOME, ABOUT, CARPOOL, VANPOOL, P&R LOTS, WEB POLICY, and LOGON. Below the navigation bar is a header for "Rideshare Rewards Programs" with a sub-header "Could you be rewarded for ridesharing? Select your work county or home county and see.*". A map of Idaho is displayed, with several counties highlighted in orange to indicate participating counties. The highlighted counties are: BONNER, KOOTENAI, BENEWAH, SHOSHONE, LATAH, CLEARWATER, NEZ PERCE, LEWIS, IDAHO, ADAMS, VALLEY, LEMHI, WASHINGTON, CUSTER, CLARK, FREMONT, PAYETTE, GEM, BOISE, BUTTE, JEFFERSON, MADISON, TETON, CANYON, ADA, ELMORE, CAMAS, BLAINE, BONNEVILLE, GOODING, LINCOLN, BINGHAM, JEROME, MINIDOKA, POWER, BANNOCK, CARIBOU, OWYHEE, TWIN FALLS, CASSIA, ONEIDA, FRANKLIN, and BEAR LAKE. A legend indicates that counties in orange represent participating counties. The website also features a sidebar with icons for Vanpool, Carpool, and Park-and-Ride Lots, and a section for Rewards Programs for Washington Counties.

Source: www.rideshareonline.com

Rideshare



Public Transportation in MT

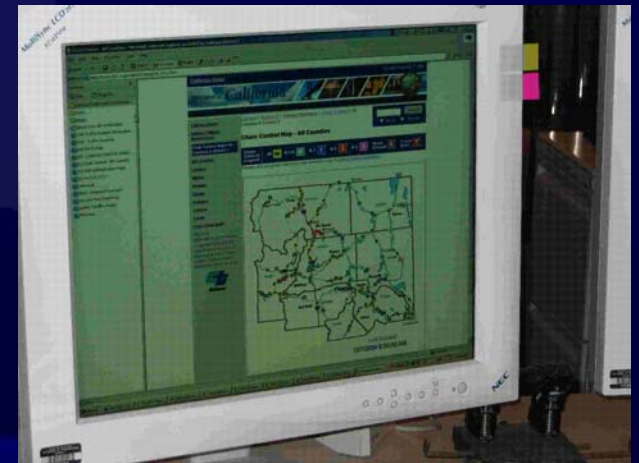


Tour District Vision



Redding Rural Traffic Management Center

- Caltrans rural district
 - 4 rooms in district office
 - 5 staff with hours 6 am to 6:30 pm
- Functions include
 - Traveler info
 - Road reporting
 - Winter operations
 - Radio dispatch
 - Incident management
 - Oversee RWIS, CCTV, HAR, & DMS

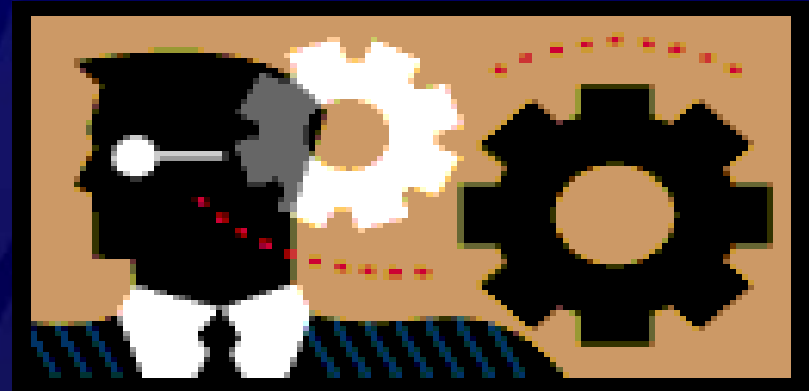


Summary

- Transportation critical catalyst to our Economy
- Transportation management needs systems approach
- Key opportunities - driver behavior and safety, freight movement, user fees, travel and tourism information, transit, traffic management



Questions and Discussion



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