Washington State
Department of Transportation

Measures, Markers and Mileposts

The Gray Notebook for the quarter ending
December 31, 2003

WSDOT's quarterly report to the
Washington State Transportation Commission
on transportation programs and department management

Douglas B. MacDonald
Secretary of Transportation

Measures, Markers and Mileposts

The Gray Notebook for the quarter ending December 31, 2003

12th Edition

Published February 19, 2004

"What gets measured, gets managed."

This periodic report is prepared by WSDOT staff to track a variety of performance and accountability measures for routine review by the Transportation Commission and others. The content and format of this report is expected to develop as time passes. Information is reported on a preliminary basis as appropriate and available for internal management use and is subject to correction and clarification.

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Cover photos: left to right; the ferry Wenatchee *approaches Pier 52 in Seattle, incident response truck, Amtrak* Cascades, *U.S. 395 in Stevens County*

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Project Reporting on the 2003 Transportation Funding Package

Introduction

WSDOT is preparing extensive information for legislators, state and local officials, interested citizens and the press on the progress of the program funded by the 2003 Transportation Funding Package. Much of the detailed information is regularly presented and maintained on-line on the WSDOT website. The *Gray Notebook* in these special pages, known as the Beige Pages, highlights each quarter's progress and reports on financial and other program management topics as well as detailed information on key projects.

The Beige Pages for this quarter are organized in the following manner:

Project Reporting

Current Project Highlights and Accomplishments

Project Delivery

Financial Information

Program Management Information

This quarterly report represents a work in progress that will be expanded and refined as more and more projects approach or enter into construction. We welcome suggestions and inquiries that can help us strengthen this project delivery and accountability reporting.

Project Reporting

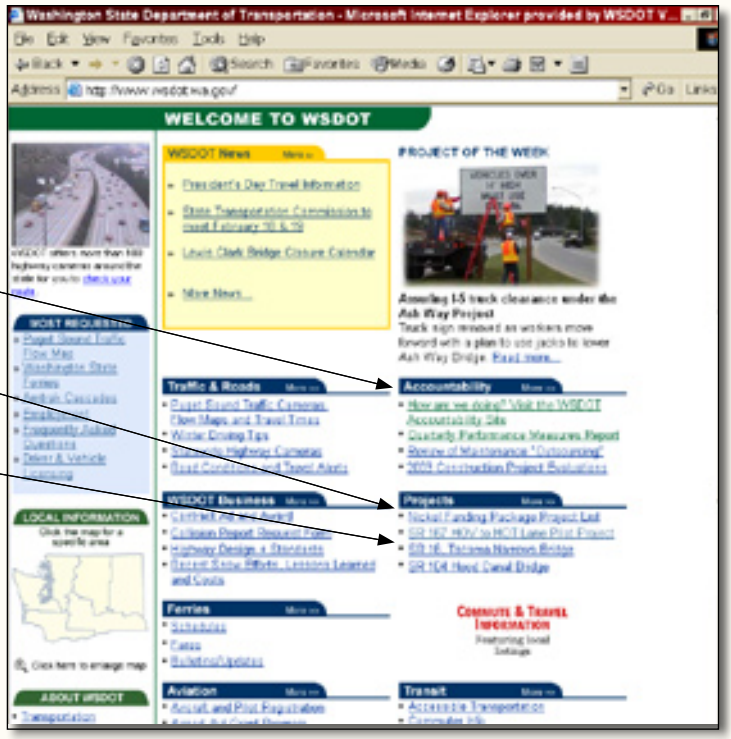
Project reporting uses several different tools, including the *Gray Notebook*, web-based Project Pages and Quarterly Project Reports (QPR). A Project Page will be created for all major WSDOT projects, whereas the QPRs will be created for Nickel funded projects of the 2003 funding package. (*See also Financial Information.*)

Navigation to the Home Page and the Project Pages

WSDOT's home page can be found at: *www.wsdot.wa.gov/*

The Home Page (shown at right) has several links that allow access to the individual Project Pages through the *Accountability* navigation bar which provides access to "hot links" found in the on-line version of the *Gray Notebook*, and the Projects navigation bar (which accesses a list of all WSDOT projects).

Project Pages for several of the largest projects are directly linked to the Home Page under the Projects navigation bar. Project pages can also be accessed from any WSDOT web page by clicking on the "projects" tab at the top of every page.



Roadmap to On-line Project Information

The diagram below is a roadmap to the information found on-line. The on-line version of the *Gray Notebook* as well as the Home Page will have "hot links" to the individual Project Pages.

Project Information Roadmap

Gray Notebook

Home Page

Project Page

Project Pages will report on all WSDOT 2003 Transportation Fund projects. Project Pages provide detailed information that is updated regularly.

- Overall Project Vision
- Financial Table
- Funding Components
- Roll-up Milestones
- Roll-up Cash Flow
- Contact Information
- Maps and Links

QPR

Quarterly Project Reports will summarize quarterly activities.

- Highlights
- Milestones
- Status Description
- Problem Statement
- Risk Challenges
- Project Costs/Cash Flow
- Contact Information

Project Pages

Project Pages contain information on all aspects of a specific project. An existing Project Page is shown at right.

Project Pages provide details on overall project vision, funding components, financial tables, milestones, status description, problem discussions, risk challenges, forecasting, maps, photos, links and more.

WSDOT has approximately 140 Project Pages that are currently providing on-line updates.

A summary of the information found on a Project Page will be provided in a Quarterly Project Report (QPR) that WSDOT anticipates will be accessible through a link on the Project Page.

Project pages are to the best of WSDOT's ability, regularly updated.

Project pages can be found at:
www.wsdot.wa.gov/projects/

Current Project Highlights and Accomplishments

This is WSDOT's third report of quarterly developments in the delivery of the program of projects under the 2003 Transportation Funding Package.

The following project information is gathered from a variety of sources within WSDOT and is principally the responsibility of the various regional administrators and their project teams. As a regular part of its project management and accountability strategy for the legislature's 2003 Transportation Funding Package, a team of senior WSDOT managers from Olympia meets in each region each quarter to perform due diligence on progress and status for each project and to offer assistance, support, and coordination of issues or problems arising with any project. This process also facilitates the ability of headquarters staff to discuss project status with members and staff of the House and Senate and to report from first hand knowledge about the projects to the Transportation Commission.

Contract Advertising and Awards

2003 Transportation Funding Package ("Nickel Funds")
Nine projects were planned to be advertised this quarter. Seven of these projects were advertised as planned. One project was advanced for advertisement. Two projects were deferred for later advertisement.

Projects Advertised as Planned:

SR 9/SR 528 Intersection – Signal

This project went to ad October 20, 2003. The construction is now starting and the project is expected to proceed on schedule.

SR 16, HOV Improvements between Olympic View Drive and Union Ave

This project consists of three construction phases. The first contract, 6th Avenue/Pearl Street (SR 16) to Jackson Avenue, was advertised to bidders on schedule in mid-November 2003 with this first phase construction to be awarded in mid-January 2004. This construction phase will widen SR 16 to prepare for HOV lanes, provide a new trail for bikes and pedestrians and rehabilitate the pavement on SR 16 mainline to accommodate traffic switches needed for phase 2 of the project. The contractor will begin grading work in Spring 2004 and is expected to complete its work in Winter 2004

US 97A, Entiat Park Entrance - Turn Lanes

This project was advertised on schedule and was awarded on December 15, 2003. This project was combined with a "non-nickel" funded roadway preservation project, US 97A/Wenatchee North - Paving. Combining this project resulted in a cost savings of $80,000. The contractor will begin construction in April 2004 and is expected to be completed in July 2004.

SR 124, East Jct. SR 12 – Reconstruction

This project improves safety on SR 124 east of Pasco by realigning a horizontal curve and widening the lanes and shoulders. The contract was advertised for bids on December 8, 2003 meeting the schedule to proceed to bid opening on January 14, 2004. The improvements are scheduled be open to traffic by summer 2004.

SR 161, 234th Street to 204th Street E

This project consists of two construction phases. The first contract, 234th Street East to 204th Street East, was advertised to bidders in early November 2003 and awarded to the low bid contractor on December 22, 2003. This construction phase will widen SR 161 from one lane to two lanes in each direction. The contractor will begin grading work on the new highway in Spring 2004 and this phase is expected to be completed in July 2006.

SR 203, NE 124th/Novelty Rd Vic

The project was advertised on schedule. However the total project cost has increased by approximately $900,000 due to additional right of way and preliminary engineering costs to accommodate King County's strict flood plain ordinance. This project is funded with pre-existing funds, the 2003 Transportation Funding Package and King County and Developer contributions. $254,000 of the cost increase will have to be accommodated from the 2003 Transportation Funding Package.

US 395, Kennewick Variable Message Sign

This project improves safety on US 395 by installing a variable message sign, camera and traffic sensor north of the Blue Bridge to warn southbound traffic of congestion and accidents ahead. The contract was advertised for bids on schedule, on December 1, 2003. The bid opening is scheduled for January 14, 2004, and the improvements should be placed in use for traffic by summer 2004.

Project Advanced for Advertisement:

SR 527, 132nd SE to 112TH SE (Additional Lanes)

The advertisement date was advanced from March 2005 to December 2003 to coordinate with the availability of funds planned for the project from other sources, avoid redesign for changes in stormwater treatment requirements and meet a commitment to Boeing. The contract award date is February 25, 2004.

Projects Deferred for Later Advertisement:

SR7/SR 507 to SR 512 – Safety

The December 2003 contract advertisement date for this project has been delayed until obstacles in right of way acquisition can be cleared. WSDOT believed that right of way would be obtained from property owners for a December ad date. However, the department has received 18 requests for adjudicative hearings from property owners adjacent to the project. Additional time will be required to prepare detailed surveys, title searches, and coordinate scheduling with the Attorney General's Office for each of the hearings. WSDOT is focused on completing negotiations with the property owners and anticipates advertising the project in spring 2004 with construction starting no later than the summer of 2004.

SR 522/I-5 to SR 405 Multi-Modal Project

To take advantage of coordinating work with Lake Forest Park in conjunction with the needs of WSDOT, the advertisement date would slip from winter 2003 to spring 2006. The 2003 Transportation Funding Package provided the entire project funding in the construction phase. The changes will result in shifting $2 million in expenditures from the 03-05 to 05-07 biennium. This project is part of an integrated program of corridor improvements where WSDOT will coordinate portions of this project with other improvements which will be funded and constructed by local municipalities such as Seattle, Kenmore, Lake Forest Park, and Bothell.

Project Completions and Other Highlights

Construction Highlights

Several of the highway and rail projects funded by the Nickel Account are now in construction. More details can be found in the respective on-line Project Pages at www.wsdot.wa.gov/projects.

Highway Construction Program

I-5, Widen Each Direction From Salmon Creek to I-205

The contractor is currently constructing retaining walls necessary for the widening of the southbound lanes. Work is continuing on the temporary widening using a detour bridge in preparation for a traffic shift that will allow construction of the northbound lanes. The traffic shift is expected to occur in May 2004. The construction schedule identifies the first weekend closure to demolish the existing NE 129th St. structure on the weekend of January 31, 2004. The new NE 129th St. structure is scheduled to be completed in five months.

I-90, Build Lanes from Argonne to Sullivan Road

The contractor met the November 1, 2003 milestone to have the temporary westbound lanes constructed and open to traffic. Although the project was suspended October 31, 2003 for the winter, work is continuing on minor items such as drainage ponds. Road work will restart as soon as weather conditions permit.

I-90, Highline Canal to Elk Heights – Truck Passing Lanes

This project constructs a truck climbing/passing lane on eastbound I-90, east of the Indian John Hill Rest Area. Work on the project was suspended for the winter on November 20, 2003, due to snow and cold temperatures. Prior to suspending work, the contractor had completed clearing the land in preparation for the widening of the roadway. Ninety percent of the embankment, excavation and drainage has been completed. The left side bridge rail replacement on the Highline Canal bridge is complete. To date, project completion status is at about 30%. Work will resume as weather conditions permit.

I-90, Ryegrass Summit to Vantage – Truck Passing Lanes

This project constructs a truck climbing/passing lane on westbound I-90 from Vantage to the top of Ryegrass Summit. Due to winter conditions, work by the contractor was suspended on November 14, 2003. Nearly one mile of the additional lane and modifications to the Ryegrass Rest Area ramps are completed and already open to traffic. WSDOT survey crews will continue to work preparing for the next construction season as weather permits. It is anticipated that the contractor will resume work in March 2004.

SR 500, NE 112th Avenue Interchange

This project constructs a new interchange on SR500 at NE 112th Avenue/Gher Road. All utility relocations are now complete and traffic was shifted to temporary lanes during a weekend closure on November 2, 2003 (one day ahead of schedule). The bridge footings and columns have been constructed as planned for the eastbound “fly-over” bridge, with girder placement expected to occur in a three night sequence in mid January 2004. The placement of the noise barrier along the I-205 ramp has started with a scheduled completion of April 2004.

Other Capital Programs

Purchase Oregon Train Set

A purchase agreement to complete this important rail rolling stock acquisition project in the 2003 Transportation Funding Package was executed between WSDOT and Talgo, Inc., on November 26, 2003. Talgo will now paint the outside of the cars to match those already in the fleet. The purchase will allow for additional rail passenger service between Seattle and Portland upon completion of track improvements.

Tacoma RMDRR Morton Line Repairs – Phase 2

This project will complete the necessary repairs to the rail line between Frederickson and Morton to restore rail service interrupted by the 1996 flood. Construction of a portion of this project for immediately needed repairs began in July 2003 and was completed in mid-December 2003. The remainder of the construction project will be accomplished under separate agreement with the City of Tacoma (owner) scheduled to begin in early 2004. It is anticipated that the entire project will be completed before the end of the current biennium.

Highlights of Projects Ready for Advertisement for 2004 Construction Season

Five of the highway projects in the 2003 Transportation Funding Package are scheduled for advertisement in the two quarters for January 1, 2004 to June 30, 2004 (the 3rd and 4th quarter of the 03-05 biennium). More details can be found in the respective on-line Project Pages at **wsdot.wa.gov/projects**. The status of these projects is described below. Two projects that were scheduled for advertisement during this time frame were deferred to future quarters (the status of these projects are described below).

I-5, 2nd Street Bridge (ad date: 4/5/2004)

The current proposal is to assist traffic flow by reducing construction from two seasons to one. No change in total project cost is anticipated. The project is expected to be advertised as scheduled.

SR7/SR 507 to SR 512 – Safety (ad date: 5/3/2004)

The ad date for this project in December 2003 was not met because of complications that arose in the right of way taking. May 2004 is the rescheduled ad date that WSDOT hopes to meet if negotiations with property owners can be completed in time.

I-90, Cle Elum River Bridge (ad date: 3/15/04)

Environmental documentation is complete and approximately 80% of the design is finished. The scheduled advertisement date is expected to be met and pre-construction start date is expected to be May 2004.

SR 304/SR 3 to Bremerton Ferry Terminal (ad date: 2/17/04)

This project reconstructs and widens the existing roadway. It will add HOV lanes to increase traffic movement. The City of Bremerton is the lead agency for this project

WSDOT's role is primarily to assure the administration of the funding provided for in the 2003 Transportation Funding Package. WSDOT's expectation is that the City of Bremerton will advance the project's scheduled advertisement date. The estimated construction completion date is June 2006.

SR 509, Design & Critical Right-of Way (ad date: 6/7/2004)

Construction funds are being transferred to the City of SeaTac, which is the lead agency on this phase of the project. Environmental permitting and stormwater designs are being developed by WSDOT and are on track to support the scheduled ad date and budget. WSDOT expects that the City of SeaTac will meet the scheduled ad date. The project is on schedule and within the established budget.

* * * * * *

SR 9, Nooksack Road to Cherry Street (ad date: 6/04)

This project was originally scheduled for advertisement in June 2004 but that date has had to be adjusted (is now set for October 2005) because of new geotechnical information requiring design revisions that in turn have led to a larger-than-originally-expected right of way acquisition program. Construction cost savings, however, are also expected to result.

SR 161, 204th Street to 176th Street (ad date: 2/9/04)

The project was originally scheduled for advertisement in February 2004 but that ad date has had to be adjusted (is now set for November 2004) due to real estate acquisitions that have taken longer than expected, and to avoid work zone traffic control issues by constructing the entire four miles at the same time. WSDOT is coordinating access revision with local developers along the corridor and is currently nearing completion of the design and real estate acquisition phase.

Project Delivery

Proposed Adjustments to Delivery Planning

Meeting schedule, budget and scope expectations are important elements in WSDOT's delivery of the projects in the 2003 Transportation Funding Package. Planning and design activities for specific projects sometimes identify the need to make adjustments to construction delivery spending schedules. Some of these adjustments will have no impact on critical start or completion dates. Others may require adjustments to critical dates.

The information in this report describes changes that WSDOT has concluded as desirable based on assessments made in the quarter under review ending December 31, 2003.

Highway Construction Program

U.S. 2, Peshastin East Interchange

The spending plan for this project should be revised based on the Value Engineering Study done in August 2003 and the Cost Risk Assessment done in July 2003. The spending plan for this project has been reduced $8.8 million to a total of $16.5 million. This is a cost savings of 35% from the budget amount. WSDOT also has a plan to reduce the construction phase of the project by two years, from three years to one year, while maintaining the planned advertisement date of September 4, 2009.

I-5/SR 502 Interchange and Corridor Widening

WSDOT has the opportunity to make advance purchases of Right of Way from property owners that have expressed interest in selling now. Purchasing Right of Way at this time benefits both the sellers and the WSDOT in that sellers will be able to know what affect the project will have on them and be fairly compensated, and early acquisition lessens the risk of land development increasing land value. In order to accelerate this preliminary design and R/W work WSDOT is requesting to advance $1,000,000 for R/W and $200,000 for Preliminary Engineering into the 03/05 biennium. The advancement of funds will not increase the total project cost.

I-5, Noise Wall

This project was removed from the September 30, 2003, Watch List. The project is in Seattle near the end of SR 520 and Roanoke Street. Previously, WSDOT reported that cost and schedule for this project were being reviewed to allow for completion of the design and may result in an ad delay. With the review complete and design underway, the project will be advertised in early summer 2004 with a construction start in late summer.

I-5/SR 526 TO US 2 (Marine View Dr) HOV Lanes

WSDOT proposes to advance the advertisement date from March 2008 to October 2007 to ensure that work begins in the spring of 2008 to take full advantage of the 2008 construction season. In addition, WSDOT is proposing to advance $4 million into the 2003-2005 biennium in order to accelerate design work. This acceleration would put WSDOT in a position to further accelerate this project for the benefit of the 2010 Olympics if the Legislature should decide to advance funding for construction (see Opportunities and Options for Legislative Consideration section of this report).

SR 7/SR 507 to SR 512 – Safety

The December 2003 contract advertisement date for this project has been delayed until right of way access issues can be resolved. WSDOT believed that right of way would be cleared with property owners for a December ad date. However, the Department has received 18 requests for adjudicative hearings from property owners adjacent to the project. Additional time will be required to prepare detailed surveys, title

searches, and coordinate scheduling with the Attorney General's Office for each of the hearings. WSDOT is focused on completing negotiations with the property owners and anticipates advertising the project in spring 2004 with construction starting no later than the summer of 2004.

