(DRAFT)

Washington Transportation Plan Update

Southwest Regional Transportation Council
Vancouver, WA

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Strategic Planning & Programming

This presentation is a public record document. It is a draft and will be revised as needed. 2nd Edition last revised 10/5/2004.

October 5, 2004

Washington State Department of Transportation

The Update Process

Aspiration for the 2005 Plan Update

- Data driven, analytically grounded and organized by major Issue areas.
- Program and investment proposals advanced for the state for each major issue area.
- Investment and programs proposals prioritized into high, medium, and low priority categories.
- Scale of proposed investment constrained by financial realities.

What we're hearing…

"The WTP should be a collection of information and data from which decision makers can make choices."

"DOT's analytic capability must be strengthened so that we have better information on which to take the long view…The key word everyone has to keep in mind is prioritization…"

"We must prioritize and make choices. The debate is not about how to keep doing just about what we are already doing. It's about how to choose to spend the money we have on what we really want."

How is the Process Taking Shape?

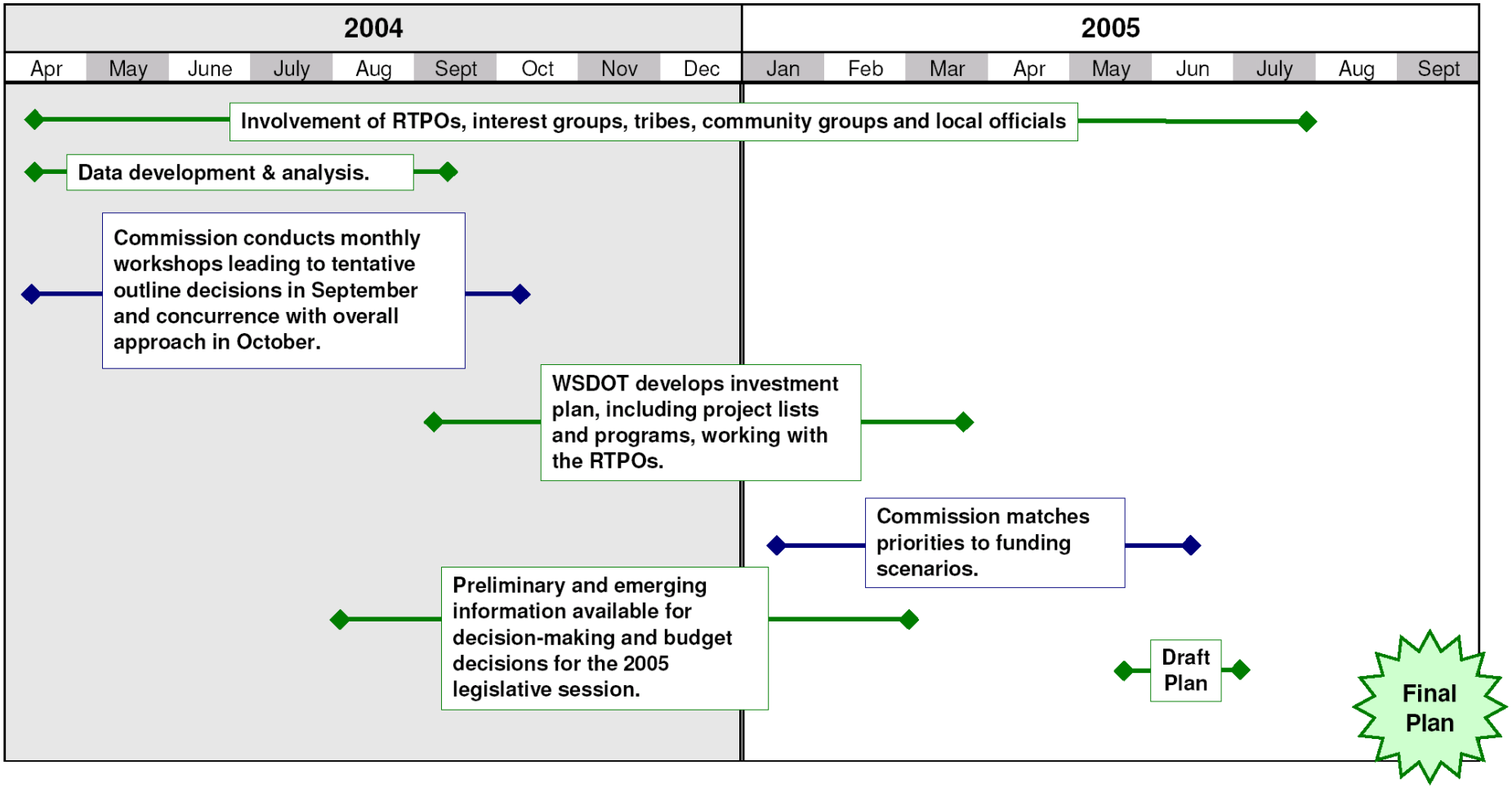
Phase 1: Data and Approach Development

- Build statewide transportation “data library”.
- Analyze statewide trends and system conditions.
- Identify key issues and choices.
- Share the learning and analysis with others.

Phase 2: Developing the Plan Update

- Commission guides tentative judgments on scale and direction of investment programs.
- WSDOT works with RTPOs and others to develop proposals for investment plans and funding scenarios.
- Commission matches priorities to funding scenarios.
- Commission adopts the plan.

What's the Schedule?



The Data

WTP Data Library

A centralized body of information and resources that can support decision-making.

Four categories of information:

- Population
- Economy
- Transportation Facilities and Systems
- Use of Transportation Facilities and Systems

A few sample pages follow…

The WTP Homepage and the Data Library

A centralized body of information and resources that support decision making.

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DATA LIBRARY

WTP LINKS
- WTP Home

STAY IN TOUCH
- Send a message.

The Washington Transportation Plan Data Library

Information about the state's population, its economy, and the conditions and uses of its transportation systems and facilities are essential for the preparation of the WTP update and are matters of great interest to those who will contribute to and use the plan.

The Data Library has begun to capture and present this information. It will continue to grow. The picture it presents also can be shaped and refined by others' questions and suggestions – including suggestions for additional material that the Data Library should include.

Here are some of the topics on which the Data Library already contains information. This listing will change from time to time as more information is added. For questions and comments on the WTP Data Library, email or call Bill Bennion benniob@wsdot.wa.gov or 360-705-7951..

Population More >>
- Washington State's Population Growth
- Population Growth: How Much from Natural Increase? How much from Net In-Migration?
- Growth in Licensed Drivers
- Population Distribution: The Changing Age Mix
- Population Growth in Relation to the State's Metropolitan Areas
- More...

Economy More >>
- Growth in Employment

Facilities & Systems
- State Owned Roadway Facilities
- Federal Road Facilities
- Bridge Inventory by Jurisdiction
- Roadway Safety Rest Area Facilities
- Washington State Ferry and Terminal Facilities
- Passenger Rail Route and Terminal Facilities
- More...