SR 9, Nooksack Road to Cherry Street

This project will have an ad date shift from June 2004 to October 2005 to account for an increase in the number of right of way parcels that must be acquired. The total cost of the project remains the same as the construction estimate has decreased.

SR 16, HOV Improvements – Olympic View Drive to Union Avenue

The third construction phase of this project, 36th Street to Olympic Drive NW, would be advanced two or three quarters to allow more flexibility for planning and implementing traffic switches needed to accommodate the opening the new Second Tacoma Narrows Bridge. This third and final construction phase will complete continuous HOV lanes on either side of the Tacoma Narrows, from the Sprague Avenue Interchange in Tacoma to the Olympic Drive Interchange in Gig Harbor, by spring 2007. Moving the construction start date of this phase from spring 2005 to fall 2004 will not affect the overall cost of the project.

SR 20, Quiet Cove Road Vic. to SR 20 Spur

In the September 30, 2003 *Gray Notebook*, this project was listed on the Watch List. At that time WSDOT reported the advertisement date for this project may be delayed to provide time for right of way acquisition and to resolve environmental mitigation issues. Currently, the advertisement date would slip by nine months, from February 2006 to November 2006, which will result in shifting $3 million in projected Nickel Fund expenditure from the 05-07 to 07-09 biennium.

I-90, Two-Way Transit and HOV

This Seattle to Mercer Island project is currently funded for design by Sound Transit, FHWA and WSDOT and is dependent on Regional Transportation Investment District (RTID) and other sources of funding for construction . Should RTID funding become available, WSDOT proposes the advertisement date be delayed thirteen months, from December 2004 to January 2006, to allow time for the issuance of the draft Environmental Impact Statement. This will allow the design to be completed in October 2005. There is no change in the expected project cost. However, $1 million in projected Nickel Fund expenditures would need to be shifted from the 03-05 biennium to the 05-07 biennium.

SR 99, S. 284th to S. 272nd St. HOV Lanes

This project will include a HOV lane and 2 general-purpose lanes in each direction, a median, sidewalk and planter strip. The updated cost estimate for right-of-way acquisition is $5.1 million, this is an increase from the previous estimate of $3 million to account for the potential of higher cost of condemnation. The advertisement date would be delayed from December 2005 to April 2006 to correct the record of survey which identify property ownership. WSDOT is currently working with the City of Federal Way to minimize the right-of-way cost by eliminating some of the proposed landscaping areas.

SR 161, Corridor Improvements – 204th Street E to 176th Street

There are multiple stages to this project. Stage 1 (234th to 204th) was advertised in November 2003. The proposal is to adjust cash flow and delay the advertisement date of Stage 2 (204th to 176th) from November 2003 to November 2004. This action will reduce traffic impacts and help right of way acquisition. These changes should not change the total project cost.

SR 203, NE 124th/Novelty Rd Vic.

The project was advertised on schedule. However the total project cost has increased by approximately $900,000 due to additional right of way and preliminary engineering to accommodate King County's strict flood plain ordinance. This project is funded with pre-existing funds, the 2003 Transportation Funding Package and King County and Developer contributions. About $250,000 of the expected cost increase will come from the 2003 Transportation Funding Package.

SR 520, W Lake Sammamish Parkway to SR 202 (Additional Lanes)

Cash flow adjustment to match actual design, right of way and construction schedules. No change in advertisement date of October 2008.

SR 522/I-5 to SR 405 – Multi-Modal Project (Nickel)

To take advantage of coordinating work with Lake Forest Park in conjunction with the needs of WSDOT partners, the advertisement date would slip from winter 2003 to spring 2006 to take advantage of coordinating work with Lake Forest Park. The 2003 Transportation Funding Package provided the entire project funding in the construction phase. The changes will result in shifting $2 million in expenditures from the 03-05 to 05-07 biennium. This project is part of an integrated program of corridor improvements where WSDOT will coordinate portions of this project with other improvements which will be funded and constructed by local municipalities such as Seattle, Kenmore, Lake Forest Park, and Bothell.

For financial information on the Proposed Adjustments to Delivery Planning – Highway projects, please refer to the table on page 16.

Other Capital Programs

The following six proposed project changes have interrelated funding and impact one another.

Palouse River and Coulee City Railroad Acquisition

Depending on a finding of cost effectiveness that the Legislature instructed be made by the Transportation Commission, WSDOT would purchase 302 miles of the Palouse River and Coulee City Railroad, preserving the state's largest short-line railroad that carries 20 percent of the state's grain crop. The original proposed budget has been reduced by $322,000 after further cost estimate review. If the conclusion of WSDOT's review of the proposed purchase of this railroad is favorable, the purchase will be completed with this decrease in the adjusted budget.

Port of Columbia Railroad Improvements **(New Project Title)**

After further engineering review and scope refinement, the following three projects are combined and overall reduced in scope to reflect actual improvements needed to maintain railroad service on this section of track.

The original project **Port of Columbia Railroad Improvements** – funds general railroad improvements on the 39-mile line. Based on further engineering reviews, the original scope for this project has been reduced from a full rebuild of the line to a less expensive rehabilitation of the line that will still provide an adequate level of service to the rail line customers. The proposed change will be combined with two additional projects listed in the 2003 Funding Package (the **Blue Mountain Railroad Upgrade** project which rebuilds 30 miles of track from Wallula to Walla Walla, and the **Port of Columbia Co. Dayton Upgrades** project which funds improvements to port rail facilities), into a single project with a total budget of $5.3 million as compared to the originally combined project budgets of $13 million.

Port of Columbia Dayton Upgrades, **and Blue Mountain Railroad Upgrade**

These projects fund improvements to port rail facilities, and rebuilding 30 miles of track from Wallula to Walla Walla. It is proposed that these projects be combined with **Port of Columbia Railroad Improvements** project as described above. The original intent of both projects will still be accomplished at a reduced cost.

Palouse River and Coulee City, Cheney-Coulee-Pullman Upgrade **(New Project Title)**

After further engineering review and scope refinement, two projects ***(Palouse River and Coulee City, Cheney to Coulee Upgrades and Rural Elevator Track Expansion)*** *are combined. Also, engineering analysis suggests the need for scope change to include upgrades of PR&CC lines in Whitman County.*

The original project **(Palouse River and Coulee City, Cheney to Coulee Upgrades)** would have funded repairs to numerous railroad bridges in Grant and Lincoln Counties and upgrade track to accommodate 286,000-pound freight cars. It would also improve the rail line between Coulee City and Cheney. The proposed change will combine these upgrades with projects in Whitman Co. that were identified by WSDOT in the summer of 2003. Further, the scope of the work from the **Rural Elevator Track Expansion** project (additional track at rural elevators and shortline / mainline connections) will also be combined into this expanded scope. The proposed scope will be completed within the overall total of $21,089,000 specified for the projects in aggregate.

For financial information on the Proposed Adjustments to Delivery Planning - Rail projects, please refer to the table on page 17.

Opportunities and Options for Legislative Consideration

The following projects were reported as requiring legislative guidance in June, 2003 and continue to be offered for legislative consideration. Details on the projects are found in the *Gray Notebook* for June 30, 2003.

I-5/SR 526 TO US 2 (Marine View Dr) HOV Lanes

The question remains on whether the construction schedule for this project should be advanced so that the project can be completed prior to the 2010 Winter Olympic Games.

WSDOT has developed two accelerated schedule options for legislative consideration. Option one is to accelerate the project schedule and advertise it for construction bids in March 2006 using the common "Design-Bid-Build" practice. This option will result in an open to traffic date of 2010. Option two is to accelerate the project schedule and advertise by July 2005 using the "Design-Build" method. This option will result in an open to traffic date of 2009 and is WSDOT's preferred option. The expenditure plan reflects the "Design-Build" option.

SR 99, Alaskan Way Viaduct

The project replaces the seismically vulnerable Alaskan Way Viaduct and seawall in downtown Seattle. The *Gray Notebook* for September 2003 identified the need to begin design in the summer 2004 as essential to remain on schedule to meet the proposed 2008 start of construction. The project has moved money from one phase to another in 2003-2005 with zero dollar change to the bottom line. By making this adjustment, restoring right of way and increasing PE in the 05-07 biennium. The project remains on the accelerated pace that will allow construction to begin in 2008 but not unless funding issues can be resolved.

I-405 Congestion Relief and Bus Rapid Transit Projects

WSDOT proposes revising the I-405 Nickel project sequence to be Kirkland Stage 1, Renton, Bellevue and Kirkland Stage 2. The Kirkland Stage 1 project addresses a known congestion hot spot that has a very high benefit/cost ratio with work that can be incorporated into future RTID projects. This schedule revision allows a project to be constructed and opened to traffic earlier than the original sequence. The revision also allows the Renton project the opportunity to combine Nickel funds with Regional Transportation Improvement District (RTID) funds in a larger, more cost-effective project should RTID funds become available.

SR 522 Bothell – UW Campus Access

Should WSDOT use the Nickel expenditure authority for this project since the funding from the lead funding partners did not materialize and WSDOT's budget for the project is insufficient to construct the project? This was identified in the September 30, 2003 *Gray Notebook*.

SR539/I-5 Access/Improvements: Ten Mile Road to International Boarder

The question remains on whether the construction schedule for this project should be advanced so that the project can be completed prior to the 2010 Winter Olympic Games.

Widening the remaining section of the "Ten Mile Road" will require the project be funded in a future budget appropriation. The Nickel funding will provide for preliminary engineering, environmental analysis and selection of a project plan for a new connection between I-5 and SR 539. Completing the final design, right of way and construction of the project will, however, require new funding.

D Street Grade Separation

The question remains whether the cash flow of this project be advanced into the 03-05 biennium from the 05-07 biennium to enable construction to be accomplished with other stages of this project?

The *Gray Notebook* for September 30, 2003 suggests that the 03-05 Supplemental Budget include a $3.5 million increase in the Program Z appropriation within the Multimodal Account.

For financial information on the Opportunities and Options for Legislative Consideration, please refer to the table on page 17.

"Watch List" Projects: Cost and Schedule Concerns

Watch List

WSDOT is watching some projects closely for warning that changes in cost, schedule or scope may be at risk due to developments and discoveries during the project delivery process, in some cases these changes are outside the control of WSDOT. Currently, the information regarding the changes for these projects are in the early stages and making a conclusion based on this information may not achieve the desired result.

Projects Removed from the September 30, 2003 *Gray Notebook* Watch List:

SR 3 to SR 303 Interchange Waaga Way

Removed from the Watch List. Concerns had been raised that several issues in the design concepts developed in 1995, now necessitating coordination with Kitsap County, might require delay of the scheduled ad date in Spring 2005. These issues have now been successfully addressed – reducing the

number of traffic signals, reducing the volume of pavement, increasing traffic volume capacity and minimizing impacts on local adjacent ball fields. Project progress now supports both the originally scheduled ad date and the project budget.

I-5, Noise Wall

See Proposed Adjustments in delivery planning. Removed from the Watch List. Previously, WSDOT reported that the need to prepare design for the project would lead to delay in the schedule originally set by the legislature. With the review complete and design underway, the project has now been scheduled to advertise in early summer 2004 with construction work to begin during the summer.

SR 20, Quiet Cove Road Vic. to SR 20 Spur

See Proposed Adjustments in delivery planning. Removed from the Watch List. This project has moved to Proposed Adjustments in the *Gray Notebook*. WSDOT reported the need to delay the advertisement date for this project might be delayed to provide additional time to acquire environmental approvals necessary for right of way acquisition. The current plan is to slip the advertisement date by nine months, from February 2006 to November 2006 in order to provide adequate time to resolve environmental mitigation issues and acquisition right of way. This delay will result in shifting $3 million in Nickel funding expenditure from the 05-07 to 07-09 biennium.

SR 99, S. 284th to S. 272nd St. HOV Lanes

This project has moved to proposed adjustments in the Gray Notebook. Removed from the Watch List. The updated cost estimate for right-of-way acquisition is $5.1 million. This is an increase from the previous estimate of $3 million and has been factored in to the project to account for the potential higher cost of condemnation. Advertisement date will be delayed from December 2005 to April 2006 in order to correct the record of survey to identify property ownership.

SR 161, Jovita Blvd to S 360th St.

Removed from Watch List. In the September 30, 2003 *Gray Notebook*, this project was on the Watch List for potential design changes from increased costs and delayed construction due to environmental and air quality provisions that have become more stringent while waiting for funding to be approved. The air quality analysis has now been completed, and there will be no impact to the project as a result. The NEPA re-evaluation is still in progress and WSDOT anticipates the report to be finalized in January 2004 and approved shortly thereafter.

SR 203, NE 124th/Novelty Rd Vic.

See Proposed Adjustments to Project Delivery and Contract Advertising & Awards. Removed from Watch List. Previously, WSDOT reported that arriving at a new floodplain mitigation site might have implications for cost and schedule. The project was advertised on schedule but the project costs for additional engineering and right of way acquisition increased by a total of $900,000.

U.S. 395, North Spokane Corridor (Francis Avenue to Farwell Road)

Removed from Watch List. This was a "Watch List" project in the last quarter's report because of concerns over obstacles in the acquisition of a single indispensable right-of-way parcel. With the assistance of mediation the acquisition was completed in November 2003. The contract advertisement was set for January 2004 with bid opening in March 2004. The project is expected to be delivered within approved funding and with little delay to the opening date.

SR 522/I-5 to SR 405 – Multi-Modal Project (Nickel)

Removed from Watch List. See Proposed Adjustments to Project Delivery. In the September 30, 2003 *Gray Notebook*, WSDOT reported it was considering delaying the advertisement date to coordinate with the City

of Lake Forest Park. To coincide with the needs of WSDOT partners, the advertisement date will slip from winter 2003 to spring 2006 to take advantage of coordinating work with the City of Lake Forest Park. The Nickel Funding Package provided the entire project funding in the construction phase. These changes will result in shifting $2 million in expenditure from the 03-05 to 05-07 biennium.

SR 543/I-5 to Canadian Border - Additional Lanes for Freight

Removed from Watch List. In the September 30, 2003 *Gray Notebook*, WSDOT reported the department was working to resolve structural design issues as a result of poor soil conditions. The initial engineering solution was to design retaining walls that would be expensive and cause the project to exceed the budget. A slope redesign was therefore developed as an alternative. It has resulted in making one wall unnecessary and reducing the necessary height of several walls. This affordable design is more cost-effective and should bring the project back within the anticipated budget.

Update on Projects Noted in the "Watch List" in the *Gray Notebook* ending September 30, 2003.

I-5, From Rush Road to 13th Street

The Watch List for the September 30, 2003, *Gray Notebook* described the review by FHWA of this project to add one lane in each direction on I-5 between the interchanges at Rush Road (exit 72) and 13th Street (exit 76), including construction of a new interchange at the current LaBree Road under-crossing. At the time of publication, FHWA approved the added access with conditions.

SR 9/SR 522 to 212th St. SE (Stages 1b & 2)

The Watch List for the September 30, 2003 *Gray Notebook* described the need to make design changes (raised center line barrier) with two-way-left-turn-lane based on current traffic data. The design change may result in a delay of the advertisement date. WSDOT continues to coordinate design and construction planning with King County regarding the County's development of the Brightwater Wastewater Treatment Plant adjacent to the project. There is continuing discussion of a revised advertisement and construction schedule.

SR 167, 15th St. SW to 15th St. NW – HOV

In the last *Gray Notebook, Watch List*, WSDOT reported that the project cost increased by $4.4 million and that the advertisement date could be delayed. The advertisement date will be moved to February 2005 to accommodate redesign of the project to meet current stormwater standards. WSDOT staff worked with permitting agency representatives on the Multi-Agency Permitting Team (MAPT) and determined that the original drainage design would not meet current water quality regulations. The MAP Team has determined that additional stormwater detention and treatment will indeed be required. Local agencies have also stated that additional wetland and stream buffer mitigation will be required. As a result, additional funds will be required for the design and construction of ecology embankments, additional detention ponds, and buffer mitigation. The additional work will delay the advertisement date to the first quarter 2005. WSDOT staff is investigating designs in order to minimize the amount of these cost increases and will report next quarter.

SR 270, Pullman to Idaho State Line - Additional Lanes

In the September 30, 2003, *Gray Notebook*, it was reported that there was a possibility of a project cost increase due to rock and soil conditions and the need for bridge design modifications. Drilling and soil testing began in mid December 2003 with planned completion of testing in February 2004. Due to the unknown rock depth in excavation areas and bridge design considerations for two bridges, it is anticipated that that a project cost increase ranging from $2 million to $5 million may be required. The project cost estimate is expected to be completed by July 2004. As the project design is further refined, WSDOT is investigating methods to reduce or offset these cost increases. The project is on schedule for advertisement in January 2005.

SR 410, 214th Ave. E. to 234th - Widening

WSDOT reported in the Watch List of the September 30, 2003 *Gray Notebook* that costs for this project could increase $16 million or more to purchase land that will be needed for stormwater treatment and detention was re-zoned for commercial and light industrial during the project development phase. Engineering work is underway to develop an updated cost estimate for right-of-way acquisition based on the zoning changes by the end of February 2004. This project will address sections of the roadway where accidents occur by controlling access to the highway, building new signal systems at major intersections and reducing congestion by providing an additional lane in each direction.

Projects added to the "Watch List"

Bellingham-GP Area Upgrades

This project would upgrade the existing track through Bellingham's Georgia Pacific (GP) Plant to allow for slightly higher speeds for Amtrak *Cascades* intercity trains, resulting in a travel time reduction of about 1½ minutes. Due to unanticipated freight business at the mostly closed GP plant since the project scope was developed, the project scope is now inadequate. The implications for cost and schedule are being reviewed.

The following table summarizes the various changes and adjustments described on pages 8-10 for the quarter ending December 2003:

Highway Projects: Proposed Adjustments to Project Delivery

Quarter Ending December 31, 2003

Dollars in Thousands

		03-05			05-07			07-09			09-11			11-13			Ten Year Total		
SR	Project	Budget	Adjusted Budget	Net Change	Budget	Adjusted Budget	Net Change	Budget	Adjusted Budget	Net Change	Budget	Adjusted Budget	Net Change	Budget	Adjusted Budget	Net Change	Budget	Adjusted Budget	Net Change
002	U.S.2/97 Peshastin East - Interchange	2,100	2,100	0	1,870	2,700	830	7,600	11,750	4150	13,780	0	-13780	0	0	0	25,350	16,550	-8800
005	I-5/SR502 Interchange	1,321	2,521	1,200	8,679	7,479	-1,200	0	0	0	0	0	0	0	0	0	10,000	10,000	0
005	I-5 Noise Wall	3,500	3,500	0	0	0	0	0	0	0	0	0	0	0	0	0	3,500	3,500	0
005	I-5/SR526 to US 2 (Marine View Drive)	11,000	15,000	4,000	6,300	11,300	5,000	54,780	52,277	-2,503	121,900	117,005	-4,895	44,680	36,474	-8,206	238,660	232,056	-6,604
007	SR7/SR507 to SR512-Safety	9,300	9,300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
009	SR 9, Nooksasck Road to Cherry St.	6,320	1,548	-4772	8,800	12,730	3,930	0	927	927	0	0	0	0	0	0	15,120	15,205	85
016	SR 16 HOV Improvements between Olympic Drive and Union Ave	49,623	51,483	1,860	40,902	39,042	-1,860	0	0	0	0	0	0	0	0	0	90,525	90,525	0
020	SR 20/Quiet Cove Rd. Vic. to SR 20 Spur	0	0	0	3,790	766	-3,024	3,270	6,294	3024	0	0	0	0	0	0	7,060	7,060	0
024	SR24/I82 to Keys Road	840	840	0	22,000	22,000	0	9,000	9,000	0	0	0	0	0	0	0	31,840	31,840	0
031	SR 31/Metaline Falls To Canadian Border	4,900	2,400	-2,500	11,000	13,500	2,500	0	0	0	0	0	0	0	0	0	15,900	15,900	0
090	I-90 Two-way Transit and HOV	4,000	3,000	-1,000	11,000	12,000	1,000	0	0	0	0	0	0	0	0	0	15,000	15,000	0
099	SR 99/s. 284th to S. 272nd St - HOV Lanes	3,780	3,656	-124	6,323	8,519	2,196	2,600	2,621	21	0	0	0	0	0	0	12,703	14,796	2,093
161	SR 161/Corridor Improvements -176th to 234th	12,100	6,641	-5,459	7,300	12,709	5,409	15	27	12	0	38	38	0	0	0	19,415	19,415	0
203	SR 203/NE 124th/Novelty Rd Vic	1,200	2,084	884	0	163	163	0	0	0	0	0	0	0	0	0	1,200	2,247	1,047
520	SR 520/w Lake Sammamish Pkwy to SR 202	3,400	3,368	-32	4,900	6,700	1,800	24,500	16,225	-8275	38,720	60,515	21,795	30,800	15,493	-15,307	102,320	102,301	-19
522	SR 522/I-5 To SR 405 Multi-modal Project	3,600	1,497	-2,103	1,500	3,568	2,068	0	0	0	0	0	0	0	0	0	5,100	5,065	-35
	Total of Projects Above	116,984	108,938	8,046	134,364	153,176	18,812	101,765	99,121	-2,644	174,400	177,558	3,158	75,480	51,967	-23,513	593,693	581,460	-12,233
	Project Adjustments from Quarter 1	229284	210,820	-18,464	374,159	375,781	1,622	323,393	333,343	9,950	229,295	263,815	34520	142,025	107,237	-34,788	1,298,156	1,290,997	-7,159
	Total of Projects from Quarter 2	221,033	238,273	17240	283,976	265,815	18,161	312,730	310,414	-2,316	307,339	307,064	-275	318,918	348,876	-42	1,483,296	1,479,741	-3,555
	Total for All Projects	567,301	558,031	-9270	792,499	794,772	2,273	737,888	742,878	4,990	711,034	748,437	37,403	566,423	508,080	-58,343	3,375145	3,352,198	-22,947

The following table summarizes the various changes and adjustments described on pages 10-11 for the quarter ending December 2003:

Rail Projects: Proposed Adjustments to Project Delivery

Quarter Ending December 31, 2003

Dollars in Thousands

Project	03-05 Budget	03-05 Adjusted Budget	03-05 Net Change	05-07 Budget	05-07 Adjusted Budget	05-07 Net Change	07-09 Budget	07-09 Adjusted Budget	07-09 Net Change	09-11 Budget	09-11 Adjusted Budget	09-11 Net Change	11-13 Budget	11-13 Adjusted Budget	11-13 Net Change	Ten Year Total Budget	Ten Year Total Adjusted Budget	Ten Year Total Net Change
Palouse Riv. & Coulee City RR Acquistion	5,820	5,820	-	1,530	1,208	(322)		-	-		-	-	-	-	-	7,350	7,028	(322)
Port of Columbia Railroad Improvements		-	-		-	-	11,500	252	(11,248)		1,904	1,904	-	3,157	3,157	11,500	5,313	(61,87)
Port of Columbia Co. Dayton Upgrades		-	-		-	-	320	-	(320)		-	-	-	-	-	320	-	(320)
Blue Mtn. RR Wallula-Walla Walla Upgrade		-	-	1,260	-	(1,260)		-	-		-	-	-	-	-	1,260	-	(1,260)
Rural Elevator Track Expansion		-	-		-	-		-	-	1,140	-	(1,140)	3,860	-	(3,860)	5,000	-	(5,000)
PR&CC Cheney-Coulee 286K Upgrade		-	-		1,582	1,582		11,568	11,568	8,000	7,236	(764)	-	703	703	8,000	21,089	13,089
Total Rail Projects	5,820	5,820	-	2,790	2,790	-	11,820	11,820	-	9,140	9,140	-	3,860	3,860	-	33,430	33,430	0

The following table summarizes the various opportunities and options described on pages 11-12.

Highway Projects: Opportunities and Options for Legislative Consideration

Quarter Ending December 31, 2003

Dollars in Thousands

SR	Project	03-05 Budget	03-05 Adjusted Budget	03-05 Net Change	05-07 Budget	05-07 Adjusted Budget	05-07 Net Change	07-09 Budget	07-09 Adjusted Budget	07-09 Net Change	09-11 Budget	09-11 Adjusted Budget	09-11 Net Change	11-13 Budget	11-13 Adjusted Budget	11-13 Net Change	Ten Year Total Budget	Ten Year Total Adjusted Budget	Ten Year Total Net Change
005	I-5, SR 526 (Marine View Drive)	11,000	16,000	5,000	6,300	110,000	103,700	54,780	88,000	33,220	121,900	-	(121,900)	44,680	-	(44,680)	238,660	214,000	(24,660)
099	SR 99, Alaskan Way Viaduct	45,000	45,000	-	12,000	40,000	28,000	40,000	40,000	-	40,000	40,000	-	40,000	12,000	(28,000)	177,000	177,000	-
405	I-405, Congestion Relief Projects	46,000	46,000	-	99,840	114,840	15,000	139,020	199,020	60,000	160,195	125,195	(35,000)	40,000	-	(40,000)	485,055	485,055	-
522	SR 522, Bothell-UW Campus Access	8,000	-	(8,000)	-	8,000	8,000	-	-	-	-	-	-	-	-	-	8,000	8,000	-
539	SR 539, I-5 Improvements: Ten-Mile Road to Int'l. Border	4,850	4,800	(50)	5,500	8,300	2,800	5,200	62,800	57,600	31,500	8,000	(23,500)	42,000	-	(42,000)	89,050	83,900	(5,150)
	Total Projects	114,850	111,800	(3,050)	123,640	281,140	157,500	239,000	389,820	150,820	353,595	173,195	(180,400)	166,680	12,000	(154,680)	997,765	967,955	(29,810)

Financial Information

2003 Transportation Funding Package – Paying for the Projects

The first edition of the Beige Pages (June 2003) included an in-depth discussion of the Legislature's 2003 Transportation Funding Package. The revenue forecast has now undergone several updates since the Legislature enacted the budget. The following information reflects the November 2003 forecast changes as well as the impact from the recent Supreme Court decision on Initiative 776. Further refinements to debt service estimates have also been made.

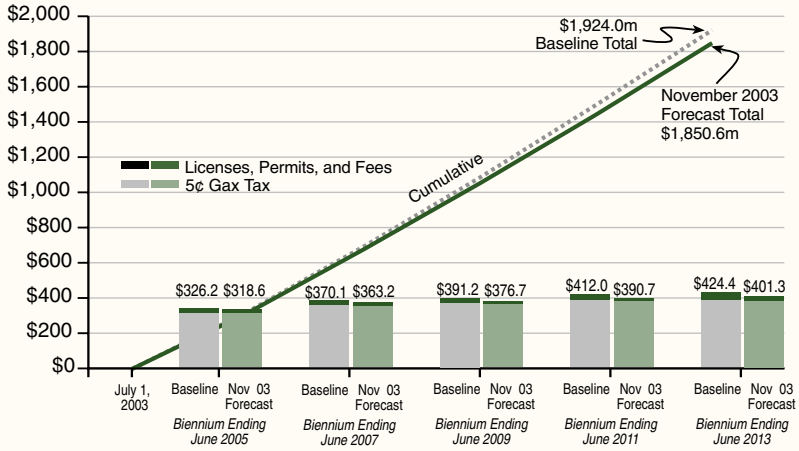
Revenue Forecasts

The 2003 Transportation Funding Package enacted by the Legislature included tax and fee increases. The gas tax was increased by 5¢ per gallon, and gross weight fees on trucks increased by 15%. An additional sales tax on new and used vehicles of 0.3% and a license plate number retention fee were both established. The first two sources are to be deposited to a new account called the Transportation 2003 (Nickel) Account. The latter two are to be deposited to the Multimodal Transportation Account that was established several years ago.

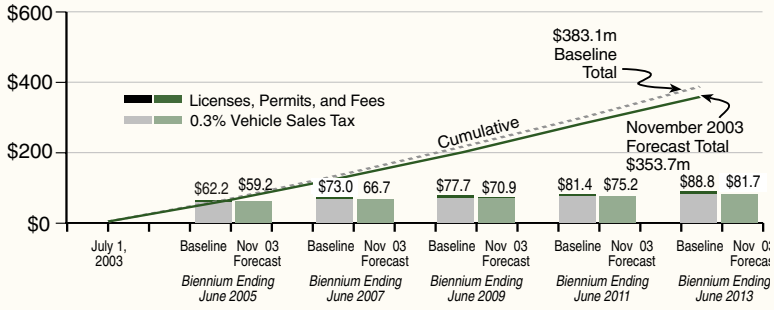
The following charts show the current projected revenues over the next ten years (for the new funding sources) as forecasted in November 2003 by the Transportation Revenue Forecast Council compared to the legislature's assumed 'baseline' projections used in the budget-making process in March 2003. Cumulative ten-year totals and individual biennial amounts are both shown.

Forecast comparisons include actual revenue collection data to date as well as updated projections based on new and revised economic variables. The November 2003 forecast includes several months of actual revenue receipt information. Gas tax receipts include four months of actual collections and licenses, permits and fees include three months of receipts. In the Transportation 2003 (Nickel) Account revenue projections for the ten-year period for gas tax receipts were increased over the September 2003 forecast (+1.05%) and licenses, permits and fees were forecast to be slightly higher (+0.5%), before taking into account the impact of Initiative 776. However, when including the I-776 impact, forecasted revenues for licenses permits, and fees are down ten percent for the ten-year period. In the Multimodal Account, licenses, permits and fees projected revenue for the ten-year period remained unchanged from the September 2003 forecast. Initiative 776 did not impact the Multimodal account.

Transportation 2003 (Nickel) Account Revenue Forecast
March 2003 Legislative Biennial Baseline Compared to
November 2003 Transportation Revenue Forecast Council
Millions of Dollars



New Sources - Multimodal Account Revenue Forecast
March 2003 Legislative Biennial Baseline Compared to
November 2003 Transportation Revenue Forecast Council
Cumulative and Biennial Totals
Millions of Dollars



Bond Sales Plan for New Authorizations Provided by the 2003 Transportation Funding Package

The 2003 Transportation Funding Package contained two new bond authorizations:

- a gas tax authorization of $2.6 billion.
- a state General Obligation Bonds (GO) authorization of $349.5 million. The proceeds from the new gas tax bonds will be used to fund highway projects. The debt service will be paid by the revenues from the nickel increase in the gas tax. The proceeds from the new state GO bonds will be used to fund rail and ferry projects. Debt service for these bonds will be paid from the Multimodal Account. Receipts from the new 0.3% sales tax on new and used vehicles will be deposited to the Multimodal Account and will augment rental car tax receipts and other fees already directed to this account.

2003-2005 Biennium

For the 2003-2005 biennium, the Legislature appropriated $280 million in proceeds from the new gas tax bonds and $47.7 million from the state GO bonds. To date in this biennium, $80 million of gas tax bonds have been sold. No new bond sales occurred in this reporting period. However, in February 2004 (the next scheduled state bond sale) $25 million in gas tax bonds is planned to be sold for the 2003 Transportation (Nickel) Account and $20 million in GO Bonds for the Multimodal Account.

The bond sales plan has not changed from the initial report. The combined affect of the revenue forecasts, bond sales assumptions and project expenditure assumptions is presented in the next section.

Financial Plans for Accounts Supporting the 2003 Funding Package

Transportation 2003 (Nickel) Account

The Transportation 2003 (Nickel) Account was established in the state treasury to be the repository of the new nickel gas tax and the increases in various vehicle licenses, permits and fees. Bond proceeds from the $2.6 billion authorization will also to be deposited to this account. Uses of the account include cash funding of highway and

Transportation 2003 (Nickel) Account 2003-2005 Budget and Ten-Year Financial Plan
dollars in millions

	03-05	05-07	07-09	09-11	11-13	Ten-Year Total
Balance Forward from Previous Biennium	$0.0	$4.4	$17.1	$36.2	$67.2	
Sources:						
Gas Tax Revenues (new 5¢)	298.0	341.9	353.3	365.2	375.1	1,733.5
Licenses, Permits and Fees Revenues	23.1	24.1	26.2	28.4	29.2	131.0
I-776 Impact (loss of revenue)	(2.6)	(2.7)	(2.8)	(2.9)	(2.9)	(13.9)
Interest Earnings	4.3	4.3	4.3	4.3	4.3	21.5
Bond Proceeds	280.0	568.0	670.0	643.0	439.0	2,600.0
Federal Funds	1.0	9.7	0.0	0.0	0.0	10.7
Local Funds	3.4	2.4	0.9	0.2	3.4	10.3
Total Sources of Funds	**$607.2**	**$947.7**	**$1,051.9**	**$1,038.2**	**$848.1**	**$4,493.0**
Uses:						
Cost of Bond Issuance	0.7	1.3	1.7	1.6	1.2	6.5
Bond Sale Underwriters Discount	2.1	4.0	5.0	4.8	3.6	19.5
Debt Service	22.5	90.6	189.0	262.2	337.8	902.1
Highway Improvements	569.7	794.3	733.8	690.9	462.8	3,251.5
Highway Preservation	2.0	10.3	5.0	20.3	107.0	144.6
Washington State Ferry Construction	5.7	34.5	98.3	27.4	3.9	169.9
Total Uses of Funds	**$602.8**	**$935.0**	**$1,032.8**	**$1,007.2**	**$916.3**	**$4,494.0**
Biennium Ending Balance	**$4.4**	**$17.1**	**$36.2**	**$67.2**	**($1.0)**	**($1.0)**

This plan represents the current budget and ten-year financial plan as adopted by the 2003 Legislature and does not contain any proposed adjustments to project delivery.

ferry projects identified by the Legislature and the payment of debt service and other associated costs for bonds sold to provide debt financing for highway projects. Since gas tax receipts are deposited to this new account, the uses of the account are restricted to highway purposes as required by the 18th Amendment to Washington's Constitution. The financial plan below, brings together all of the projected Sources (tax revenue, bond proceeds, interest earnings) and Uses (2003-2005 appropriations, 10-year projected program expenditures, and debt service) of the new account.

Changes to projected Sources and Uses of funds have been updated to reflect the most current forecasts. As changes, either positive or negative, are incorporated into the plans the ending balances in the outer biennia are affected. The current *pro forma*, which incorporates actual tax collections and current forecast projections, predicts a small negative ending balance of approximately $1.0 million by the end of the 2011-13 biennium. The September 2003 pro forma predicted that there might be a negative $16.5 million shortfall. This change is primarily due to a refinement to debt service calculations and the increased gas tax revenue forecast.

As mentioned earlier, for the ten-year period, gas tax receipts were up slightly from the September 2003 forecast ($18.5 million) and licenses, permits and fees were up slightly ($0.6 million) before the I-776 impact. Key economic variables, tax receipts, and interest rates, will continue to change over time. Future updates to forecasts as well as inclusion of more actual receipts will further impact the projected final ending balance. Additionally, actual and revised assumptions pertaining to bond sales and debt service will continue to be incorporated and likewise will impact the outlook for the final ending balance.

Impacts of Initiative 776

The 2003 Transportation (Nickel) Account was affected by Initiative 776, the application of which was ruled upon in October 2003 by the State Supreme Court (other affected accounts include the Motor Vehicle Account, the Puget Sound Ferry Operations Account and the Washington State Patrol Account). This table shows the projected impact of Initiative 776 to all affected accounts in millions of dollars. The 2003 Transportation Account will be negatively impacted over the ten-year period by $13.9 million.

I-776 Impacts
Loss of Revenue by Account
dollars in millions

	03-05	05-07	07-09	09-11	11-13	Ten-Year Total
Motor Vehicle Account	$30.7	$27.2	$28.0	$28.9	$29.7	$144.5
Transportation 2003 (Nickel) Account	2.6	2.7	2.8	2.9	2.9	13.9
Puget Sound Ferry Operations Account	0.6	0.5	0.5	0.6	0.6	2.8
Washington State Patrol Account	9.4	8.2	8.4	8.7	8.9	43.6
Biennial Total	**$43.3**	**$38.6**	**$39.7**	**$41.1**	**$42.1**	**$204.8**

Multimodal Transportation Account

The Multimodal Transportation Account was established several years ago as the repository for tax revenues and operating and capital expenditures not restricted by the 18th Amendment. The 2003 Transportation Funding Package directs receipts to this account from the additional 0.3% sales tax on new and used vehicles and the license plate number retention fee. The most significant pre-existing tax deposited to this account is the rental car tax. The 2003 Funding Package also directs bond proceeds from the $349.5 million State GO authorization to this account.