Facilities & Systems Use
- Passenger Rail Ridership
- Safety

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TRANSPORTATION PLAN UPDATE

Transportation Plan Update

WTP LINKS
- WTP Home
- Most Recent Folios
- Additional Folios
- Additional Presentations
- Most Recent Presentations
- Nine Key Issues
- Issue Papers
- Schedule of Events
- Milestone Event
- Data Library
- Transportation Commission
- Federal Highway Administration (FHWA)
- Federal Transit Administration (FTA)
- Planning Organization Directory (pdf)

Transportation Plan

"How can transportation serve our economy's productivity, our communities' livability, our ecosystem's viability, and our citizens' convenience?"

The 2005 update to the Washington Transportation Plan (WTP) is a blueprint for transportation programs and investments. The plan covers all modes of Washington's transportation system: roadways, ferries, public transportation, aviation, freight rail, passenger rail, marine ports and navigation, bicycles and pedestrians. The WTP is required by state and federal law to be regularly updated. The update currently underway will be adopted by the Transportation Commission in 2005, will cover the period 2007-2026, and will be the basis for an investment proposal to the legislature in 2007.

This site will be continuously updated with new information and revisions to earlier releases of draft papers and products, as we progress through the planning process. Current plans that will be updated throughout this process are listed below as resources.

Where indicated, .pdf documents require the free Adobe Acrobat Reader to open and view.

Work Plan More >>
- Phase One
- Milestone Event
- Phase Two
- What's the schedule?

Resources
- Data Library
- Current WTP
- Highway System Plan
- Aviation Planning
- Washington State Ferries Strategic Plan
- Bicycle and Pedestrian Plan
- Public Transportation and Rail

Issue Presentations
- WTP Overview Presentation (pdf)
- Most Recent Presentations
- Additional Presentations

Issue Folios
- WTP Overview Folio (pdf)
- Most Recent Folios
- Additional Folios

Strategic Issues
- Nine Key Statewide Issues
- Commission Workshops (pdf)
- WSDOT Accountability

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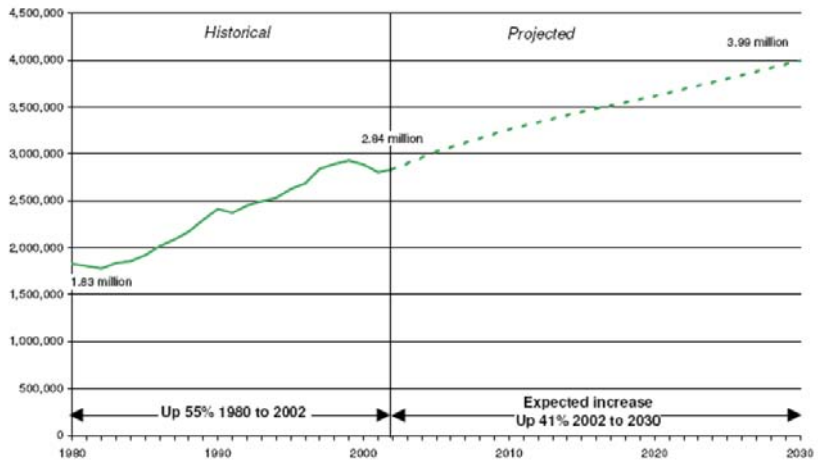
TRANSPORTATION PLAN

WTP Home > Data Library > The State's Economy

Growth in Employment: 1980 to 2002 and 2002 to 2030

From 1980 to 2002, the number of Washington jobs grew from 1.83 million to 2.84 million, an average annual growth rate of 2 percent.

Between 2002 and 2030, 1,158,214 jobs are expected to be added to the Washington economy. Employment in the state is expected to increase at an average annual rate of 1.2 percent, from 2.84 million in 2002 to 3.99 million by 2030.



Source: Table 3-1, 2003 Long Term Economic and Labor Force Forecast for Washington, Office of Financial Management & Employment Security Division

Most of the projected employment growth will be in trade and services industries. From 2002 to 2020, trade and services are predicted to account for 67 percent of the total non-agricultural job increase in the state.

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TRANSPORTATION PLAN

WTP Home > Data Library > The State's Transportation Facilities and Systems

Roadway Safety Rest Area Facilities

WSDOT owns, operates, and maintains 43 developed safety rest areas (28 on interstate highways and 15 on non-interstate highways). In the safety rest areas, WSDOT manages 85 buildings, 566 acres of land, 30 on-site public drinking water systems, and 37 on-site sewage pre-treatment/treatment systems.

Safety rest areas on the interstate system typically serve one direction of travel such as north-bound (NB) or south-bound (SB). Non-interstate safety rest areas typically serve traffic from both directions and are identified as being multi-directional (MD)

See the Safety Rest Area Inventory table below for more information.

Map of Washington's Safety Rest Areas

Click here to view location information.

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Safety

National Transportation Safety Board's Most Wanted Safety Improvements

Highway Safety

Motor Vehicle Fatalities

Motor Vehicle Fatalities Plus Disabling Injuries

Motor Vehicle Collisions on State Highways

The Cost of Motor Vehicle Collisions to Society

Where do Motor Vehicle Collisions Occur?

Collision Factors

Collision Factor: Age of Drivers

Collision Factor: Driver Errors and Behaviors

Collision Factor: Alcohol Impairment

Collision Factor: Speeding

Collision Factor: Inattentive and Sleepy Drivers

Collision Factor: Not Using Seat Belts

Other Factors

Collison Factor: Motorcycles

Collision Factor: Large Trucks

Collision Factor: Pedestrians

Collision Factor: Bicyclists

Collision Factor: Road Features and Conditions

Collisions in Work Zones

The "Golden Hour"

Intermediate Drivers' License for Young Drivers

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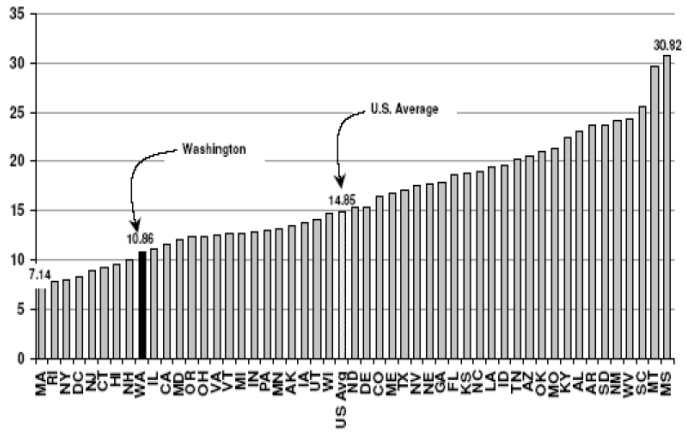
TRANSPORTATION PLAN

WTP Home > Data Library > Use of Transportation Facilities and Systems in the State > Safety

Motor Vehicle Fatalities

In 2002, Washington State ranked ninth in the nation for fewest traffic fatalities in relation to population. That means Washington's average is about 11 traffic fatalities out of every 100,000 people. The national average is about 15 traffic fatalities out of 100,000 people. Compare this to Washington's traffic fatality rate per vehicle miles traveled and the ranking is not much different. Washington is ranked 10th in the nation for traffic fatalities per 100 million vehicle miles traveled.