Multimodal Account 2003-2005 Budget and Ten-Year Financial Plan
(dollars in millions)

	03-05	05-07	07-09	09-11	11-13	Ten-Year Total
Balance Forward from Previous Biennium	$14.1	$10.7	$20.2	$33.0	$49.1	
Sources:						
Licenses, Permits, Fees Distribution	24.7	27.0	28.2	29.0	30.2	139.1
Rental car tax	45.3	50.3	56.7	62.7	68.9	283.9
Sales Tax on New & Used Car Sales	58.8	64.8	68.5	72.9	79.2	344.2
Miscellaneous Income	1.5	1.5	1.5	1.5	1.5	7.5
Bond Proceeds	47.8	43.7	128.7	89.6	39.8	349.5
Federal Revenue	14.1	5.4	5.5	101.6	187.7	314.2
Local Revenue	2.7	0.2	0.2	0.2	0.2	3.3
Total Sources of Funds	**$194.8**	**$192.8**	**$289.3**	**$357.5**	**$407.4**	**$1,441.7**
Operating Uses:						
Cost of Bond Issuance	0.1	0.1	0.3	0.2	0.1	0.9
Bond Sale Underwriters Discount	0.4	0.3	1.0	0.7	0.3	2.6
Debt service	2.2	9.3	19.5	32.5	43.9	107.3
Transfers to Other Accounts	9.9	4.5	4.5	4.5	4.5	27.9
WSDOT Program Support & Planning	5.4	4.5	4.6	4.7	4.8	24.0
Public Transportation	49.3	52.1	58.4	62.7	66.1	288.6
WSF Maintenance and Operations	5.1	5.3	5.4	5.5	5.6	26.8
Rail	37.6	40.3	41.0	41.8	42.6	203.3
Total WSDOT Operating Uses of Funds	**$109.9**	**$116.3**	**$134.7**	**$152.6**	**$167.9**	**$681.4**
Capital Uses:						
Hwy Preservation P0C	1.7	20.0	10.0	0.0	0.0	31.7
WSF Construction W0C	13.4	8.2	60.7	47.3	0.0	129.6
Rail Y0C	44.0	32.7	71.1	141.5	225.0	514.3
Local Programs Z0C	29.2	6.0	0.0	0.0	0.0	35.2
Total Capital Uses of Funds	**$88.3**	**$66.9**	**$141.9**	**$188.7**	**$225.0**	**$710.8**
Biennium Ending Balance	**$10.7**	**$20.2**	**$33.0**	**$49.1**	**$63.6**	**$63.6**

New funding source from the 2003 Legislative Package

New Bond Authorization from the 2003 Legislative Package

Anticipated Federal Funds

Projects funded primarily by New Bonding Authority and Augmented Federal Funds for Rail

The Multimodal Account includes changes to projected sources of funds, based on three months of actual receipts and current forecast data. As stated above, projected revenues from licenses, permits and fees for the ten-year period remained unchanged from the September 2003 forecast.

Program Management Information

Management Information Systems and Needs

A key lesson learned from WSDOT's nationwide assessment of project delivery information systems was that successful transportation programs were supported by integrated management information systems. Currently, WSDOT's hardware and software capabilities in this area, pieced together over a period of more than twenty years, fall far short of delivering what is necessary to support today's higher expected levels of oversight and accountability. This presents significant challenges.

WSDOT managers are required to access project financial plans, expenditure plans, actual expenditure levels, project milestones, and project work load estimates from several different management systems. Reporting from the various systems, while partially automated, requires a significant degree of manual intervention and support systems (databases, spreadsheets, etc.).

The 2003 Legislature supported WSDOT's request for a systems modernization assessment study. A Legislative Transportation Committee (LTC) workgroup was formed to provide oversight for this project. Members include four senators and four representatives charged with recommending actions to the full LTC. The workgroup met in September 2003 to initiate review of the project Statement of Work. If the statement of work is approved, the assessment effort is expected to produce an integration strategy and a project plan for presentation to the transportation committees of the legislature by December 2004.

While developing the long-term plan, there are pressing short-term needs that are required to shore up the existing systems. WSDOT has completed the following activities:

- Added information to the data marts used for reporting program management information (CPMS) and project accounting information (TRAINS). This will provide added support for project and program tracking and will increase reporting options and flexibility of information retrieval.
- Developed a web-based Quarterly Project Report for the Gray Notebook's Beige Pages. Trained staff to feed information to the Quarterly Project Report manually and developed a plan to implement electronic data feeds (to be implemented in early 2004).
- Completed an assessment of the number of projects, by project type and by region, that have been loaded into the agency's Project Scheduling Information System (PDIS).
- Developed a preliminary plan to build a PDIS Data Mart that will make project schedule and status information more readily available for reporting. Completion of the data mart is tentatively scheduled for mid-2004.
- Developed a preliminary design/build work breakdown structure for use in scheduling the mega projects. This structure will allow for scheduling and reporting status at a detailed level and assessing the earned value of work done to-date as the mega projects proceed.
- Started development of data marts to provide flexible reporting of the roadway inventory information that supports project scoping and development activities (to be implemented in mid-2004).

Right of Way Acquisition

Delays and cost increases in right of way acquisition have affected the delivery of several 2003 Transportation Funding Package projects. For example, advertisement for the SR 7/SR 507 to SR 512 – Safety project has been delayed due to 18 adjudicatory hearing requests from property owners adjacent to the project. WSDOT expects to complete negotiations with property owners by the end of spring 2004. For details, see page 4.

The tight delivery schedule for the 2003 Transportation Funding Package presents unique challenges for right of way acquisition. In order to minimize future right of way acquisition problems, the WSDOT Real Estate Services office (RES) and the Access Management office are analyzing the next two biennia to pick out projects requiring immediate action, to assure that right of way is delivered in time for advertisement. WSDOT's right of way, access, and real estate experts have also formed a plan to look for total parcel acquisitions and parcels where access control is already in place, thereby avoiding access hearings whenever possible. Acquisition plans will be developed as soon as possible and RES will be able to begin to acquire the necessary properties.

Appraisers, title examiners, and real estate agents in the private sector continue to enjoy a high volume of business due to the low interest rate environment. As a result, recruitment of experienced real estate professionals to replace retiring right of way staff at WSDOT is proving challenging. WSDOT continues to seek qualified professionals to join its staff, and will also begin a training program to develop sufficient staff experience to support the large program it needs to deliver over the next decade.

Utilities Relocation

As of December 31, no utility relocation issue has caused a project to go on "Watch List" status.

One of the keys to avoiding obstacles to project delivery from utilities relocation is to give utility companies as much notice as possible of WSDOT project impacts to their facilities. This allows the utilities adequate time for design, budgeting, and scheduling of the utility relocation. Below is an example of WSDOT's coordination efforts with the goal of minimizing utility relocation risks to our project schedules.

- **Widen I-5 Each Direction from Salmon Creek to I-205**

  NW Natural had concerns that the pressure in its natural gas lines would not adequately serve the neighborhood to the west of Interstate 5 once the NE 129th Street over crossing was demolished. WSDOT and NW Natural changed the original plan to run the gas line across the new bridge at 129th. The new plan utilized horizontal directional boring equipment to place the line under Interstate 5, allowing the utility to navigate around proposed drainage, drilled shafts for the new bridge, and retaining walls.

  Comcast also voiced concern regarding running a temporary line during the reconstruction of the bridge. WSDOT worked to provide a new freeway crossing at the 134th Street interchange, rather than at 129th Street.

- **SR 270, Pullman to Idaho State Line – Additional Lanes**

  An initial meeting has taken place with Avista Utilities for gas line relocation along the SR 270 corridor. This allows approximately one year to complete design and relocation prior to the start of the contract.

- **SR 31 – Metaline Falls to the Canadian Border – Reconstruction**

  A new fiber optic line was recently installed at the north end of the project to enhance communications to the Metaline Falls Border Crossing. After coordination with WSDOT, the Pend Oreille Telephone Company placed the line so that it would not impact roadway construction.

- **US 395 North Spokane Corridor - Gerlach to Wandermere**

  An agreement has been made with Bonneville Power Administration to initiate design work on tower relocation and reconstruction. The design work is to be completed by April 2004. Construction is scheduled to begin in November 2004.

WSDOT is also coordinating with the PUD and local communications companies in Pacific County on U.S. 101 in the vicinity of South Bend to make design adjustments so that underground utility lines can be placed at the time WSDOT raises the grade of the road for the SR 105 Mitigation – Willapa River Estuarine project. This will not impede the traffic staging of the project and will decrease the risk of any utility relocation delays to the contractor.

Environmental Documentation, Review, Permitting, and Compliance

WSDOT is overseeing a statewide transportation improvement program that creates new opportunities for aligning citizens' goals for the environment and for transportation systems. We are working to change the way we communicate these objectives and the interrelated nature of the complex issues in both protecting and improving the environment from the delivery of transportation projects.

Environmental Documentation and Review

Compliance with the Endangered Species Act

About forty Nickel projects remain to be advertised for construction in this biennium, according to WSDOT's delivery plan. Twenty-three of these projects have completed their required consultations under Section 7 of the Endangered Species Act. Transportation projects that do not use federal funds are not required to obtain Section 7 consultation from the Endangered Species Act. Two projects will not require Section 7 consultation because no federal funding will be allotted for project. Eleven projects in the preliminary stages of design cannot seek the consultation process at this time until the Biological Assessments are completed. Consultation on these projects should begin in 2004.

There are two projects currently undergoing consultation with NOAA Fisheries and the US Fish and Wildlife Service (USFWS). The **SR 31 Metaline Falls to Canadian Border Reconstruction** project is undergoing formal consultation with the USFWS to address Canada Lynx concerns. The **I-90 Two Way Transit & HOV** project is undergoing consultation with NOAA Fisheries and USFWS.

Three local projects, funded with Nickel Funds revenues, will be lead through the consultation process by local governments (City of Shoreline, the City of Bremerton, and the Hood Canal Coordinating Council). Two projects for WSDOT to deliver statewide (Statewide Bridge Rail Retrofit and Statewide Guardrail Retrofit) will be taken through consultation by the regional offices, acting on a regional basis. Two regions have already completed the consultation process for these projects.

A team of three experienced WSDOT biologists was deployed to the Western Washington Office of the USFWS to address the approximately 20 projects stalled in review. This staff assignment accomplished the completion of consultations for 15 projects including the **SR 9 – SR 522 to 176th St.** project. A new backlog is beginning to build due to the need to reinitiate consultation on a number of projects, including the Hood Canal Bridge Replacement. In addition, the backlog is compounded with the extensive amount of time that seems to be required to be spent in consultation on some of the more complex projects. The Federal Highway Administration, WSDOT and USFWS are continuing discussions on how to address this problem.

Program Delivery Tracking Sheet for ESA Section 7 Consultation
WSDOT Projects, '03 -'05 Biennium

	NOAA Fisheries		USFWS				
Project	Biological Assessment	Consultation Status	Biological Assessment	Consultation Status	NEPA Type	NEPA Complete	Proposed Ad Date
SR 31 Metaline Falls to Intt'l Border	N/A	N/A	8/10/03	Waiting	EA	12/05/03	4/10/04
I-90 Two Way Transit and HOV	11/21/2003	Waiting	12/21/03	Waiting	FEIS	03/30/04	1/06

Consultant Utilization

There are two main areas where consultants are expected to be utilized on 2003 Transportation Funding Package projects. The first is to augment WSDOT's workforce so WSDOT can minimize the inefficiencies associated with short-term workforce expansions and contractions. The second is to fill needs for specialized expertise that may not be available "in-house."

When WSDOT established the Urban Corridors Office in 2003, contracting efforts were directed at having a sufficiently large pool of qualified talent to draw from, quickly and efficiently, without time delays. With that goal currently being met, the emphasis has shifted slightly to identifying the "Best of the Best" in a variety of specialized areas, allowing WSDOT to draw upon top expertise at national and international levels.

Regional Transportation Improvement District (RTID) Projects
The 2003-2005 Transportation Budget requires the Regional Transportation Improvement District (RTID) to conduct an independent review of all project scopes and budgets prior to placing projects on the ballot. WSDOT management is assisting RTID by identifying and assembling a "Panel of Experts" to review CEVP® and Cost Risk Assessment projects. National or international experts with experience in a wide range of engineering disciplines and in cost risk assessment will be sought. The panel selection should be complete early next quarter.

On-Call Services
WSDOT currently has over 200 different consulting firms committed to providing services to the State on short notice through "On-Call" contracts. Many of these firms, which range from single person consultants to large, multi-tiered organizations, have internationally recognized experts on staff. Currently twelve prime contractors, plus their sub-consultants, are under contract to provide project specific services across the state.

2003 Transportation Funding Package - Consultant Utilization to Date
For the quarter ending December 31, 2003, WSDOT paid $2,556,500 to firms providing services on 2003 Transportation Funding Projects. Over 300 people were working directly on a full or part time basis on these projects. Over $5,000,000 was authorized as new work in the quarter.

Construction Employment Information

Contractor Employment

The 2003 Transportation Funding Package supports transportation projects that make important and long-term contributions to the state's economy and the productivity and economic well-being of its citizens. Far from the only, or even the largest, of these impacts is the direct and indirect economic benefits of the construction activity itself, one aspect of which is the creation of jobs to built the projects.

The direct and indirect benefits of construction employment have been extensively examined by labor economists. A useful guide is, Associated General Contractors of Washington, *Economic Impact of the Construction Industry on the State of Washington, 2002 Update* (prepared by the University of Washington).

How many people are at work on the 2003 Transportation Funding Package projects?

The precise number, for obvious reasons, is impossible to state. The jobs are not just at the job site, but include designers and project engineers (many of whom divide their efforts among many projects), suppliers and their employees and many others. Even for the contractors, employment supported by these projects includes home office as well as job site staff. And at the job site the employment count varies from day to day depending on subcontractor activity, the sequencing of job activities, and even the weather. We have asked contractors on the Nickel Fund projects in construction to provide the WSDOT construction office with a "snapshot" number: what is your best estimate of the "average" direct job site employment on your job over the course of the quarter? The following table captures the prime contractors' responses for their own work and their on-site subcontractors on the Nickel Fund projects that have already gone into construction.

Project/Contractor	Average project employment for Oct.-Dec. 2003
I-5 Widening Each Direction from Salmon Creek to I-205 Hamilton Construction and its 24 subcontractors.	24 employees
SR 500 New Interchange and Additional Lanes Tapani Underground Inc. and its 18 subcontractors.	21 employees
I-90 Build Lanes from Argonne Road to Sullivan Rd. Scarsella Brothers Inc. and its 13 subcontractors.	19 employees
I-90 Rye Grass Summit to Vantage Superior Paving Company and its 10 subcontractors.	14 employees
I-90 Highline Canal to Elk Heights Scarsella Brothers Inc. and its 12 subcontractors.	17 employees
I-182/U.S. 395 Interchange – Roadside Safety Transtate Paving Company and its 2 subcontractors.	6 employees

Construction Safety Information

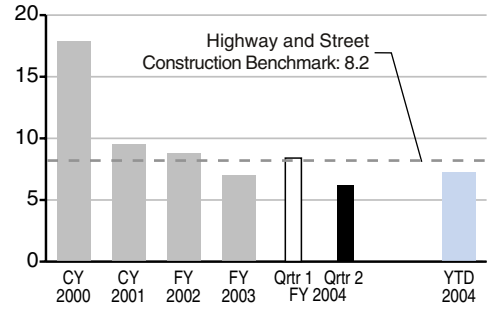
WSDOT and the AGC are currently finalizing the details of a method to jointly report safety data for the nickel projects. The expected outcome will be a combined safety rating for the contractor and WSDOT staff on each of the Nickel Fund projects.

Worker Safety: Quarterly Update

Continuing updates on *Gray Notebook* safety topics – data is shown for calendar year (CY) 2000, CY 2001, fiscal year (FY) 2002, FY 2003, and FY 2004 by quarter.

WSDOT Highway Maintenance Workers

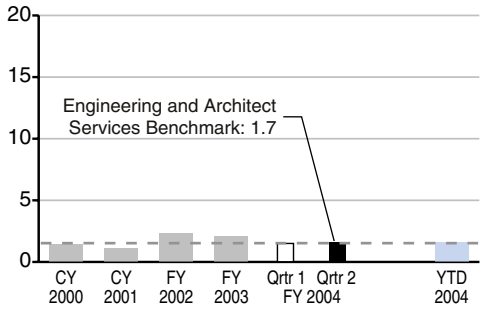
Recordable Injuries per 100 Workers per Fiscal Year



The second quarter recordable injury rate for maintenance workers was 6.2 injuries per 100 maintenance workers. There were 22 recordable injuries during the second quarter of which 9 were lost workday cases accounting for 202 lost workdays. This is a 24% decrease in injuries and a 17% reduction in lost workdays from the first quarter. The three most frequent types of injuries for the second quarter were dislocation (27%) occupational illness (23%) and sprain/strain (23%). The three most frequent causes of injuries for the quarter were struck by an object (23%), overexertion (18%), and falls from the same level (14%). The three most frequent injuries to the body were back (32%), ear (14%), and hand (9%).

WSDOT Highway Engineer Workers

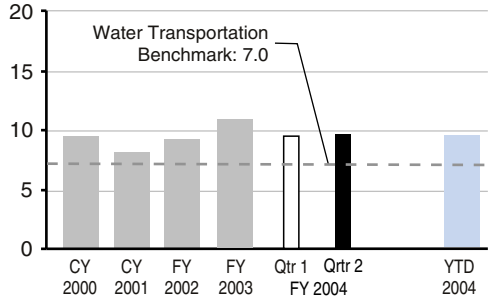
Recordable Injuries per 100 Workers per Fiscal Year



The second quarter recordable injury rate for engineer workers was 1.6 injuries per 100 engineer workers. There were 8 recordable injuries during the second quarter of which 7 were lost workday cases accounting for 56 lost workdays. There are less worker hours this quarter causing a slightly higher accident rate even though the number of injuries remained the same. The three most frequent types of injuries for the quarter were sprain/strain (38%), occupational illness (25%), and lacerations (25%). The three most frequent causes of injuries were overexertion (25%) falls from the same level (25%), and noise (25%). The three most frequent injuries to the body were the back (25%), ear (25%), and knee (13%).

WSDOT Ferry Vessel Workers

Recordable Injuries per 100 Workers per Fiscal Year



The second quarter recordable injury rate for ferry vessel workers was 9.8 injuries per 100 ferry vessel workers. There were 23 recordable injuries during the second quarter of which 21 were lost workday cases accounting for 268 lost workdays. This is a 4% decrease in the number of recordable accidents and a 3.6 % reduction in the number of lost time days from the first quarter. There are less worker hours this quarter causing a slight increase in the recordable accident rate even though the actual number of accidents dropped slightly. The three most frequent types of injuries were sprain/strain (52%), chemical exposure (13%), and aggravation of a previous injury (13%).The three most frequent injuries to the body were the back (13%), circulatory system (13%), and multiple (13%).

Source for all charts: WSDOT Safety Office.

Accident Prevention Activities

Second Quarter FY 2004

- The South Central Region's Maintenance division is identifying targets and strategies to decrease personal injuries within work groups. Four of five sections reduced their yearly injury average. Accountability and awareness has increased substantially and the numbers reflect significant improvement.
- The Eastern Region is revising its Accident Review Board process to make it more accountable for overall safety.
- WSDOT completed a successful West Nile Virus campaign during the second quarter. Between May and October 2003, WSDOT spent about $92,000 for the West Nile Virus program. This included obtaining materials, training people, monitoring sites, and application of pesticides under the direction of the Department of Health (DOH). DOH reported that no human or animal cases were confirmed in Washington in 2003. However, nationally, in 2003, there were 7,718 human cases with 166 deaths. In 2002, there were 4,156 cases and 284 deaths.

Reading the Charts

"Recordable Injuries and Illnesses" is a standard measure that includes all work related deaths and work related illnesses and injuries, which result in loss of consciousness, restriction of work or motion, transfer to another job, or require medical treatment beyond first aid.

The U.S. Bureau of Labor Statistics provides the selected 2000 national average benchmarks. After discussion with the National Bureau of Labor Statistics, the following benchmarks were selected to provide a more relevant and consistent benchmark.