Rate of Fatalities Per Capita in the U.S.
Traffic Fatlities per 100,000 Population in 2002



Source: U.S. Department of Transportation; National Highway Traffic Safety Administration - "Traffic Safety Facts: 2002" http://www-nrd.nhtsa.dot.gov/pdf/nrd-30/NCSA/TSFAnn/TSF2002Final.pdf

Source Data: Rate of Fatalities per Capita

The Message

Washington Transportation Plan Update

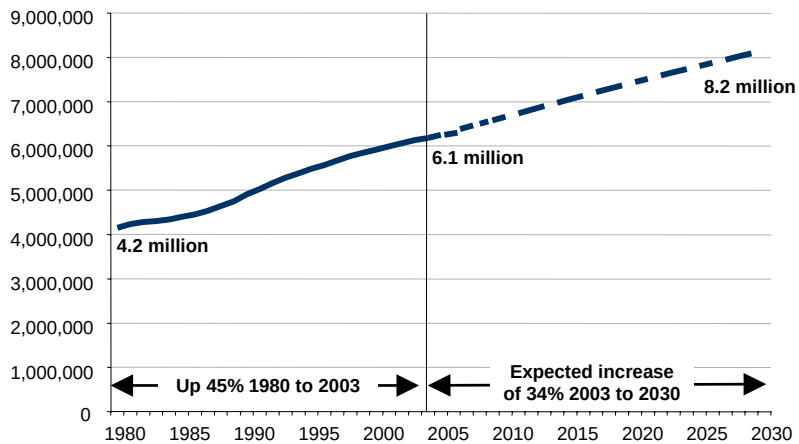
What you will hear over and over. . .

- **Demands on our state's transportation systems are up, and have not been adequately addressed for years.**
- **Funds for transportation are not there to do what needs to be done.**
- **Aging and deterioration of our state's transportation system will require spending more and more to "stay in place".**

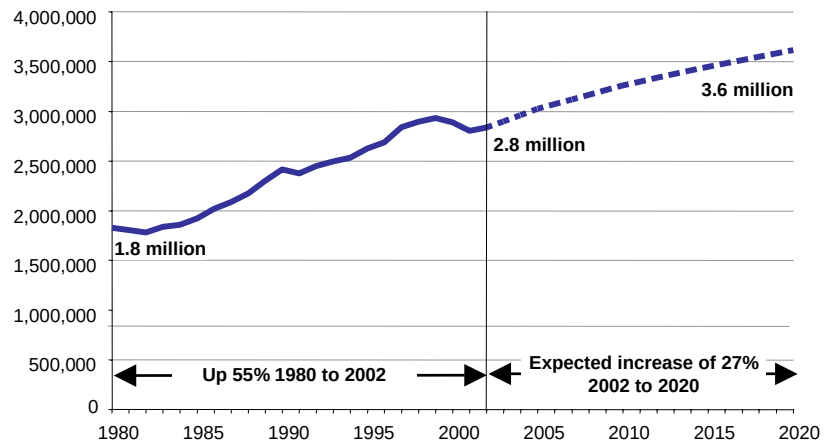
How do we talk about and settle on our real priorities in light of these paramount realities?

Demand is up…

Population Will Continue to Grow

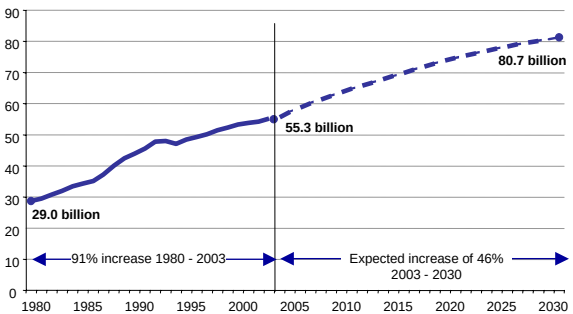


Employment Will Continue to Grow

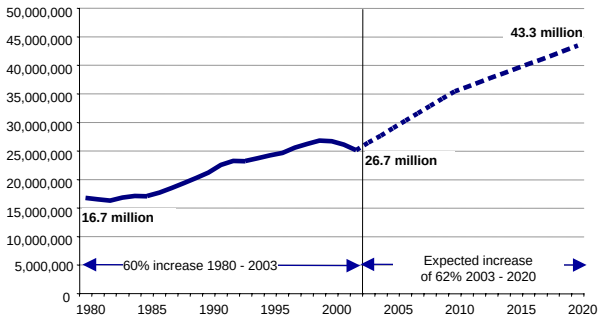


Vehicle Miles Traveled Will Continue to Grow

(Miles in billions)

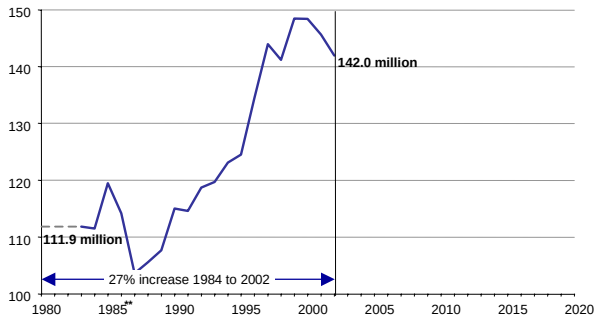


Ferry Ridership Will Continue to Grow



Transit Ridership Will Continue to Grow

(Fixed Urban Passenger Trips displayed)



**In the 1980 US Census, some suburban population areas were reclassified as urban areas. As a result, the transit systems serving these areas were then required to begin submitting yearly operating data to the National Transit Database - many of these beginning reporting in 1983. Data before 1983 is not compatible

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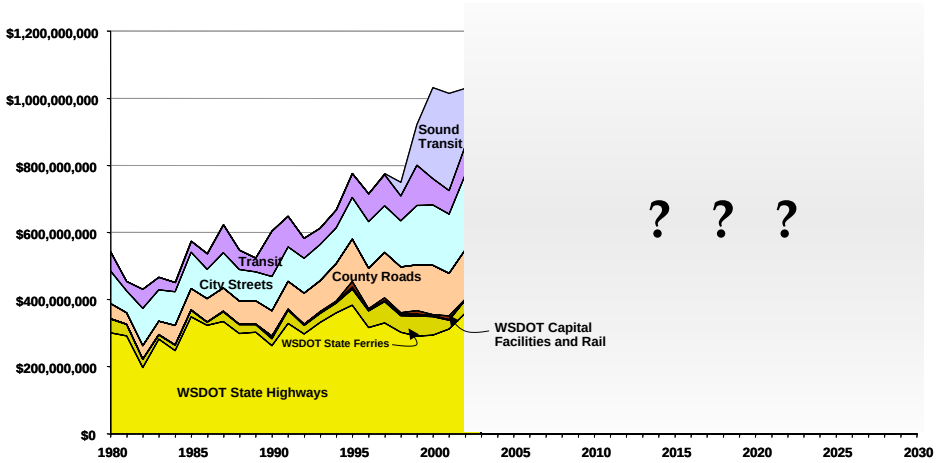
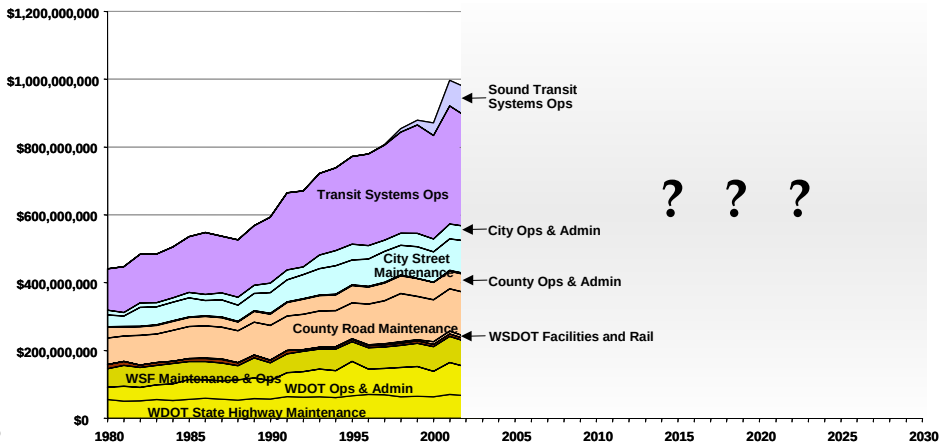
Funding: Down or flat…more or less….???