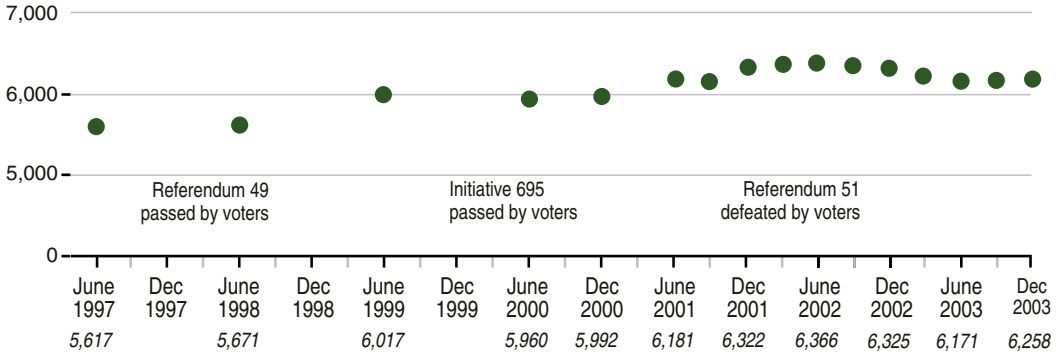
Maintenance: "Highway and Street Construction" Standard Industry Classification (SIC) 161 (rate 8.2). Engineering: "Engineering and Architect Services" SIC 871 (rate 1.7). Ferry Vessel Workers: "Water Transportation" SIC 44 (rate 7.0)

One worker equals 2,000 hours per year.

WSDOT Workforce Levels

One indicator of the agency's workforce size is the current number of permanent full-time employees on staff. The accompanying chart shows that number at various points since the end of 1996. (The number of "FTEs" [full-time equivalents] will generally exceed the number of full-time employees, since seasonal and part-time work force must also be funded from "FTE" allotments.)

Number of Permanent Full-Time Employees at WSDOT



Source: WSDOT Office of Human Resources.

Training for WSDOT Highway Maintenance Employees

WSDOT continues progress toward achieving training goals for maintenance employees. A total of 24 safety and maintenance courses are required by law and/or regulation. The chart shows status of training completed for 6 of the 13 required safety courses and 5 of the 11 maintenance courses.

	Maintenance Workers Requiring Training Dec 03	Total Current Maintenance Workers Trained to Date Dec 03	Maintenance Workers Trained 1st Quarter FY04	Maintenance Workers Trained 2nd Quarter FY04	Compliance to Date: Target = 90%	Change Since Last Quarter
Safety Courses						
Blood Borne Pathogens	1,243	1,064	13	46	86%	+2%
First Aid	1,480	1,383	6	0	93%	-2%
Hearing Conservation	1,363	1,255	0	0	92%	-3%
Personal Protective Equipment	1,361	894	216	0	66%	+1%
Fall Protection	750	403	19	0	54%	+2%
Flagging & Traffic Control	1,149	1,109	1	0	97%	-1%
Maintenance Courses						
Drug Free Workplace	326	287	0	0	88%	+1%
Forklift	1,173	1,036	37	28	88%	+0%
Hazardous Materials Awareness	986	671	85	90	68%	+8%
Manlift Operations	523	307	0	8	59%	-3%
Excavation, Trenching and Shoring	438	302	45	93	69%	+13%

Training for All WSDOT Employees

The following table reflects continued progress on important workforce training courses that help shape WSDOT's workplace. These courses are for all permanent full-time, part-time, and temporary employees. The goal is to have 90% of our workforce trained as promptly as resources allow.

	Number Requiring Training	Number of Employees Trained to Date Dec 03	Number Trained 1st Quarter FY04	Number Trained 2nd Quarter FY04	Compliance to Date: Target = 90%	Change Since Last Quarter
Training Courses						
Disability Awareness	7,295	2,567	116	131	35%	+1%
Ethical Standards	7,295	7,050	82	82	97%	0%
Security Awareness - all employees*	7,295	5,711	17	0	78%	+4%
Security Awareness - supervisors	2,884	1,474	0	0	53%	+1%
Sexual Harassment/Discrimination	7,295	4,880	71	149	67%	+14%
Valuing Diversity	7,295	3,200	129	142	44%	+2%
Violence that Affects the Workplace	7,295	5,910	6	7	81%	+6%

**In past quarters, non-supervisory employees were incorrectly credited by WSF for attendance at Security Awareness for Supervisors training. This has now been corrected.*

Source: WSDOT Office of Human Resources, Staff Development.

Highway Construction Program: Quarterly Update

Meeting WSDOT's Scheduled Advertisement Dates

The Highway Construction Program is the largest capital program in the Transportation Budget. Planned expenditures for the 2003-2005 biennium are approximately $2.3 billion.

Overall delivery of the Highway Construction Program is tracked and monitored against schedule projections for ad dates and for project cash flow. The first is "Meeting WSDOT's Scheduled Advertisement dates." The second is "Cash Flow."

Funding for the 2003-2005 Highway Construction Program includes a variety of fund sources, including pre-existing transportation funds, 2003 Transportation Funding Package ("Nickel" funds) and Tacoma Narrows Bridge funds. The program includes 345 construction projects for advertisement during the current biennium, of which 46 are "Nickel" projects and 299 are funded with pre-existing funds. Overall, including preconstruction activities on construction projects to be advertised in future biennia, more than 1,000 projects will be underway during the 2003-2005 Biennium.

In the 2003 Transportation Funding Package there were 20 projects originally planned for advertisement in the biennium through the end of the second quarter. Of the planned total, 15 have been advertised, four have been rescheduled for later in the biennium, and one has been deferred to the 2005-2007 biennium.

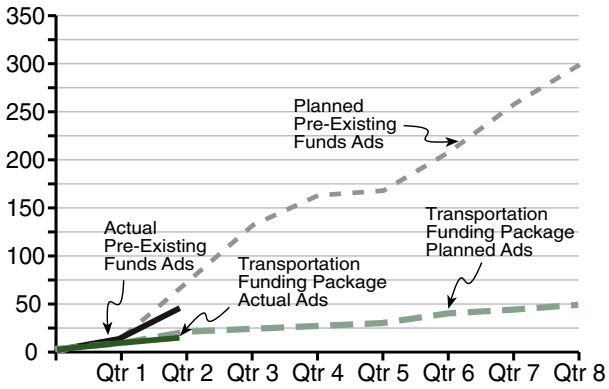
There were 70 pre-existing fund projects planned for advertisement by the end of the second quarter; 42 have been advertised as planned, 26 have been rescheduled for later in the biennium and two have been deferred to the 2005-2007 biennium. In addition, three projects were advanced from quarters later in this biennium and were advertised in the first quarter for a total of 45 projects that have been advertised to date.

Ad Date: 2003 Transportation Funding Package ("Nickel Funds")

Of the nine projects planned to be advertised in this quarter, seven projects were advertised as planned, one project was delayed for advertisement to later in the biennium and one will be deferred to the 2005-2007 biennium (for more detail, see the *Beige Pages*). One project was advanced from the eighth quarter, for a total of eight advertised projects.

- **Seven projects were advertised as planned.**
  SR 9/SR 528 Intersection – Signal
  SR 16 HOV Improvements between Olympic View Drive and Union Ave.
  U.S. 97A, Entiat Park Entrance – Turn Lanes
  SR 124, East Jct. SR 12 - Reconstruction
  SR 161/234th Street to 204th Street E
  SR 203/NE 124th/Novelty Rd Vicinity
  U.S. 395/Kennewick Variable Message Sign
- **One project was advanced:**
  SR 527/132nd St. SE to 112th St. SE
- **One project was delayed to a future quarter in 2003-2005:**
  SR7/SR 507 to SR 512 – Safety
- **One project was deferred to 2005-2007:**
  SR 522/I-5 to SR 405 Multi-Modal Project

Highway Construction Program Delivery
Planned vs. Actual Number of Projects Advertised
2003-2005 Biennium, Quarter 2 Ending December 31, 2003



Source: WSDOT Project Control and Reporting Office.

Ad Date: Pre-Existing Funding

Of the 58 projects scheduled for advertisement with pre-existing funds in the second quarter, 34 projects were advertised as scheduled, 22 have been delayed slightly to later in the 2003-2005 biennium, two were deferred to beyond the 2003-2005 biennium, and two projects were advertised in response to emergencies.

- **The following are six examples of pre-existing projects advertised as planned:**

  U.S. 101, Olympic National Park to Indian Creek – This project overlays approximately three miles of existing roadway pavement between Olympic National Park and Indian Creek.

  I-5, Stewart - South Bound off Ramp – The existing signal system will be replaced with a signals using poles and mast arms. WSDOT will be conducting a feasibility assessment of connecting the new signal system to the City of Seattle's centralized system.

  SR 11, Whatcom County Line to Bellingham – This project will resurface approximately four miles existing roadway and restore safety features between the Whatcom County Line and the City of Bellingham.

SR 26, Union Flat Creek-Improve Drainage
On SR 26 west of Colfax, the design of this project will stabilize the roadway structure by reconstructing approximately 1200 linear feet of creek channel away from the roadway. There will also be check dams to slow the flow of the creek and protect the roadway from erosion.

SR 127, Central Ferry to Church Hill Road
At Central Ferry and extending eight miles north on SR 127, the project preserves the pavement and extends the service life by paving with Asphalt Concrete Pavement mixture and will restore the basic safety features of the highway.

U.S. 97, Blewett Pass South – Paving
From the junction with SR 970 to the north of the summit, the project is to resurface existing roadway pavement to maintain the integrity of the roadway.

- **The following are two examples of delayed projects:**

  SR 20, Troxell Road to Deception Pass – Current design issues could not be resolved and will require additional engineering changes to meet environmental requirements. This will delay the project until February 2005.

  U.S. 395, Deadman Creek Fish Barrier Retrofit –After a project cost/benefit analysis was conducted in conjunction with the Department of Fish and Wildlife, both WSDOT and WDF believe that funds for this project could be used for similar projects that would gain better results.

- **Two projects were added in response to emergencies:**

  SR 20, Rockslide – On Sunday, November 9, 2003 at 6 a.m. a rockslide estimated at two to three million cubic yards occurred above State Route 20 at milepost 121.5. The rockslide left the hillside extremely unstable, damaged two sections of the highway and left the small town of Diablo cut off.

  Currently, monitoring equipment and minor highway repairs give Diablo residents, Seattle City Light personnel, National Parks Service, and WSDOT personnel limited access to the highway. The highway is open between 8 a.m. and 4 p.m. when flaggers are in place. In early February 2004 contractors will turn in a report to WSDOT with proposals for long-term solutions that will reopen the highway permanently.

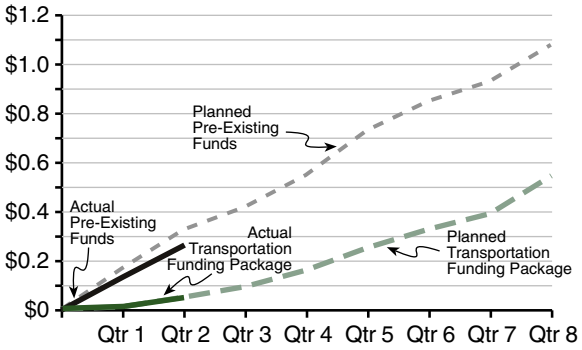
  U.S. 101, Hoh River Erosion – In response to storm-related erosion, WSDOT replaced washed out armoring and stream barbs with huge boulders along the Hoh river bank in an effort to keep the river from washing out sections of SR 101. Placement of the boulders is a temporary solution. A permanent solution to this problem is being reviewed. To meet permitting requirements of the Washington State Department of Fish and Wildlife, WSDOT completed a Reach Analysis for this section of river in 2002. The Federal Highway Administration reviewed WSDOT's approach to fixing the problem and has agreed to fund a permanent solution with federal funds. WSDOT is now completing a conceptual design in accordance with the Reach Analysis and will have a cost estimate completed by the end of February 2004.

Cash Flow on Highway Construction Projects

2003 Transportation Funding Package ("Nickel Funds")

Expenditures for highway projects through the quarter ending December 31, 2003 were $44.2 million. This represents 8 percent of the budgeted cash flow for the biennium. At this point, expenditures using the 2003 Transportation Funding Package are within one percent of meeting the plan. The expenditure rate will increase as more projects are awarded or moved from a pre-existing project and added to the nickel list of projects. The expected pattern of 2003 Transportation Funding Package spending is illustrated by the fact that expenditures in the 8th quarter of 2003-2005 are expected to be 28 percent of the entire biennium's budgeted cash flow.

Highway Construction Program Cash Flow
Planned vs. Actual Expenditures
2003-2005 Biennium, Quarter 2 ending December 31, 2003
Dollars in Billions



Source: WSDOT Project Control and Reporting Office.

Pre-Existing Funding

For the first two quarters of the biennium, WSDOT submitted an expenditure plan to the legislature for approximately $328 million. As of December 31, 2003, expenditures totaled $265 million. This leaves a variance of approximately $64 million or 19.2 percent from the plan. WSDOT is currenlty seeking legislative direction on projects with programmatic variance.

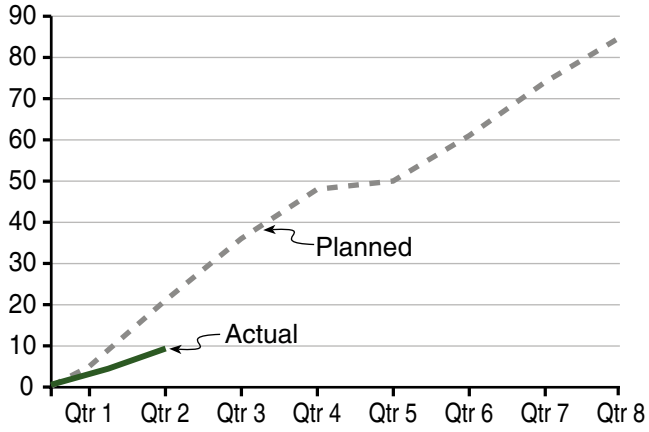
Special Safety Improvements: Quarterly Update

Meeting WSDOT's Scheduled Advertisement Dates for the Safety Improvement Subprogram

While elements that improve safety are a part of almost every highway construction project, a special program sub-category established by the legislature covers the projects that are designed to address issues in "high accident corridors" and "high accident locations." These projects are identified by WSDOT based on information about the history of accident frequency and severity. While these projects account for only a small portion of the overall benefits to safety from highway improvements. WSDOT tracks the advertisement of these projects just as with other projects in the program in order to provide a picture of program delivery on issues that are of great importance on particular locales around the state that have been selected for this program treatment.

- **Of the 14 projects planned for ad, these six projects were advertised as scheduled for this quarter:**
  - I-5/Ramps at Michigan – Corson/Albro/Swift
  - SR 9/SR 528 Intersection – Signal
  - I-90/Moses Lake West Safety Improvements
  - SR 124/East Jct. SR 12 – Reconstruction
  - SR 203/NE 124th/Novelty Rd Vicinity
  - U.S. 395/Kennewick Variable Message Sign

Safety Improvement Program Delivery
Planned vs. Actual Number of Projects Advertised
2003-2005 Biennium, Quarter 2 Ending December 31, 2003



Source: WSDOT Project Control and Reporting Office.

- **Eight projects were deferred for advertisement later in the biennium:**
  - SR7/SR 507 to SR 512 – Safety
  - SR 20/Oak Harbor NCL to Frostad Road
  - SR 20/Monkey Hill Rd. to Troxell Rd.
  - SR 20/Sapp Rd. to Reed St. – Rechannelize
  - SR 20/Troxell Rd. to Deception Pass Vic.
  - SR 20/Frostad Road Vicinity – Guardrail
  - SR 24/South Wahluke Slope – Guardrail
  - SR 290/Helena Street – Add Turn Lane

End-of-2003 Season Highway Construction Project Evaluations: Third Annual Report

The annual Construction Highlights report is an end-of-the-year synopsis of construction projects that were completed or nearly completed during the previous construction season. Each region's project office evaluates how well its projects were carried out. This is WSDOT's third year publishing this report.

This year's report is an assessment of 23 projects statewide, representing a variety of construction types and settings. Each project is rated in four elements of construction – design, construction management, schedule and cost and each element is assigned a one-to-five star rating (one is the lowest ranking, while five is the highest). Contractor's names are listed for identification, but the detailed report shows that the strength or weaknesses of a particular project are often as much WSDOT's responsbility as the contractor's (guiding of design, for example), and the best projects seem always to be built on strong teamwork for the entire project team. The complete report can be found at *www.wsdot.wa.gov/projects/2003highlights/.*

Highway Construction Project Rating* for 2003 Season

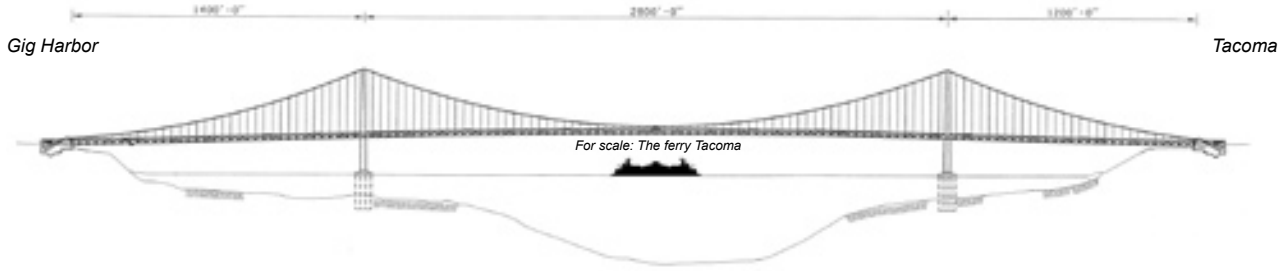
Project	Design	Construction Management	Schedule	Cost	Contractor
SR 504, Castle Rock	★★★★★	★★★★★	★★★★★	★★★★★	Lakeside Ind.
SR 28, Rock Island	★★★★★	★★★★★	★★★★★	★★★★★	Scarsella Bros.
U.S. 395, Hillsboro	★★★★	★★★★	★★★★★	★★★★★	M. A. DeAtley
SR 26, Vantage	★★★★	★★★★★	★★★★★	★★★★★	Central WA Asphalt
SR 8, McCleary	★★★★	★★★★★	★★★★★	★★★★	Scarsella Bros.
U.S. 12, Brady - Malone	★★★★	★★★★★	★★★★★	★★★	Lakeside Ind.
I-90 Sunset	★★	★★★★	★★★★★	★	Kiewit Const.
I-405/SR 167 I/C	★	★★★	★★	★	Max J. Kuney
SR 520, 10th to Midspan	★★★★	★★★★	★★★	★★★★★	Colvico Inc.
I-90 Eastgate	★★★★	★★★★	★★★★	★★★★★	Lakeside Ind.
I-405 Cole Creek Parkway	★★★	★★★★	★★★★	★★	Tri-State Construction
SR 141, Klickitat Co. Paver	★★★★	★★★★★	★★★★★	★★★★★	Mid-Columbia Paving
SR 20, Methow River Bridge	★★★★	★★★★★	★★★★	★★★★★	One Way Construction
SR 167, N. Meridian to King	★★★★★	★★★★★	★★★★★	★★★★★	ICON Materials
I-5, Puyallup River Bridge	★★★★★	★★★★★	★★★★★	★★★★★	CBI Inc.
SR 161, Clear Lake Rd.	★★★★★	★★★★★	★★★★★	★★★★★	Tucci and Sons
SR 525, SR 99 to SR 526	★★★★	★★★★	★★★★★	★★★★	KLB Construction
U.S. 2, Barclay Creek Bridge	★★★★	★★★★★	★★★★★	★★★★★	Wilder Construction
SR 290, Trent Ave. Bridge	★★★	★★★	★	★★★★	Ross Bros.
I-90, Sullivan Rd.	★★★★★	★★★★★	★★★★★	★★★★★	Inland Asphalt Co.
SR 510, I-5 Pacific	★★★★	★★★★	★★★★	★★★★	Scarcella Bros.
SR 125, Military Road	★★★★	★★★★	★★★★★	★★★	Transtate Paving
I-5, Samish Way	★★★★	★★★★	★★★★★	★★★	Wilder Construction

Four other projects of interest were included in the report, but not evaluated: SR 16 Tacoma Narrows Bridge; SR 104, Hood Canal Bridge; SR 433, Lewis and Clark Bridge, and the Moses Lake Wetland Mitigation Bank.
* Five star rating system: one represents the lowest rating, five represents the highest.

WSDOT Asks the Public's Opinion

Included for the first time in this annual Construction Highlights report is a public opinion questionnaire evaluating one project in each of WSDOT's six regions. Motorists who traveled through state highway construction projects over the past summer have an opportunity to tell WSDOT what they did or did not like, what worked or did not work, by visiting *www.wsdot.wa.gov/projects/2003highlights/*.

WSDOT will use the public comments to improve the way projects are managed and communicated in the future. Results of the public evaluation will be posted for each of the six projects. Projects included are: I-90, Sunset Interchange in King County; I-5, Puyallup River Bridge in Pierce County; State Route (SR) 141, Klickitat County Paver; U.S. 395, Hillsboro Street Interchange in Franklin County; I-90 Sullivan Road to Idaho State Line Paving in Spokane County; and SR 28, Rock Island Rock Slopes in Douglas County.



Tacoma Narrows Bridge Project Update

Design/builder Tacoma Narrows Constructors (TNC) now stands at 26.3% construction completion of the new State Route 16 Tacoma Narrows Bridge project. In December 2003, TNC reached another significant milestone – that of "touching down" the Gig Harbor (west) caisson onto the 133-foot-deep Narrows seabed. In January, TNC expects to touch down the Tacoma (east) caisson on the seabed at an even lower depth of 149 feet. Following touchdown, crews will continue placing reinforced concrete to build caisson internal and external walls while they dredge soil from the 15 hollow cells in each caisson. Dredging will allow the caissons to sink another approximately 60 feet into the Narrows seabed. At that point, crews will start building the towers above water. Other bridge work continues as well, including anchorage construction and the overseas fabrication of the suspension cable wire.

Excavation work on both the Tacoma and Gig Harbor anchorages is finished. The Tacoma anchorage has already had four massive concrete pours, and crews are preparing to begin placing concrete on the Gig Harbor anchorage.

Roadwork also continues to move at a rapid pace. Crews plan to complete the new eastbound on ramp and exit at 36th Street NW, along with 22nd Street construction, and open all to traffic in March. Construction continues on several large retaining walls, erosion control measures are in place for the winter season, and landscaping along SR 16 is underway.

On February 2, the state Department of Ecology (DOE) fined WSDOT and TNC jointly $10,000 for inadequate treatment of construction storm water. During several rain events between October and January, discharges of cloudy stormwater from the project site in the Narrows exceeded permit limits. Since October, project staff have worked hard to improve environmental compliance by implementing DOE environmental recommedations, including: implementing best-management-practice

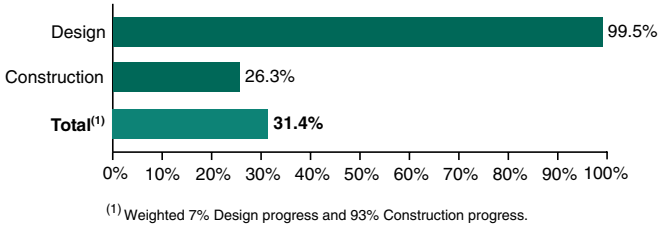
Landscaping at 36th St. on-ramp

Tacoma caisson construction

Tacoma anchorage concrete pour

Tacoma caisson concrete pour

Tacoma Narrows Bridge Project
Progress to Date
Percent Complete



(1) Weighted 7% Design progress and 93% Construction progress.

Source: WSDOT Engineering and Regional Operations Division.

stormwater treament controls, increasing water monitoring and testing, and monitoring stormwater detention ponds steps. For more information on WSDOT's environmental commitments, see page 45 of this *Gray Notebook*.

For additional information, including financial information, project schedule, traffic information, photo library and more, please visit www.tacomanarrowsbridge.com.

Hood Canal Bridge Project Update

Graving Dock

Progress on the project remains almost at a standstill as efforts continue among WSDOT, the Lower Elwha Klallam Tribe, the State Office of Historic Preservation, FHWA and the Army Corps of Engineers to resolve issues presented by the discovery in August 2003 of a significant archaeological find. The process must establish compliance with the requirements of Section 106 of the National Historical Preservation Act in order for construction work to resume at the site, probably following a period of intensive archaeological activity.

Meanwhile, despite the lack of physical construction at the graving dock site, the contractor completed a restoration project at Ediz Beach. Close to 1,500 feet of shoreline was cleared, contoured and reseeded. For many years, the Ediz Beach area was unsafe and inaccessible due to logs, pilings and other debris. WSDOT removed these articles at low tide to avoid disturbing the harbor waters.

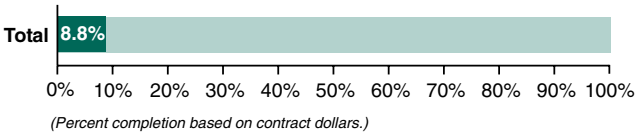
This restoration provides a healthy natural environment for native plants and animals and may also encourage the spawning of sand lance (a small fish), a significant portion of juvenile salmon's diet.

It was completed on time, and in accordance with a Hydraulic Project Approval (HPA) issued by the Department of Fish and Wildlife as mitigation for use of shoreline access to the graving dock. The mitigation project had to be completed before October 15, 2003 to minimize disturbance of the sand lance during its spawning period.

Before

After

Project Progress to Date
Percent Complete



(Percent completion based on contract dollars.)

Source: WSDOT Engineering and Regional Operations Division.

Bridge Site

Construction continued at the bridge site with the contractor, Kiewit-General of Poulsbo, building a temporary work trestle at the bridge's east end. The work trestle eventually will support the new east-half transition span. Plans are to roll the existing span onto a second temporary work trestle and roll the new transition span into place. A long weekend closure is expected sometime in 2005 or 2006.

For more information, please visit: *www.wsdot.wa.gov/projects/sr104hoodcanalbridgeeast/.*

Highway Safety Improvement Projects: Quarterly Update

Many of the highway safety improvement projects installed or constructed by WSDOT seek to improve safety in an area identified by unusually high frequencies of accidents. Do these safety improvement projects, in fact, lead to safer conditions? WSDOT reports below on a very encouraging review of before-and-after accident statistics in relation to 21 such projects from locales around the state. Also featured this quarter are results from a study on:

- Cable Median Barrier - Across the Median Protection, a project intended to benefit longer stretches of highway
- Impacts of the .08 DUI law assessed over a six year period
- Safe Routes to School program and
- A roundabout project in the City of Port Orchard

Safety Projects – Before and After Results

Each year, WSDOT completes a variety of safety improvement projects throughout the state highway system, ranging from adding turn lanes and signals to installing median barrier and rumble strips. To begin to determine their effect on reducing the number and severity of traffic collisions, a preliminary before-and-after study has been conducted for 21 such projects. Projects were chosen that permitted at least 18 months of collision data to be analyzed in the before period, and at least 12 months in the after period. The data was then normalized (12 month average) to make a fair comparison.

Combined Average for 21 Safety Projects

Collisions Per Year

	All Types	Property Damage Only	Injury/Fatal
Before	15.5	8.8	6.7
After	9.7	5.5	4.2

Source: WSDOT Transportation Data Office.

Preliminary results indicate that for this 21 project sample the average number of collisions per year for all projects combined was reduced by 37 percent. Likewise, the average number of fatal and injury collisions per year also declined by 37 percent. As additional data becomes available, this safety project analysis will be updated and expanded.

To provide examples of the various types of highway improvements that were indicated in the study additional details about three different projects are provided below and on the next page.

I-90 Gold Creek to Easton Hill Vicinity, Kittitas County

Screens were installed in the median at these two locations to reduce the night time headlight glare from on-coming traffic. Prior to installation of the screens, these two sections of I-90 had a combined average of 19.4 night time collisions per year. After the installation, this figure dropped to 13.7, a 29 percent decrease. In addition, for collisions that involved only damage to property, the decline in the after period was even greater, from 15.2 to 6, or a 60 percent reduction.

Glare screen installed on median barrier along I-90.

I-90 Ritzville to Tokio

This project involved flattening side slopes, installing rumble strips, upgrading illumination and repaving. Before the project started, there was an average of 39 collisions per year in this 13-mile section of I-90. Since the project was completed, this dropped to 21 collisions per year, a 46 percent decrease. The percentage decrease in fatal and injury collisions was nearly as large, dropping by 34 percent. In looking at specific categories of collisions, additional reductions are shown: a 9 percent decrease in non-daylight collisions; a 31 percent decline in collisions on wet pavement surfaces; and an 8 percent drop in overturns.

Slope flattening and new pavement on I-90 near Ritzville

SR 99 Battery Street Tunnel, Seattle

In order to reduce the number of collisions occurring on wet pavement surfaces, the concrete roadway was ground to increase friction. Before the project, this section of SR 99 experienced an average of 77.5 collisions per year, 47.5 of which were on wet pavement. After the project was completed, total collisions decreased to 30.5 per year, while wet surface collisions declined to 10.2 per year, a reduction of 61 percent and 79 percent, respectively. If only injury collisions are considered, the decrease after the project was completed is nearly as dramatic, from 29.5 per year down to 14.8, or a 50 percent drop.

Concrete pavement grinding to increase friction on SR 99 at the Battery Street Tunnel in Seattle.

The summary of all 21 safety projects so far included in the study that are being analyzed is presented in the table below. For a complete table of findings, please visit the following web site: www.wsdot.wa.gov/mapsdata/tdo/PDF_and_ZIP_Files/safety_project.pdf

Highway Safety Projects - Before and After Study

Collision Data Comparison

Project Title and Location	Description of Work	Available Data (in months)	Collisions Per Year: All Types	Collisions Per Year: Property Damage Only	Collisions Per Year: Injury/Fatal
U.S. 2 Sultan-Startup Road Startup Vicinity	Widened SR 2 to provide an EB left turn lane and a WB left turn pocket.	18 *Before* 14 *After*	0.7 0.9	0.0 0.0	0.7 0.9
SR 99 Battery Street Tunnel - Safety Seattle	Constructed roadway surface improvements - pavement grinding	26 *Before* 13 *After*	77.5 30.5	48.0 15.7	29.5 14.8
SR 522 NE 145th St Vicinity To NE 155th St Shoreline	Constructed raised median island in place of existing two way left turn lane. Improved visibility.	18 *Before* 16 *After*	63.3 40.5	38.0 26.3	25.3 14.3
U.S. 2 Applets Way To Vicinity Red Apple Road Cashmere	Installed median barrier to reduce crossover collisions	23 *Before* 12 *After*	2.1 0.0	0.5 0.0	1.6 0.0
SR 17/26 Othello - Grade Separation Othello	New interchange and illumination	21 *Before* 12 *After*	7.4 2.0	2.9 1.0	4.6 1.0
SR 24 Hatton Road Ltl Othello	Widened and provide left turn channelization and improve turning radius.	20 *Before* 13 *After*	1.2 1.8	0.6 1.8	0.6 0.0
SR 26 Royal City Vicinity	Constructed left turn lanes.	23 *Before* 12 *After*	6.8 0.0	3.7 0.0	3.1 0.0
SR 28/282 Ephrata - Signal Ephrata	Widened roadway, constructed left turn lanes and installed signal.	23 *Before* 13 *After*	5.7 3.7	5.7 3.7	0.0 0.0
U.S. 97 Orondo North Orondo Vicinity	Realingment and construction of left turn lane.	25 *Before* 12 *After*	0.5 0.0	0.0 0.0	0.5 0.0
U.S. 97 Alt Lakeside Vicinity Chelan	Constructed two-way left turn lane.	21 *Before* 16 *After*	5.1 0.8	4.0 0.8	1.1 0.0
SR 150 Chelan West - Turn Lanes Manson	Widened and constructed left turn channelization.	22 *Before* 17 *After*	1.1 0.7	0.5 0.7	0.5 0.0
SR 105/SR 105 Spur Westport	Constructed channelization for right and left turns. Upgraded illumination.	29 *Before* 12 *After*	3.3 3.0	1.2 2.0	2.1 1.0
SR 162 Bowman Hilton Rd E. to Vicinity 149th Alderton	Upgraded signal and illumination, realignments, installed signal, guardrail and flattened slopes.	19 *Before* 18 *After*	49.9 46.7	21.5 23.3	28.4 23.3
I-5/SR6 Sb. Ramp - Signal Chehalis	Signal and illumination installation.	25 *Before* 15 *After*	2.9 0.8	1.4 0.0	1.4 0.8
I-5 Chamber Way - Signal Chehalis	Installed signal at NB off-ramp, realignments, resurfacing and illumination.	25 *Before* 15 *After*	3.8 2.4	2.9 2.4	1.0 0.0
U.S. 101 Fowler Street- Signal Raymond	Installed signal, reconfigured with curbs and raised islands.	25 *Before* 15 *After*	2.4 4.0	1.9 2.4	0.5 1.6
SR 24 Birchfield Road Intersection Yakima Vicinity	Installed signalization, upgraded illumination, signing and pavement markings.	24 *Before* 12 *After*	5.5 5.0	2.0 3.0	3.5 2.0
I-90 West E'burg I/C To South E'burg I/C Ellensburg Vicinity	Lengthen acceleration lane and tapers. Updated illumination and guardrail. Roadway rehab and overlay.	25 *Before* 12 *After*	14.9 16.0	11.5 13.0	3.4 3.0
I-90 Gold Creek To Easton Hill Snoqualmie Pass Vicinity	Installed glare screen along median barrier.	26 *Before* 14 *After*	19.4 13.7	15.2 6.0	4.2 7.7
SR 241 Alexander Road To Factory Rd Sunnyside Vicinity	Constructed two-way left turn lane. Channelization Upgraded signals, widened shoulders, 4-way stop.	25 *Before* 21 *After*	12.0 10.3	3.4 6.3	8.6 4.0
I-90 Ritzville To Tokio-safety Matrix Ritzville Vicinity	Flattened slopes, installed rumble strips, illumination upgrades, and ACP overlay.	28 *Before* 12 *After*	39.0 21.0	19.3 8.0	19.7 13.0

In addition to the projects shown, the I-82/Union Gap to Oregon State Line project was analyzed. Initial results indicate an increase in collision frequency which is not readily identifiable because of the length of the project, weather variation and increased traffic in different locations throughout the project. Additional review is underway to identify probable causes for the collisions. This information will be presented at a future date. *Source: WSDOT Transportation Data Office.*

The Cable Median Barrier

Protection From 'Across the Median' Collisions

Errant vehicles that cross the median into opposing lanes of traffic typically cause severe and often fatal collisions.

A study of across the median crashes on Washington's multilane, divided state highways with full access control was conducted to evaluate median barrier guidelines and identify specific highway sections where installation of a barrier would be appropriate. The program adopted after the study is to install cable barriers as part of improvement projects when the median width is 50 feet or less. Installation of barriers in medians over 50 feet in width will be weighed against other improvements on a case-by-case basis.

2003-2005 Median Crossover Protection Projects

State Route	Project Title	Length (miles)	Ad Date
I-5	Puyallup River To Fife Interchange	1.9	Aug-03
I-90	Argonne Rd. to Pines Rd. - Widen	2.06	Nov-03
I-90	Pines Rd. to Sullivan Rd.-Widen	2.11	Nov-03
I-90	Moses Lake West-Safety Improvements	11.35	Dec-03
I-5	County Line to Prairie Creek Bridge	2.45	Jan-04
I-90	Sullivan Rd to State Line	6.99	Apr-04
I-90	Geiger Road to US-2	2.37	Oct-04
I-5	Pierce Co. Line to Tukwila I/C HOV-	5.3	Oct-04
I-90	George Vicinity East - Safety	15.82	Oct-04

Source: WSDOT Engineering and Regional Operations Division.

Cable barriers have been used on the nation's highways since the 1930s or before. The modern system, which uses three cables supported by weak steel posts, was developed in the 1960s and is now in widespread use in several states.

Reductions in Severe Collisions

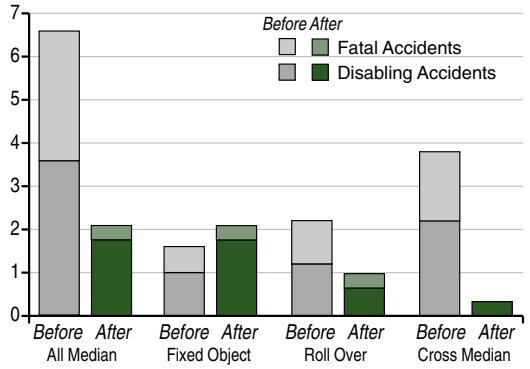
While total collisions in the study areas, I-5 in Everett, Vancouver and Fife, nearly doubled (from 45 to 100, including collisions with property damage only), the number of severe collisions (fatal and disabling) decreased significantly. This resulted in a societal benefit of cable median barriers calculated to be $420,000 per mile annually. A breakout of the types of severe collisions are shown in the graph to the right (graph does not include "property damage only" collisions).

The data on the right was normalized and represents 12 months before and 12 months after the project.

Severe Collisions

Before and After Cable Median Barrier Installation

Annual Fatal and Disabling Collisions and Median Collision Type



Source: WSDOT Engineering and Regional Operations Division.

Washington State and Alcohol-Related Fatalities

From 1998 to 2002, alcohol-related deaths per 100 million miles driven dropped 11 percent overall from 0.60 to 0.54 per 100 million miles driven in Washington. A package of anti-drunk-driving laws, enacted in 1998, lowered the blood alcohol intoxication threshold from 0.10 to 0.08 percent, and provided for automatic loss of license for drunk driving. These legislative steps together with increased State Patrol emphasis on stopping drunk drivers are credited with the decrease. Other measures in Washington include increased use of ignition interlock devices (a device attached to the car's ignition system that requires the driver to blow into the device before starting the car – if alcohol is detected the car won't start), and a crackdown on deferred prosecutions.