Capital Investment for Transportation by WSDOT, Counties, Cities, & Transit Agencies 1980 – 2002 Historical Data - (1980 dollars)

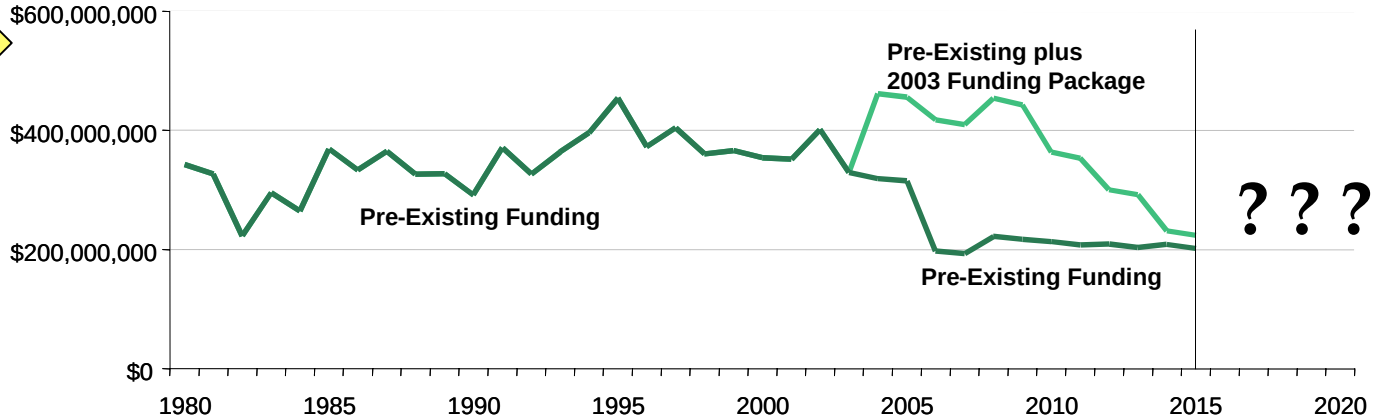


Operating Expenditures for Transportation by WSDOT, Counties, Cities, & Transit Agencies 1980 – 2002 Historical Data - (1980 dollars)



For WSDOT

Over the Next Decade WSDOT Capital Funding is Declining Even With the Last Funding Package (in 1980 constant dollars)



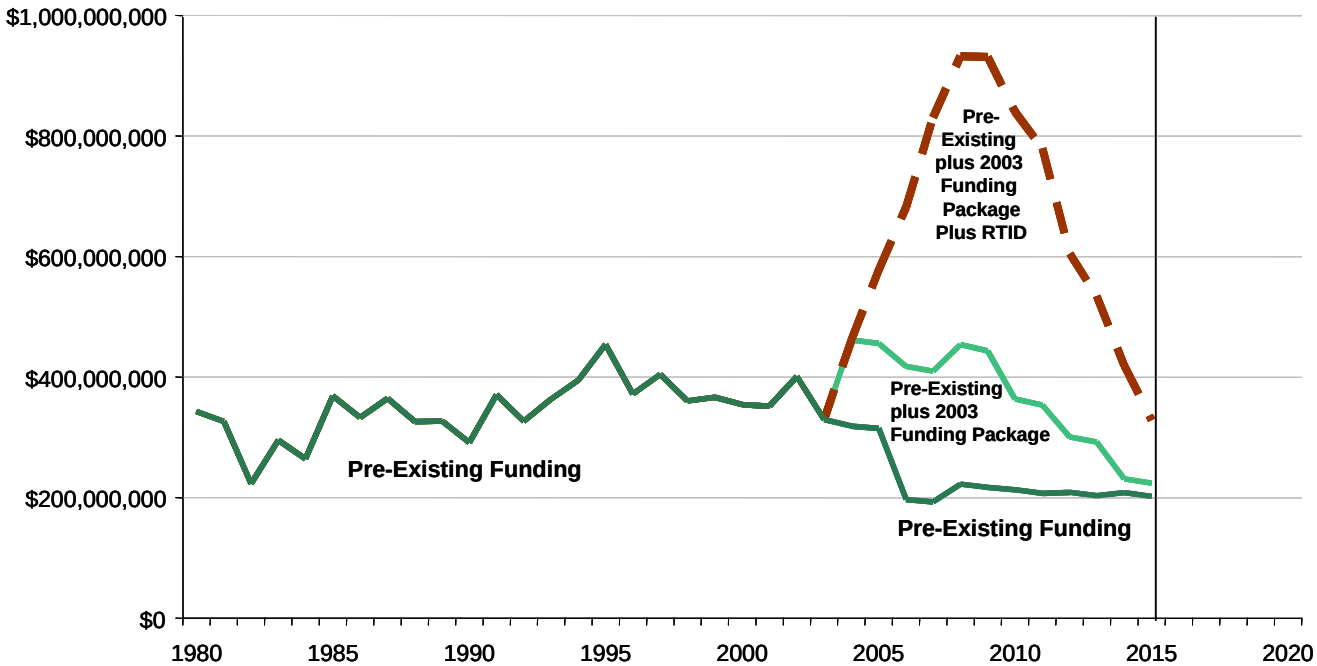
The New Games in Town for Funding are:

Regional Transportation Improvement District (RTID):

- If passed, could increase capital investments by $10+ billion in King, Pierce and Snohomish counties.

Other Initiatives: ?

Overall Level of Capital Investment Continues to Depend on the RTID (in 1980 constant dollars)



Additional State Revenue: ?

What are we hearing about funding issues from the cities and counties and transit systems?

- County road levy and the current share of the gas tax cannot meet current funding needs.
- Most rural counties do not have an adequate tax base to fund general government needs let alone local transportation improvements.
- Local options cannot generate enough funds to provide for construction maintenance and preservation programs.
- Recent statewide initiatives have repealed local transportation funding tools.
- For transit, the state provides less than 2% of their total funding.
- Capital needs of transit systems vary depending on size and location, but are most acute in urban areas.
- Most critical for transit is augmenting funding for operations.
- In some areas of the state, the sales tax imposed by transit will not grow by enough to support funding for current operations.

The System is Aging and Deteriorating…

These problems are best recognized by the public as:

- Alaskan Way Viaduct
- SR 520 (Evergreen Point Floating Bridge)
- Interstate Pavements

On inspection, this is the problem of "preservation" investment. It is statewide and multimodal. It affects bridges, pavement and other facilities that the public assumes it can "take for granted".

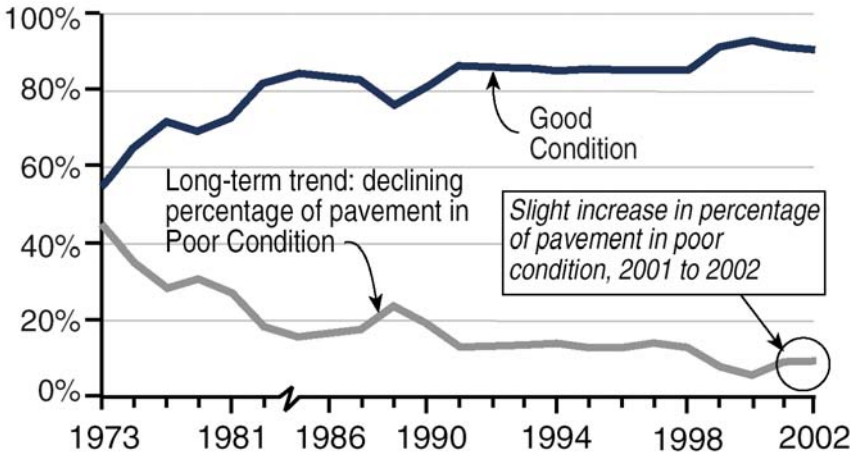
But preservation cannot be taken for granted and needs to be funded.

The System is Aging and Deteriorating…

Even though *asphalt pavement* conditions are improving,***concrete pavement*** conditions on the state's most important highways are in decline and will be expensive and inconvenient to fix.

All Pavement Condition Trends

Percent of Pavements



Source: WSDOT Materials Lab.

2004 Concrete Lane Miles*		
Current Age (Construction or Reconstruction)	**Total Lane Miles**	**Lane Miles Rehabiliated to Date by Dowel Bar Retrofit**
0-10	147.1	0.0
11-20	274.0	0.0
21-30	566.8	35.0
31-40	642.0	322.4
41-50	279.1	58.1
51-60	5.0	0.2
61 or more	66.1	0.0
Total	**1980.0**	**415.7**

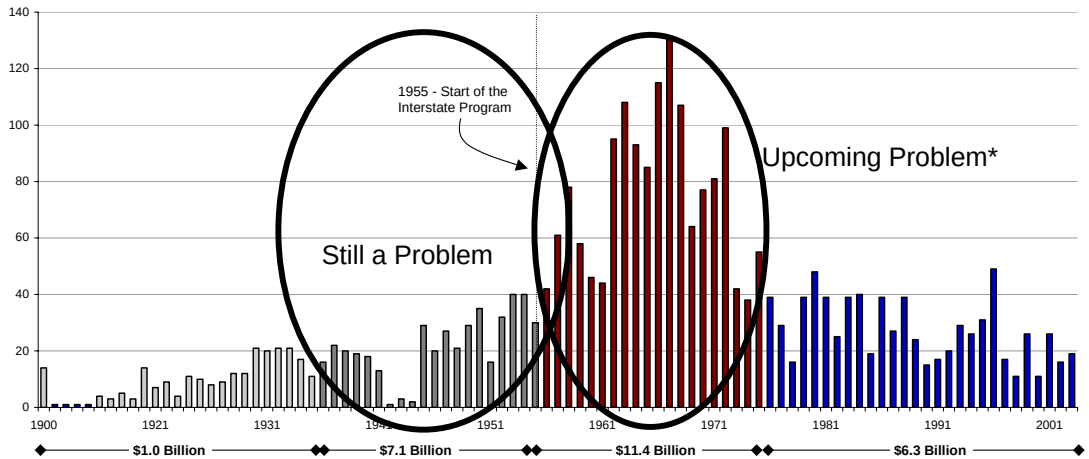
** Does not include 321 lane miles of bridge sections and 112 lane miles of ramps.*

The System is Aging and Deteriorating

Bridges are getting older.

- In the next 20 years, much of the bridge inventory will reach the age of 50 or more years.
- As more of our bridge inventory reaches the age of 50, investment needs for bridge rehabilitation will continue to rise sharply with the most pressing needs being to replace the oldest structures in the system.

Bridge Inventory by Age and Replacement Costs
2004 dollars



*May last longer than assumed life of 50 years

Ferry system assets are getting older.

- Just as with bridges the time is coming when expensive investments in ferry terminals and vessels will need to be made.
- Of our 28 ferry boats, 21 are more than 20 years old and six are 50 years or older.

Class	Name	Year Constructed	Age
Jumbo Mark II	Tacoma	1997	7
	Wenatchee	1998	6
	Puyallup	1998	6
Jumbo	Spokane	1972	32
	Walla Walla	1972	32
Super	Hyak	1967	37
	Kaleetan	1967	37
	Yakima	1967	37
	Elwah	1967	37
Issaquah 130	Issaquah	1979	25
	Kitsap	1980	24
	Kittitas	1980	24
	Cathlamet	1981	23
	Chelan	1981	23
Issaquah	Sealth	1982	22
Evergreen State	Evergreen State	1954	50
	Klahowya	1958	46
	Tillikum	1959	45
Steel Electric	Quinault	1927	77
	Illahee	1927	77
	Nisqually	1927	77
	Klickitat	1927	77
Miscellaneous	Rhododendron	1947	57
	Hiyu	1967	37
Passenger-Only	Skagit	1989	15
	Kalama	1989	15
Chinook	Chinook	1998	6
	Snohomish	1999	6

The System is Aging and Deteriorating…

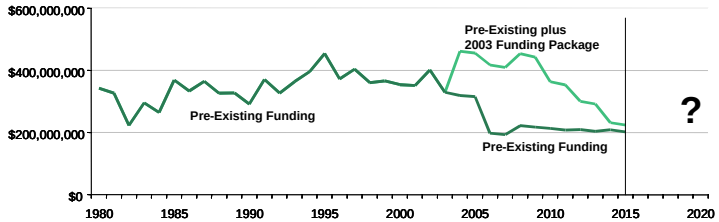
Concrete pavement rehabilitation and bridge replacement are not the only preservation items in need of new investment funding.

- **Chip Seal roadways** on freight and goods transportation system routes that carry trucks and freight tonnage in excess of the roadway structures load carry capacity.
- **Rest Area buildings** which have reached the end of their economic life (i.e. renovation costs often exceed replacement costs).
- **Major Electrical features** are either aging or reaching the point where replacement parts are difficult to purchase and the systems have become obsolete.

Reality Intrudes

To put the funding potential in perspective, several scenarios were developed. The bottom line: even with an aggressive state funding scenario, priorities will have to be set.

Over the Next Decade WSDOT Funding is Declining Even With the Last Funding Package
(in 1980 constant dollars)



How much additional funding could be raised over the next decade?