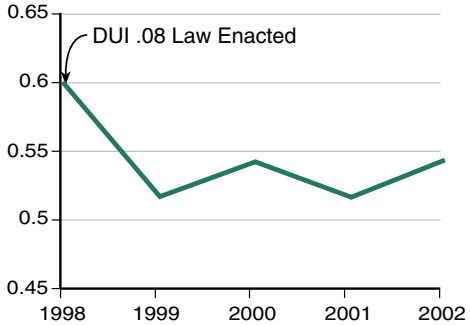
Washington DUI Facts & Trends

Between 1983 and 1991, an average of 391 drinking-driver-involved (DDI) deaths occurred each year. Between 1992 and 2002, an average of 285 DDI deaths occurred each year. This improvement means that about 1,166 lives have been saved in Washington during the 1990s.

Washington State Alcohol-Related Fatalities

Per 100 Million VMT

1998 to 2002



Source: "Research Note," DOT HS 809 680, U.S. Department of Transportation, National Highway Traffic Safety Administration, December 2003

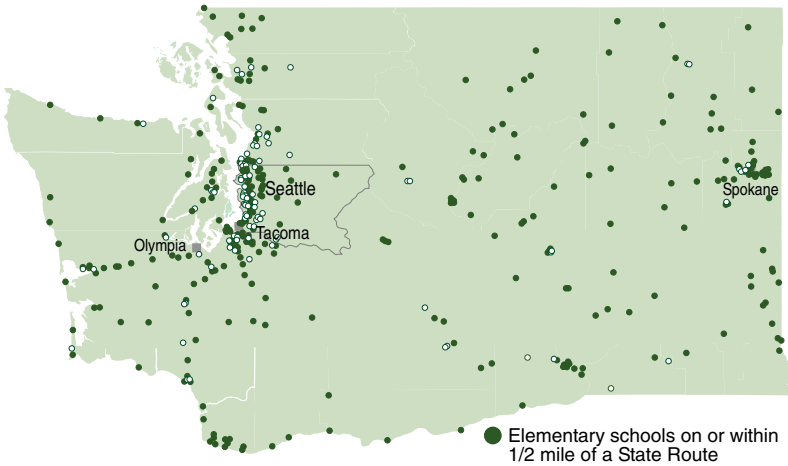
Safe Routes to Schools

Since 1999, WSDOT has administered a five million dollar per biennium grant program appropriated by the legislature called Traffic Safety Near Schools. This program has funded more than 70 projects across the state to improve bicyclist and pedestrian safety near schools. This program was not, however, extended to new projects in the 2003-2005 budget. In addition, the Washington State Traffic Safety Commission currently administers a $2 million annual School Zone Safety grant program that pays for safety education and small traffic safety improvements. The program is funded by fines from school zone traffic violations.

The Washington State Department of Health (DOH) recently received $800,000 in grant funds to promote active community environments, a program that will include safe walk/ride to school routes. DOH is currently working with regional, county and city governments in areas meeting specific public health criteria across Washington.

Half of the elementary schools in Washington are located on or very near state routes. State law requires elementary schools to produce walk route plans.

Safe Routes to Schools — Elementary School Locations



● Elementary schools on or within 1/2 mile of a State Route

○ Elementary schools near accident sites (accidents involving elementary agevictims 1995-2001)

Safety in a Roundabout Way

Port Orchard Roundabout Safety Improvement

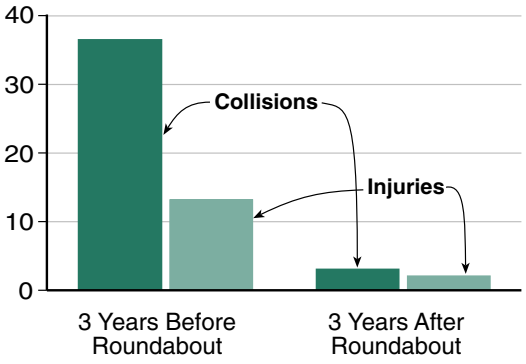
During the late 1980s and early 1990s, traffic growth in the city of Port Orchard in southern Kitsap County overwhelmed the intersection of Bethel Avenue and Mile Hill Drive (SR 166), eventually generating enough injury and property collisions to classify the intersection as a High Accident Location (HAL). Vehicle speeds exceeding the posted speed limit and the intersection configuration contributed to the collision problem. In the mid-1990s, after approval of the design by WSDOT, the City of Port Orchard built a "modern" roundabout, the first of its kind on the state highway system and the second to be built in Washington.

After the construction of the single-lane roundabout, crash data supports how well a roundabout can work when applied to a site-specific intersection safety problem. There are now 48 roundabouts in Washington.

Port Orchard - Bethel Ave. and Mile Hill Drive Intersection

Number of Collisions and Injuries

Before and After Roundabout: Comparison



Source: WSDOT Engineering and Regional Operations Division.

Asset Management: Pavement Assessment Annual Update

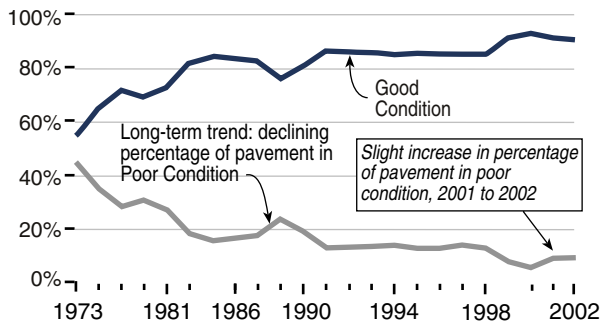
WSDOT maintains approximately 19,200 lane miles (including ramps) of pavement surfaces. The three major pavement types are chip seal, hot mix asphalt pavement, and portland cement concrete (PCC) pavement. Each of these pavement types has an associated pavement life, rehabilitation treatment, and rehabilitation cost. This report is an annual update of information last presented in the *Gray Notebook* for the quarter ending December 31, 2002.

Pavement Condition Update, 2002 Results

According to the 2002 pavement condition survey, the percent of WSDOT pavements in "poor" condition increased slightly in 2002 to 9.3 percent, up from 8.9 percent as reported in the 2001 pavement survey. The rating continues to be dramatically better, however, than the situation in 1971 when the Washington State Pavement Management System was first put in place.

Pavement Condition Trends

Percent of Pavements



Source: WSDOT Materials Lab.

Programming Pavements for Rehabilitation

The table below shows some important facts about the extent and use of the various pavement types, and the success that the state seems to be achieving in directing investment to areas of need.

Over the last biennium, about nine percent of pavement rehabilitation spending has been for chip seal resurfacing. These roads, the cheapest to resurface, constitute about 23 percent of the lane miles but carry only about five percent of the traffic.

Eighty-eight percent of the spending has been for preservation of hot mix asphalt pavements. These roads are 64 percent of the lane miles and carry 71 percent of the traffic.

The PCC pavements are 13 percent of the lane miles, yet carry 23 percent of the traffic. PCC pavements have longer lives than other pavements, but are very costly to rehabilitate, not only in terms of construction money but also in traveler inconvenience from traffic restrictions when pavement work is performed, especially on the major high-traffic corridors. Forthcoming replacement of these pavements will bring big challenges involving funding, engineering and traffic management during construction (see the discussion on PCC pavements later in this section). The state is fast approaching the need to reckon with this looming financial and traffic crisis in pavement management, a story that is not fully revealed by the generally positive picture conveyed by the recent annual surveys of "poor" condition pavements for the entire highway system.

Lowest Life Cycle Cost (LLCC) Program for Pavement Management

The basic principles behind LLCC are rather simple — if rehabilitation is done too early, pavement life is wasted, if rehabilitation is done too late, very costly repair work may be required, especially if the underlying structure is compromised. WSDOT continually looks for ways to best strike a balance between these two basic principles while implementing the practical aspects of pavement rehabilitation programs.

Pavement Type	Lane Miles	% Lane Miles	Annual Vehicle Miles Traveled – 2002 (in billions)		03-05 Dollars Programmed (in millions)		05-07 Dollars Programmed (in millions)	
			Miles	%	$	%	$	%
Chip Seal Pavements A chip seal is a durable surface that provides six to eight years of performance life and has an approximate cost of $12,000 per lane mile.	4,490	23.4%	1.7	5.3%	$19.5	9%	$18.2	9%
Hot Mix Asphalt Pavements Hot mix asphalt pavement surface life between rehabilitation treatments can range from six to 18 years (based on actual pavement performance) and has a cost of $123,000 (due miles) per lane mile, and $156,000 (past due miles) per lane mile.	12,284	64.0%	22.5	71.5%	$181.9	84%	$184.5	91%
Portland Cement Concrete (PCC) Pavements WSDOT has experienced PCC pavement lives ranging from 25 to 45 years and has an approximate cost of $330,000 for dowel bar retrofit per lane mile and $1 million for full replacement per lane mile.	2,410	12.6%	7.3	23.3%	$14.2	7%	$0	0%

Source: WSDOT Systems Analysis and Program Development Office, WSDOT Materials Lab.

Chip Seals

For chip seals, asphalt is sprayed on the existing surface and then covered with a layer of rock chips. The oil becomes solid as it cools. Chip seals are appropriate for low volume roads (less than 2,000 vehicles per day and less than approximately 200 trucks per day). Since the roadways that receive this type of treatment are typically on rural routes, WSDOT has found that pavement rehabilitation dollars seem to be best spent with efficiency of scale when a stretch of rural road mileage is taken together for resurfacing in a single "paver" contract even when the contract includes aging segments not yet "due" together with "past due" segments.

Hot Mix Asphalt

On average, western Washington hot mix asphalt pavement life is 16.5 years, eastern Washington life is 11.3 years (due to severe winter cold and extreme summer heat), and the statewide average is 14.7 years. Hot mix asphalt is appropriate for a broad range of roadways, from lower volume routes (more than 2,000 vehicles per day and more than 200 trucks per day) to interstates with heavy traffic volumes.

These pavements are where the greatest benefits of LLCC pavement management can be realized. In past biennia, there has been some tendency to allocate a share of pavement preservation dollars on a traditional basis by region in addition to dollars programmed strictly by reference to "past due" needs. This has resulted in some distortion away from ideal LLCC results. As of the 2003-05 biennium, this has been corrected by making all regional allocations based on pavement condition and LLCC analysis.

Efficiency Gains for Hot Mix Asphalt Pavements

Hot mix asphalt surface life has improved by 14 percent (statewide) over the last six years, while over the same time period the vehicle miles traveled on asphalt paved roadways has increased by approximately 10 percent. Management of asphalt pavements is an area where WSDOT has succeeded in delivering dramatically improved "bang for the buck" to Washington state taxpayers.

How have WSDOT and its asphalt paving industry contractors achieved this significant efficiency gain in asphalt on state freeways and highways? The keys lie chiefly in the following areas:

- Provision on the paving specification for use of performance-grade binders selected for expected climate and traffic conditions;
- Use of Superpave mix designs keyed to temperature and traffic expectations;
- Improved asphalt pavement repair and asphalt placement techniques;
- Better attention to construction details and inspection, and,
- Increased experience with LLCC rehabilitation programming.

WSDOT is also focusing pavement management efforts on programming more lane miles at a single location, resulting in lower bid prices. The amount of asphalt used for pre-leveling (filling in minor ruts and depressions prior to paving) has also been reduced on WSDOT paving jobs, generally from 600 tons per lane mile to 300 tons per lane mile, resulting in a substantial cost savings. The effect of these efficiency gains, taken together, is that a tax dollar invested in pavement rehabilitation today buys much more than it did just a few years ago.

Portland Cement Concrete (PCC)

Existing PCC pavement life ranges from 25 to 45 years. PCC pavement is typically placed on heavily traveled interstate, principal arterial and intersection locations. Most of the PCC pavements historically installed on Washington highways require dowel bar retrofit and diamond grinding (to smooth the pavement surface) 20 to 25 years after construction (due to lack of reinforcing steel at the transverse joints to prevent settlement). It is estimated that a newly constructed PCC pavement will have a pavement life of 50 years and only require diamond grinding in its 25th year due to studded tire wear.

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.*

A matter of concern in the 2002 pavement condition survey is that an additional six miles of PCC pavement were found to have fallen into the "poor" category, raising the PCC "poor" total to 170 lane miles. However, the greatest concern is the potential for a dramatic increase in the poor category as a result of the PCC performance reevaluation in 2004.

The table at left illustrates the number of PCC pavement lane miles currently owned and maintained by WSDOT. Sixty miles of PCC replacement would cost on the order of approximately $60 million *before* taking into account the project costs associated with roadway safety upgrades and stormwater runoff control retrofits. Traffic disruptions associated with rehabilitation or replacement of these pavements is another difficult feature of this looming problem.

Rating Pavement Conditions

WSDOT continues to use a three-part examination system to rate pavement condition:

Pavement Structural Condition (PSC)

A pavement will develop structural deficiencies for two reasons: truck traffic and cold weather. The PSC is a measure based on distress, such as cracking and patching, which are related to the pavement's ability to carry loads. PSC ranges from 100 (best condition) to 0 (worst condition). A roadway should be considered for rehabilitation when it falls within the PSC range of 40 to 60.

Rutting

Rutting is caused by heavy truck traffic or studded tire wear. Ruts deeper than 1/2 inch have the potential to hold water, increasing the risk of hydroplaning for high-speed traffic. A roadway should be rehabilitated when the rut depth is greater than 1/3 inch.

Roughness

The International Roughness Index (IRI) is a procedure to measure pavement ride. A full-sized van, with a laser-measuring device mounted on the front bumper, measures the roughness of the pavement. A roadway should be rehabilitated when the IRI value is between 170 and 220 inches per mile.

Determining When Pavements are "Due"

The Pavement Condition Rating process using the van pictured on the right analyzes and predicts the pavement rehabilitation due period (see the *Gray Notebook* for the quarter ending June 30, 2001 for details). A regional validation process reviews the results and calibrates the ratings if needed. The number of disputed segments varies between 5-10%. Each of the segments in question is then reviewed and any discrepancies are resolved. WSDOT considers the pavement rehabilitation due year in the Pavement Management System to be approaching 100% accuracy.

Pavement Condition Data Collection Vehicle

How Do Washington's Pavements Conditions Compare with National Experience?

FHWA's annual *Highway Statistics* report includes information on pavement condition reported by each of the 50 states and the District of Columbia (based on roughness only). To the right is a snapshot of the 2002 results that shows the number of miles, by state, in poor condition according to smoothness. The total miles reported includes the interstate system and principal arterials owned by the state, cities, and counties, and a sampling of other functional classes. Washington state ranked 16th in smooth roads in 2002 (Washington was ranked 17th in 2001).

The FHWA publication can be viewed at www.fhwa.dot.gov/policy/ohim/hs02/index.htm.

2002 Pavement Smoothness by State

Rank	State	Centerline Miles Reported	Miles in Poor Condition	Percent in Poor Condition
1	Georgia	11,301	34	0.3%
2	Wyoming	4,414	22	0.5%
3	Alabama	7,643	41	0.5%
4	North Dakota	6,180	53	0.9%
5	Minnesota	11,658	108	0.9%
6	Nevada	2,959	33	1.1%
7	Kentucky	5,192	76	1.5%
8	Florida	10,898	160	1.5%
9	Kansas	8,851	183	2.1%
10	Arizona	4,065	86	2.1%
11	Idaho	3,860	93	2.4%
12	Maine	2,391	60	2.5%
13	Montana	6,927	179	2.6%
14	Utah	3,676	120	3.3%
15	Alaska	1,800	62	3.4%
16	**Washington**	**5,396**	**194**	**3.6%**
17	South Carolina	6,791	260	3.8%
18	New Hampshire	1,375	54	3.9%
49	California	20,634	5,437	26.3%
50	Massachusetts	3,290	1,182	35.9%

Source: Highway Statistics 2002, *U.S. Department of Transportation*

Highway Maintenance: Annual Update

Biennial Maintenance Targets

The Maintenance Accountability Process (MAP) targets, measures, and communicates the outcomes of 34 distinct highway maintenance activities. Maintenance results are measured using field condition surveys, and are reported as Level of Service (LOS) ratings. LOS targets are defined in terms of the condition of various highway features (for example, the percent of guardrail on a highway system segment that is damaged). LOS targets are also keyed to the level of funding provided by the Legislature. The following table shows a list of maintenance activities (in prioritized order) for which LOS targets have been set in the 2003-05 biennium. During 2003, targets for all activities were achieved.

WSDOT Maintenance Targets Achieved for 2003

Maintenance Activity	Achieved
Pavement Patching and Repair	✓
Snow and Ice Control Operations	✓
Traffic Signal Systems	✓
Movable and Floating Bridge Operations	✓
Urban Tunnel Systems	✓
Keller Ferry Operations	✓
Guardrail Maintenance	✓
Noxious Weed Control	✓
Structural Bridge Repair	✓
Intelligent Traffic Systems	✓
Control of Vegetation Obstructions	✓
Permits/Franchises	✓
Maintain Culverts	✓
Regulatory Sign Maintenance	✓
Slope Repairs	✓
Crack Sealing	✓
Bridge Deck Repair	✓
Safety Patrol	✓
Rest Area Operations	✓
Highway Lighting Systems Operations	✓
Pavement Striping Maintenance	✓
Maintain Catch Basins and Inlets	✓
Raised/Depressed Pavement Markers	✓
Sweeping and Cleaning	✓
Nuisance Vegetation Control	✓
Maintain Ditches	✓
Shoulder Maintenance	✓
Detention/Retention Basins	✓
Litter Pickup	✓
Guide Sign Maintenance	✓
Landscape Maintenance	✓
Guidepost Maintenance	✓
Bridge Cleaning	✓
Pavement Marking Maintenance	✓

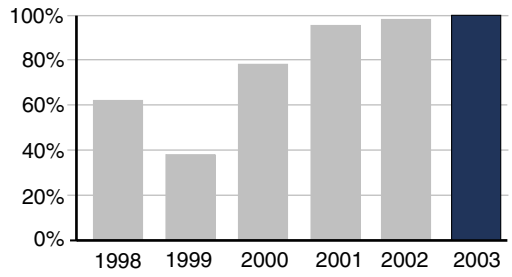
2003 Perfect Score – Percentage of Legislatively Funded Targets Achieved 1998-2003

In September 2001, the first *Gray Notebook* quarterly report on MAP, WSDOT achieved 26 out of the 34 MAP targets. Three years later, a perfect score has been achieved. The positive trend can be attributed to:

- *What gets measured gets managed.* WSDOT maintenance managers and field workers are gaining experience with how to manage work in ways that help to attain the service level targets.
- Strong maintenance results across-the-board have been assisted by mild or average winter conditions.
- Stable funding for maintenance for several years has lessened "crisis mode" management and produced better across-the-board results.
- Improved accuracy in measuring MAP results – based on a six-month review and field verification of MAP measures and their assessment technique.

Starting in March 2004, WSDOT maintenance staff will be documenting greater levels of detail such as units of work completed (for example, "linear feet of guardrail repaired"). This will provide information that can be used to develop cost per unit and units per day or week measures to supplement the outcome measures provided by MAP. Look for more on this in future *Gray Notebook* maintenance pages.