Dollars in millions

Three scenarios, 2 options each.	Option A				Option B			
	Local Share	State Share		Total	Local Share	State Share		Total
	50%	*50%*			*25%*	*75%*		
		20% Maintenance	80% WSDOT Capital*			20% Maintenance	80% WSDOT Capital*	
Scenario 1: **1¢ gas tax increase each year for the next 10 years**	$993	$199	$1,835	$3,027	$497	$298	$2,722	$3,517
Scenario 2: **10¢ gas tax increase beginning July 1, 2005**	$1,781	$356	$2,526	$4,663	$890	$534	$3,790	$5,214
Scenario 3: **10¢ gas tax increase beginning July 1, 2005, plus another 10¢ increase July 1, 2011**	$2,675	$535	$4,344	$7,554	$1,337	$802	$6,577	$8,716

**Amounts shown for WSDOT Capital Investment include assumptions for the sale of bonds using the available revenue stream. The funding level can vary depending on the timing of expenditures and the resulting bond sales needed, as well as from financing assumpitons including interest rates and debt service coverage requirements.*

The Discussion Involves:

- Even with RTID, more will be needed from the state for the Alaskan Way Viaduct, SR 520 (Evergreen Point Floating Bridge), interstate pavements, and other preservation needs.
- Maintenance and other operating and capital programs were not augmented by Transportation 2003 Funding Package. Safety programs need more funding.
- Only the very worthiest “new works” (i.e., capacity enhancement) projects can be funded at the likely levels of future investment capacity. How should they be prioritized?
- Multimodal funding will continue to present a challenge – other sources besides the gas tax and vehicle fees will need to be tapped.
- Increased state funding will need to be shared with cities, counties and transit.
- Equity amongst areas of the state will continue to be an issue: the “donor areas” are very restless.

The Issues

Strategic Issues for this Update

- ✓ System Preservation
- ✓ System Efficiencies
- ✓ Safety
- ✓ Transportation Access
- ✓ Bottlenecks & Chokepoints
- ✓ Moving Freight
- ✓ Health & the Environment
- ✓ Strong Economy & Good Jobs
- ✓ Building Future Visions

System Preservation

What are we finding?

- **On State Highway Pavements**: WSDOT has made progress on asphalt and chip seal pavements, improving conditions and achieving lowest life cycle cost investment. Concrete pavements are an emerging need: they are disproportionately represented in poor pavement miles. The pro forma 10 year budget is adequate to cover asphalt and chip seal repaving needs, but falls far short of funding concrete rehabilitation needs (could represent over $1 billion shortfall)
- **On State Highway Bridges**: WSDOT has made good progress on bridge rehabilitation, but aging bridges represent a growing need. WSDOT's pro forma 10 year budget has shortfalls: bridge painting ($50 million); bridge deck preservation ($23 million); and bridge replacement ($50 million +inflation). In addition, replacement of the Alaskan Way Viaduct and SR 520 floating bridge are unfunded and represent a many billion $ shortfall. No funding is identified for modernizing bridges with width and geometry deficiencies, which could cost $1.5 billion.
- **Other State Highway** needs include shortfalls in unstable slope work ($25 million); rest area preservation ($15 million); and potentially large shortfalls in preserving drainage structures and electrical systems, pending complete inventories.
- **On Local Roadways**: Local governments face large shortfalls in preserving their pavements and bridges, with local transportation funding being squeezed by reductions, growing costs, and expansion needs. Consistent data on preservation needs of local roadways, especially for cities, is lacking.
- **On Washington State Ferries**: The current 10 year budget pro forma shows the WSF meeting targets for both vessel and terminal preservation, including the replacement of four 1927 vessels. Further vessel replacement beyond the 10 year period is an outstanding and unfunded issue.
- **On General Aviation Airports**: A shortfall exists in paving, lighting, and navigation aids. An inventory is being updated.
- **On Public Transit Systems**: An inventory is being developed on transit asset preservation needs. Issues include funding stability for bus fleet replacement strategies; increasing costs for preservation of service levels; park and ride lot preservation needs; and growing demand response operating needs are competing with other transit priorities.
- **On Railroads**: Short-line rail tracks are facing large rehabilitation needs,and may be at least partly unfunded.

Emerging Directions

- Asset preservation has emerged as a major issue for the WTP: "Pay me now, or pay me much more later"
- Big ticket preservation needs include replacement of the Alaskan Way Viaduct, the SR 520 floating bridge, and concrete interstate pavements. In addition, regular state highway preservation programs (such as bridge painting, bridge deck preservation, bridge replacement, drainage systems, electrical systems, and others) need to be augmented.
- Local roadway preservation shortfalls are affecting system performance and need to be addressed.
- Stable funding for transit and ferries is needed to enable fleet and terminal asset management strategies to work. An approach for prioritizing general aviation pavement rehabilitation needs is needed.

System Efficiencies

Conclusions about Maximizing Transportation Efficiency

- System operations is about aligning transportation system performance with customer expectations, and getting the highest performance possible out of the existing system– this applies to all modes.
- On roadways, including transit, throughput is a key measure of system efficiency. Roadway capacity can actually decrease under congested conditions, leading to lost productivity. Maintaining flow is key. Basic maintenance and operations are essential to keep the system open and operating. As traffic grows, increasingly sophisticated management techniques are needed to maintain flow.
- Information technology will allow the next generation of management techniques - Advanced communication will permit real-time information for travelers. In-vehicle ITS devices (such as On-Star) will be the next step, sharing weather, safety and transportation system data with drivers, system providers and first responders. Enabling closer integration of modes (highway and transit) to address real-time system coordination needs.
- The focus has been on system efficiency measures – the next frontier is on point-specific applications to improve flow at specific chokepoints (such as truck performance on specific on-ramps).
- System pricing is emerging as one of the primary options to effectively maintain flow, because price allows the ultimate flexibility in matching roadway capacity to traffic demands.
- Operational approaches should be viewed as part of a continuum and an integral part of our investment program: a commitment to maintain and operate the system; management techniques to maximize use of the system; and capital investment to expand the system where needed.

Emerging Directions

- Preserving existing roadway capacity through operational strategies is taking a higher priority in the WTP update: continued and expanded ITS applications; operational flow improvements; and integration with capital expansion strategies (bottlenecks and chokepoints) are directions. New technical analysis procedures are needed.
- Effective transit operations are critical to system efficiency in congested corridors: a closer tie between transit and roadway operations is needed.
- The potential of pricing strategies to preserve system capacity needs to be explored and tested.

Safety

What are we finding?

- Roadways continue to be the biggest safety concern: while fatality rates continue to fall, more than 600 people are killed annually on Washington roadways, with many more suffering disabling injuries.
- The societal cost of motor vehicle collisions for all roadways (state, county, city, tribal, and federal) is estimated at $5.6 billion annually. Although fatal and disabling injury collisions make up only 2.5% of the total number of collisions, they account for 54% of the total societal costs.
- Rural roads (state, county, and federal) have the highest accident rates and are outstanding problems.
- Young, inexperienced drivers (16 – 20 years old) are the age group with the highest rate of fatal collisions. On the other end of the age spectrum, the risk of being involved in a fatal collision begins to grow in the 71+ age group. As the state's population ages, this will be a continuing concern.
- 93% seatbelt use in Washington, but half of all fatalities are of unbelted drivers or passengers.
- The top three contributors in fatal accidents are:
  - Lane errors – 43% (This is a broad category that includes, improper lane changes, merging and exiting, leaving the roadway, crossing into the path of on-coming traffic, etc.)
  - Alcohol – 30 %
  - Speeding – 24%
- The number of pedestrian deaths (12% of all fatalities in 2002) remains disproportionate to the frequency they are involved in roadway collisions (1.4% of all roadway collisions). 40% of pedestrian fatalities involve impaired pedestrians, and a large number of pedestrian accidents take place close to transit stops. Bicycle crashes are of concern because they are more often severe. The rate of all collisions involving motorcycles is only 1.4%, however, the percent of fatal and disabling collisions involving motorcycles is 12%.
- The biggest safety concern on rail is trespassers being hit by trains.
- General aviation safety problems include pilot error due partly to inadequate weather information.

Emerging Directions

- Behavioral approaches will be a significant part of the strategy to address impaired driving, seat belt use, speeding, aggressive driving, and other contributing driver behaviors. WSDOT and the Traffic Safety Commission are working together to evaluate the effectiveness of potential behavioral countermeasures.
- Roadway Environment—safety conditions on rural two lane roadways can and should be addressed – strategies such as increased enforcement, centerline and edge rumble-strips, and improved shoulders and roadsides are being evaluated. Also, median cable barriers and rumble strips on Interstates are proving to be cost-effective solutions.
- Pedestrians, bicyclists, and motorcyclists are disproportionately represented in fatality rates and need to be addressed in the safety strategy.
- Stepped up efforts to prevent railroad trespassing, such as Operation Lifesaver, are needed.
- Improved weather information access at general aviation airports will help pilots make good flight decisions.
- Better understanding of data, e.g., separated by county, should help target safety efforts where they will have the most effect.

Transportation Access

What are we finding?

- Persons with special transportation needs (those without car access) fall into four broad groups: the elderly, people with disabilities, children, and people with low incomes. It is difficult to determine how many people in these groups need specialized transportation services, but the demand is growing.
- The elderly are a growing share of the population and they are driving more and longer. The elderly are "aging in place," increasingly living in suburban areas where driving is essential, and public transit service is difficult and expensive to provide. The growing "old" elderly (85+) will increase the demand for demand-response public transportation. The growing number of older drivers will require special roadway safety emphases (such as signing).
- Public transit agency spending represents a majority of funding for access services, but many, especially rural, areas of the state do not have public transit services. The continued loss of intercity bus services has further contributed to a sense of rural isolation. A large number of both non-profit and for profit groups provide access services in all areas of the state. Many of these services rely on volunteers, and funding in precarious. Demand response services are expensive to provide, and are taking an increasing share of limited transit agency funding. With current funding, transit agencies face the dilemma of trading-off between demand response service and fixed route service.
- Efforts to coordinate these services are ongoing through organized broker programs, and the efforts of the Agency Council on Coordinated Transportation.

Emerging directions

- Comprehensive strategies are needed to address the transportation issues of the growing elderly population, and of increasing rural isolation.
- Funding and service levels for demand response service by both transit agencies and other providers needs to be addressed.
- Continuing focus on better coordination between services is needed to minimize duplication and make the most of available revenue.

Bottlenecks & Chokepoints

What are we finding?

- Demand is growing, and the demand/capacity imbalance will continue to grow in the future.
- Congestion occurs mostly in the urban areas, especially Puget Sound, Vancouver and Spokane. (92% of all delay on highways occurs in these areas.)
- Congestion affects efficiency of the system: Maximum freeway throughput of about 2000 vehicles per hour occurs at speeds of 45-50 mph. Throughput drops dramatically when traffic volumes force speeds to drop below 50 mph. The capacity of the roadway actually decreases (as much as half) with congestion-induced reduction in speed.
- There are locations on the system where system geometry and traffic patterns contribute to congestion and the reduction of throughput capacity. These locations, known as bottlenecks and chokepoints, provide an opportunity to restore lost capacity to the system.
- Bottlenecks and chokepoints are not always locations with measured congestion-related delays: roadway geometry may impede traffic flow; weather and other events (spring thaw, flooding, avalanches) may affect “passability” of a roadway.

Emerging Directions

- Targeted capital investments at bottlenecks and chokepoints cost less than full corridor projects, and can result in a recognizable reduction in delay and improved flow for the traveler – they represent the biggest bang for the “short” buck to be invested in capacity expansion solutions. New analysis techniques are needed to identify these locations, and to develop and prioritize appropriate solutions.
- Bottleneck and Chokepoint Investment options could be developed to improve travel for commuters, freight, interregional movement, recreation and event access.

Moving Freight

What are we finding?

Freight needs have been identified in three areas:

- Global trade throughput – freight that flows through Washington
  - Port related trade is growing, raising concerns about both highway capacity, railroad capacity, and the ability of port connector roadways to handle the projected volumes
- The needs of Washington's producers & manufacturers
  - Washington manufacturing represents $88 billion and Washington agriculture represents $5.6 billion in economic activity per year – freight movement is essential to receive supplies and to move products to markets
  - These needs vary by region
- The retail and wholesale distribution system
  - Represents up to 80% of all truck travel
  - Critical supply chains for everything we consume, including gas, groceries and garbage.

Emerging Directions

- Addressing rail bottlenecks: East/West mainline capacity; port access in Vancouver, Kalama, Tacoma, and Seattle; border crossings
- Reducing the productivity loss due to roadway congestion: urban area bottleneck and chokepoint solutions; I-90 Snoqualmie Pass delay reductions (capacity and weather); Canada/U.S. border truck crossings
- Maintaining the Columbia/Lower Snake River System as a transportation option: dredging and lock maintenance
- Developing a multi-county core all-weather road system (state and county roads) to minimize the economic impacts of thaw related closures
- Improving air cargo ground capacity and access to SeaTac International and King County airports
- Determining the proper state role in short-line rail track preservation

Health & The Environment

What are we finding out?

- **Air Quality:** Air quality is improving: concerns remain with air toxics, "inhalable" soot ($PM_{2.5}$), and other components of diesel exhaust. Carbon dioxide, implicated in global warming, is a significant transportation emission.
- **Active Living and Healthy Communities:** Washington residents are increasingly overweight, and automobile dependency is implicated along with diet and other choices. Access to facilities such as sidewalks and bike paths, and transit-friendly land use patterns, increases the frequency of physical activity.
- **Water Quality – Stormwater:** Water quality (preventing pollution from entering water bodies) and water quantity, which affects flooding, erosion, and stream habitat, are the primary concerns. Watershed approaches provide a means to deliver more cost-effective and beneficial environmental investments. **Protecting and Connecting Habitat:** Washington's rich natural biodiversity is highly valued by the citizens of the state. Roads can degrade habitat, restrict movement of wildlife across landscapes, lead to collisions with vehicles, and create barriers fish passage. WSDOT is working to address these issues as part of project design and retrofit.
- **Operations and Maintenance:** WSDOT's Integrated Vegetation Management is moving forward. The agency's Environmental Management System and compliance review will help WSDOT ensure best environmental practices.
- **Noise:** Citizens are increasingly concerned about traffic noise. Barriers remain an effective strategy, but the retrofit program is largely unfunded and people continue to request noise barriers.
- **Sprawl:** Transportation's role in "sprawl" is a matter of debate and discussion: this must be resolved at the regional planning table, rather than on a project by project basis.

Emerging directions

- Meet environmental priorities:
  - Help shape the state's response to calls for reductions in greenhouse gas emissions
  - Invest in watershed-based tools to better address stormwater and wetlands needs
  - Actively address habitat connections across transportation corridors
- Define an appropriate transportation role in the area of active living
- Recommend a systems approach for addressing cumulative effects of transportation projects and induced growth issues

Strong Economy & Good Jobs

What are we finding out?

- The link between transportation and economic development is manifest: transportation, in the form of roadways, airports, water ports, and rail, is necessary for a strong economy, providing access to businesses, jobs and world markets, and moving freight and commerce.
- Economic benefits of transportation investment fall into four primary categories:
  - Basic User Benefits (mainly reduced operating costs, reduced passenger and freight delay and reduced accidents)
  - Jobs from project construction and the multiplier effect
  - Economic productivity increases that helps expand the state economy
  - Development for local or regional economies (through improved land access and support for tourism)
- Transportation infrastructure is a necessary factor for economic development, but not sufficient to ensure economic development. Other factors are important, and may overshadow transportation investment.
- To grow the state's economy, transportation investments made for economic development purposes should be targeted at supporting generative industries (those that grow state personal income) not development that just redistributes personal income from one locality to another (such as retail).
- Transportation projects which intend to support speculative development don't necessarily attract that development. Targeted transportation economic development projects which focus on retaining existing jobs or probable new jobs help ensure success.
- DCTED has identified industry clusters particularly important to Washington's economy which grow generative jobs. The state's economic development plan calls for expanding and supporting the needs of these industry clusters.
- Transportation programs and services particularly support the tourism industry through: Infrastructure (highways, scenic byways, airports, Washington State Ferries (a service and an attraction), intercity passenger rail, safety rest areas, and scenic viewpoints); Information and Interpretation (highway signing , roadside Interpretation,traveler information, maps (Official Highway, Bike, and Byways) and publications; and access to federal grant funding for tourism planning and projects (transportation enhancements and the National Scenic Byway Program)

Emerging Directions

- WSDOT should work closely with DCTED and the State Economic Development Commission to evaluate the transportation needs of industry clusters to support the overall state economic development direction.
- Transportation policy should continue to focus economic development transportation projects on supporting "sure bets" rather than speculative development, and should be aimed at supporting generative industries.

Building Future Visions

What are we finding out?

- There are a lot of visions for the future of transportation in Washington that come from all levels and perspectives – some are beyond our grasp (either by just a little or sometimes by a lot), and some are within sight (sometimes clearly, and sometimes more distantly). Some are clearly needed, some are unjustified. Given that Washington is still growing, it's important to think today about shaping the future, even though current funding is tight.
- Some future visions are funded and are now emerging into reality: including the first phase of light rail and commuter rail n the Puget Sound region (which along with the HOV system, direct access ramps, transit oriented developments represents an emerging transit vision in the Puget Sound region); Portland's four light rail corridors, two of which approach Washington; the AMTRAK Cascades train service which represents the first step toward higher speed intercity passenger rail; and the targeted highway improvements funded by the 2003 transportation funding package.
- Many future visions are unfunded, including most large scale corridor transportation improvements:
  - Planning is proceeding and the need is established, but corridor improvements on I-405, SR 167, SR 520, SR 704 Cross Base Highway, the I-5 Columbia River Bridge, SR 395 North/South Freeway in Spokane, SR 9, SR 522 and other urban corridors are mostly unfunded
  - Future phases of light rail expansion in Seattle, and initial segments in Vancouver and Spokane are unfunded, as is the build out of the intercity passenger rail plan
- Technology in smart vehicles and smart roadways is rapidly evolving: these technologies, including adaptive cruise control and collision avoidance systems, have the potential to significantly improve safety and system efficiency.
- Alternative fuel development will likely become a significant factor in the second decade of this century.

Emerging Directions

- In order to build capacity expansions needed to support growth, innovative financing will be needed. The Regional Transportation Investment District (RTID) in the Puget Sound region, and other similar regional approaches, show promise if regional voters will support regional sources to augment state funding.
- Pricing approaches also show promise to augment traditional transportation funding, especially in congested corridors.
- As smart vehicle technologies develop, Washington needs to be on the forefront of adapting the transportation system to ensure that the benefits of these vehicle technologies can be accessed by drivers.
- Washington needs to take actions to adapt the transportation funding system in light of alternative fuels.

More to Come…

- An emerging 10th issue?
  - Funding and Regional Governance

Communications

What is the Outreach Program?

RTPO Outreach

- Briefing by Secretary MacDonald at quarterly meeting with all MPOs and RTPOs.
- WSDOT Modal Directors one on one meetings with each RTPO.
- WSDOT WTP briefings at RTPO policy or technical committees by WSDOT regional staff.
- Joint process for developing investment plan.

Document and Information Sharing

- The WTP web page.
- Creating web based documents accessible by everyone.
- Creating an on-line data library to share WTP data.
- Publishing and distributing folios describing WTP progress.

Special Outreach Meetings

- Legislator and legislative committee staff conversations
- Tribal Transportation Planning Organization
- Washington Public Ports Planning Group
- Freight Customer Interviews
- Safety Conscious Planning Workshop
- Freight Workshop with FMSIB
- Congestion Relief Study in Puget Sound, Vancouver and Spokane
- Local roadways group
- Other Events

Late Summer "Milestone" Event

- Scheduled for October 19, 2004
- Hosted by Transportation Commission
- Opportunity to share what we've learned, to discuss approaches, and solicit views.

The WTP Communications Plan

E-mail News Service

- Bi-weekly e-mail updates, “factoids”, highlights of activities

Online Calendar of Events

- Conferences, interest group meetings, Commission workshops, etc.

WTP web pages

- Data Library, WTP issues, papers, presentations and opportunity to comment link

Talking Points

- For Divisions, Regions, others to use in presentations to interest groups

Folios

- Topical information and key messages

Powerpoint modules

- Ready-to-go presentations that can be tailored to suit a particular audience

Statewide survey

- Assess public opinion for needs of transportation

Working group meetings

- Targeted outreach and input

MPO/RTPO meetings

- Targeted outreach and input

Public Library Distribution

- Public access to documents, analyses, and opportunity to comment

Title VI/Environ mental Justice

- Identify location where additional outreach efforts may be needed
- Evaluate targeted investment approaches to avoid disproportionate impacts

Building the Record

- Centralized record of outreach, materials, and input received

The October 19, 2004 Milestone Event

- An opportunity for the Commission to interact with RTPO and other transportation interests on the Washington Transportation Plan direction
- The meeting will involve:
  - A summary overview of the issues: what we've found and emerging directions based on the data
  - What we know about transportation finance: the history, present, and future potentials
  - Opportunities for input to the Commission through focused panels and an open mike
  - Messages from our legislative leaders

What's Next?

- We want to have a dialog on the data and analysis.
  - If you look at the issue one way, you see…
  - If you look at the issue another way, you see…
- Phase 2 is where we translate data-driven conclusions and perspectives into an investment plan
  - Data point to needs for which we recommend state projects, statewide programs, and statewide policies
  - Clearly show the benefits and attributes of those proposed actions.
- The Commission then prioritizes the proposal:
  - High-Medium-Low priorities