Percentage of Legislatively Funded Targets Achieved for 1998-2003



Source: WSDOT Maintenance Office

Integrated Vegetation Management

Integrated Vegetation Management (IVM) involves creating and supporting roadside plant communities that minimize short and long-term maintenance needs. Roadside vegetation maintenance requirements often depend on how well roadsides are designed and constructed. When soil is conserved and improved, vegetation is restored during highway construction, roadside maintenance requirements can be relatively low. However, if roadsides are not well restored at the time of construction, the expense of roadside maintenance grows because noxious and nuisance weeds tend to establish themselves and thrive in poor soils with sparse vegetation.

With an effective IVM program, common weeds such as kochia in eastern Washington can be managed with reduced herbicide use over time.

2003 Herbicide Use Trends – Results

In terms of pounds of active ingredient, WSDOT's statewide annual use of herbicides for roadsides increased by 3,300 pounds (121,105 pounds in 2002 to 124,426 pounds in 2003). On closer review of the data, most areas in western Washington were either down or about the same in their overall herbicide use compared to 2002. In fact, Clallam County, the first area in which WSDOT has implemented an IVM plan, saw a 50 percent reduction in herbicide use on the roadsides. In eastern Washington, two areas in particular experienced significantly increased herbicide use. The cause was a localized, ongoing weed infestation problems for which herbicide applications were needed. Had it not been for the significant application in these two areas, WSDOT's herbicide use in 2003 would have been less than in 2002.

Clallam County IVM Plan

In the past year, WSDOT has finally begun to make progress implementing its long-promised IVM program. Working with communities and a number of interest groups on the Olympic Peninsula, WSDOT developed an IVM plan for state highway maintenance in Clallam County that reduced the amount of herbicide used and responded to citizen concerns. Highlights and results include:

- No vegetation-free area adjacent to pavement within 60 feet of salmon streams. Hand-treatment only of invasive plants growing next to the pavement edge in this area.
- No summer application of herbicides for controlling trees and brush.
- Hand application of noxious weed control herbicide (as opposed to truck applications), and close coordination with the Clallam County Noxious Weed Control Board.
- Experimentation with alternative brush control methods such as planting desirable plant species (i.e. salal), hydro seeding and biological controls.
- Total herbicide use decreased more than 50 percent.

At a February 5, 2004 open-house meeting to discuss continued aspects of the IVM program in Clallam County, concerned citizen Josey Paul commended WSDOT employees, saying, "Thank you for your good efforts managing vegetation along SR 112 this past year."

Vegetation-Free Area

Approximately 60 percent of herbicides used by WSDOT are used to prevent vegetation from growing at the pavement's edge. WSDOT is reviewing this practice, including a study of other states' use of chemicals in vegetation-free zones alongside the roadway. The challenge in determining the best approach comes from needing to balance the potential herbicide impacts with hazards to motorists associated with an abundance of roadside vegetation, to highway workers from mechanical control technologies, and to pavements for vegetation incursions to the pavement. By the end of the year, WSDOT will develop and implement updated policies on vegetation-free areas.

The vegetation-free zone next to the roadway.

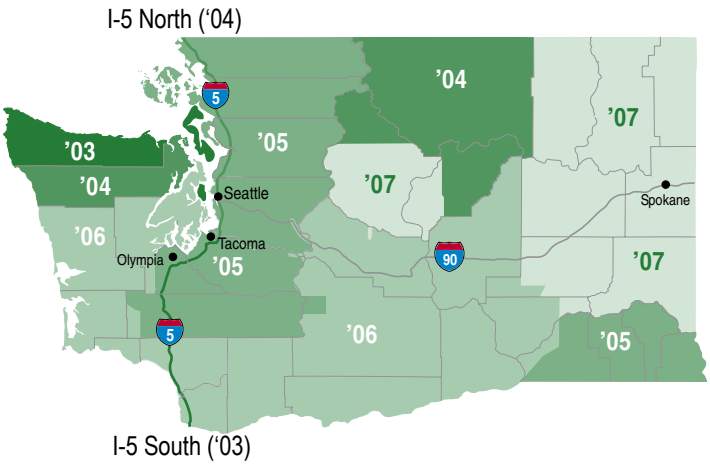
IVM Future Practices

Because of the success of the Clallam County IVM plan, WSDOT created a statewide schedule for Roadside Vegetation Management plans. The timetable implements all plans by the end of 2007.

WSDOT also identified new performance measures to track future roadside vegetation management trends. The measurements include:

- The IVM plan development schedule.
- Adherence to sensitive buffers, upon orders by the U.S. District Court (see below).
- Number of WSDOT application violations.
- Maintenance Accountability Process (MAP) conditions measures for nuisance weeds, noxious weeds, vegetation obstructions and landscape maintenance.
- Documentation of area-specific IVM plan elements completed each year.

Integrated Vegetation Management Plan Schedule



WSDOT's Integrated Vegetation Management Plan implementation is scheduled by year and by maintenance area as shown in the above map. Area by area production of the plans will continue until statewide coverage is achieved.

Whidbey Island Plan Coming

The department will hold a public meeting on a Roadside Vegetation Management Plan for Whidbey Island in March 2004. WSDOT expects to develop and implement a plan that meets the concerns of citizens with varying viewpoints on herbicide use and can be achieved at reasonable cost. The draft plan identifies a number of key areas, test sites, roadside features and treatment practices. Other IVM plan details for Whidbey Island are expected to include:

- Restoration of roadsides in coordination with future construction projects on State Route 20.
- Restoration of native roadside vegetation on half of an acre a year as part of the regular maintenance program.
- No vegetation-free area adjacent to pavement within 60 feet of the waterline at Penn Cove and Keystone Spit.
- Establishment of the vegetation-free area pilot projects.

US District Court January 2004 Ruling

The United States District Court in Seattle entered an injunction in January 2004 prohibiting the use of certain herbicides within sixty feet of salmon streams, pending EPA's completion of a review whether such use is consistent with protections afforded by the Endangered Species Act.

WSDOT's herbicide practices included in the 2003 IVM plan for Clallam County and generally followed in many other areas of Western Washington are already matched to the injunction's requirements. To ensure adherence to the terms of the injunction, WSDOT maintenance crews will identify affected areas on the highways, mark buffer zones and receive additional training on vegetation management practices, including limitations on herbicide use.

WSDOT – Proactive in Risk Assessment

As part of its vegetation management efforts in 2003, WSDOT contracted with a consultant, Intertox Inc., to update a 1993 WSDOT hazard assessment study. This included integration of new research in herbicide usage. The hazard assessments aim, through review of scientific literature, to inform WSDOT's understanding of potential risks to humans, wildlife and aquatic organisms. The hazard assessment update generally found the potential risks of specific products to be negligible or low in WSDOT's patterns of use. The assessment suggested, however, that moderate potential risks might be presented by two products, MCPA and Diuron. WSDOT discontinued further use of MCPA in 2003 and has taken steps to reduce the use of Diuron by limiting its application only to certain areas in eastern Washington.

Environmental Programs

Environmental Management System (EMS) Update

WSDOT is continuing to develop its Environmental Management System (EMS) to help support the department's environmental efforts and integrate those efforts into everyday operations, training programs and regular performance reports. Currently, several important activities, described below, are building WSDOT's capacity to improve, track and report on environmental compliance.

Seven Core Elements to WSDOT's Environmental Management System

- Legal and other requirements clearly outline all environmental laws, regulations and agreements that apply to operations.
- Written procedures instruct staff and contractors how to conduct work activities in compliance with requirements.
- Training ensures those that conduct certain activities know how to do the work in a compliant manner.
- Roles and duties ensure WSDOT staff and contractors know what they are to do under the EMS.
- Inspection, monitoring and corrective action ensure a process is in place to check WSDOT's work for compliance and correct any problems.
- Documentation allows WSDOT to evaluate the operation of the EMS, and communicate results to the public and within the department.
- Performance measurement compares WSDOT's performance against pre-determined targets, with results reviewed by management and reported to the public.

Construction Services Program Pilot

To address projects funded by the 2003 Transportation Funding Package, WSDOT is piloting a construction services program modeled on a prototype used by its regional office in Yakima. The program is being evaluated for statewide implementation. Its goal is to ensure that environmental commitments attached to a project are clearly communicated and implemented throughout design, construction, and facility operation. The program's three major components are: (1) pre-construction and pre-activity meetings between WSDOT and the contractor; (2) tools to aid construction and maintenance staff in maintaining compliance on the project site, including an environmental inspection checklist for use by construction inspectors; and (3) environmental compliance procedures issued by WSDOT for all construction and maintenance activities

Enhanced Commitment Tracking

WSDOT is working to better track formal commitments made during the project development process. By the end of 2004, WSDOT will track all formal commitments from inception (usually during planning or project design phase) through construction to completion or handoff to its Maintenance and Operations Department. This new system will make clear assignments of roles and duties to show who manages, performs and monitors the implementation of each commitment.

Examples of Environmental Commitments on WSDOT Projects

Some environmental commitments are terms and conditions outlined in environmental permits. These may require WSDOT to maintain a certain water quality level during construction, use certain Best Management Practices (BMPs) and conduct environmental monitoring.

For example, straw blankets and silt fences are required to be used to protect a small stream along Highway 18 during rainstorms until permanent erosion control grasses are established.

Other commitments are agreements made during the Endangered Species Act process. These commitments, or "conservation measures," are designed to protect endangered species. Examples include the requirement for WSDOT to place woody debris in a river or avoid working at certain times to protect migratory species.

In addition to habitat protection, WSDOT uses engineered log jams, root wads, and other bio-engineering techniques to protect stream banks near roads and bridges.

Some commitments are made during the National Environmental Policy Act (NEPA) environmental review process to minimize or offset overall environmental impact of a project. Commitments under NEPA may affect a roadway's alignment or physical design.

The concrete box culverts shown below were agreed upon during the NEPA process and are designed to promote floodplain connectivity—allowing water to pass under the roadway during high water, rather than over it or on to adjacent property.

Environmental Compliance Assurance: Annual Update

WSDOT self-monitors for "non-compliance events" whether or not such events are taken up as formal "violations" by regulatory agencies or officials.

Compliance History

The *Gray Notebook* for March 31, 2003 reported on WSDOT's initial effort to track non-compliance events. Data for 2001 and 2002 was obtained by interviewing project managers in December 2002 to gather an after-the-fact best estimate of the number and types of non-compliance events. Since then, WSDOT has systematically tracked non-compliance events for highway construction and maintenance programs, and for operations of the Washington State Ferries (WSF).

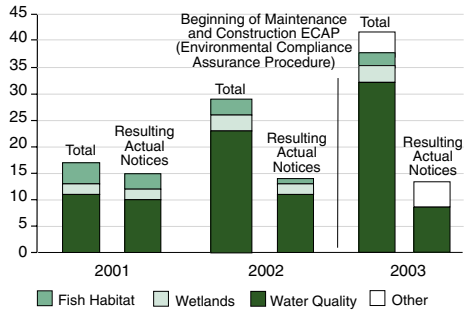
How Are We Doing?

In 2003, WSDOT recorded 41 non-compliance events, with 13 leading to issuance by a regulatory agency of a formal Notice of Violation (NOV).

In 2003, 32 of 41 non-compliance events involved water quality regulations, as shown in the chart at right. For 2003, the "other" category includes three events associated with underground storage tank rules and one event associated with an air quality violation.

The increase in recorded highway program and WSF non-compliance events from 2001 to 2003 is partially explained by an increased emphasis on identifying non-compliance events. Because 2003 is the first year that WSDOT has systematically tracked non-compliance events, apples-to-apples comparison with previous years is not possible. The baseline data for 2003 of the number and type of events taking place will help WSDOT staff develop compliance tools for the agency.

Non-Compliance Events
2001-2003



For more information about WSDOT's Environmental Compliance Assurance Procedure, please see the Gray Notebook *for the quarter ending March 31, 2003, page 18.*

Source: WSDOT Environmental Services Office.

Using Non-Compliance Data

WSF began systematizing data collection on petroleum product spills three years ago. The data illustrated ongoing minor problems from hydraulic systems on transfer spans at WSF terminals. Last winter, WSF Terminal Maintenance began a program to improve inspection of transfer spans and quickly correct any problems. This new emphasis includes training for terminal attendants to identify potential leaks in the bridge operation and to report potential leaks to Terminal Maintenance.

For the three years since 2001, WSF terminals have had seven, four, and five hydraulic spills, respectively. The prevention actions instituted by Terminal Maintenance means that now more WSF employees are aware of and watching for potential problems.

Hydraulics system at the Anacortes Ferry Terminal.

Integrated Vegetation Management Results

WSDOT also tracks compliance with herbicide and pesticide application laws covering the products and procedures used to maintain roadside and wetland mitigation sites. The number of product applications in 2003 went up 17% and the pounds of active ingredient went up by 3.5%* from the previous year. The number of findings of fault notices from the Washington State Department of Agriculture (WSDA) remained steady at four. Two notices involved overspray leaving the road right of way and two were found not to have merit and dropped by WSDA. In 2003, WSDA issued two warning letters to WSDOT regarding the alleged injury to two privately owned conifer trees in the town of Loon Lake near Colville. The trees tested positive for diuron that may have come from an earlier WSDOT roadside application of herbicides.

Non-Compliance Events

	2001	2002	2003
Number of WSDA Investigations	8	6	4
Number of WSDA Findings of Fault	5	4	2
Number of Product Applications	2,271	3,399	4,091
Total Pounds of Active Ingredient Applied	67,156	120,171	124,290

** Please see Highway Maintenance IVM report on page 43 of this* Gray Notebook *for total quantity of chemicals used.*

Monitoring Replacement Wetlands: Annual Update

Types of Mitigation

Two WSDOT mitigation bank sites currently provide advance compensation for unavoidable wetlands losses. The Moses Lake Mitigation Bank provides five acres of enhanced wetland and about two acres of restored wetland. The North Fork Newaukum Mitigation Bank provides 91 acres of enhanced wetland and one acre of restored wetland. Since 2002, 15 new replacement wetland sites (199 acres) have been added to the overall inventory of wetlands replacement acreage.

Meeting Standards in 2003

In 2003, biologists monitored a total of 63 active replacement wetlands, ranging from one to eight years in age. Of these sites, 21 had targets (success standards) to be met in 2003. Monitoring was conducted for 87 individual standards.

Of the two sites that did not meet any standards due in 2003, one is in the middle of its planned monitoring period and had poor plant survival and too many weeds. The site has been re-planted and because it is close to a river, biological weed control is planned. The second site is at the end of its planned monitoring period, but has not developed into a wetland because it is too dry. WSDOT staff are considering appropriate alternatives to achieve this environmental commitment.

Completed Replacement Wetlands

Successful sites have achieved reasonable ecological success, and no longer need monitoring. Unsuccessful sites have not met requirements and are ecologically unsuccessful.

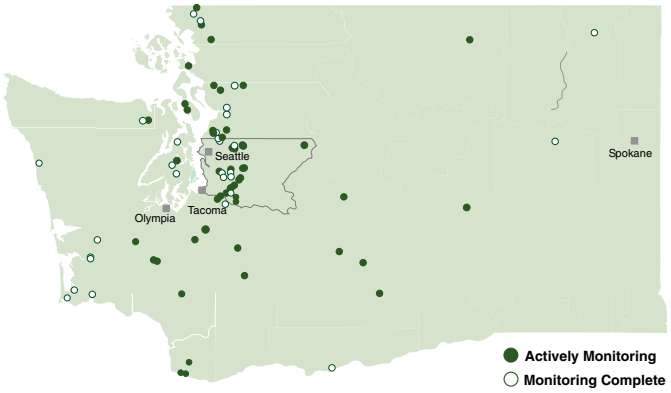
Reasonable ecological success was achieved on six more sites in 2003, bringing the total of completed sites since 1988 to 53. The total of sites judged successful in this group is 49 (267 acres). The four unsuccessful sites failed due to unpredicted or changed hydrology, the most important parameter of wetland success. WSDOT is considering options to meet the environmental commitments for these projects.

For additional detail on monitoring replacement wetlands and pictures of the different types of projects, see the *Gray Notebook* subject index at www.wsdot.wa.gov/accountability/graybookindex.htm#environment and click on "Wetland Mitigation and Monitoring."

WSDOT has been mitigating for unavoidable wetlands loss with replacement wetlands for 15 years to address the state's Executive Order 89-10, which mandates that the actions of state agencies result in no net loss of wetlands. Advance mitigation means building replacement wetlands before unavoidable impacts take place. Monitoring and reporting on the status of replacement wetlands is critical to the success of the program as seen through the eyes of both the public and the resource protection agencies with whom agreement on these projects must be reached.

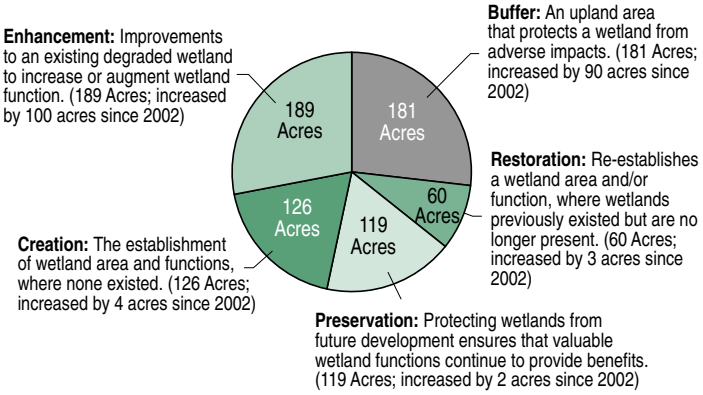
WSDOT Replacement Wetlands

1988-2003



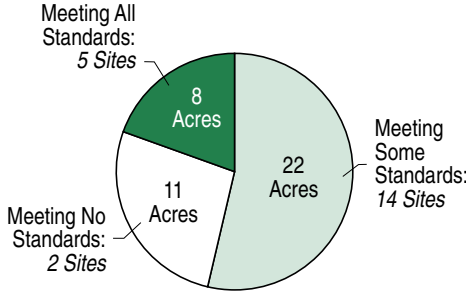
WSDOT Replacement Wetlands, 1988-2003

Total Acreage of Wetland Projects
116 Sites, 675 Acres



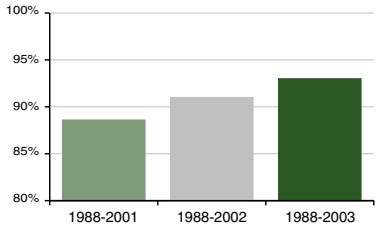
Replacement Wetlands: Success in 2003

Total Number of Sites: 21



WSDOT reported on the status of sites with standards to be achieved in 2003 on a site-by-site basis in the 2003 Annual Monitoring report. For detailed monitoring results visit: www.wsdot.wa.gov/environment/wetmon/default.htm.

Success Rate for Replacement Wetlands*: Monitoring Complete



** Includes acreage not yet designated for mitigation credit.*

Source for all charts: WSDOT Environmental Services Office.

Stormwater Treatment Facilities

WSDOT routinely builds stormwater treatment facilities to Department of Ecology standard as a part of highway construction. Stormwater treatment facilities reduce stormwater flows that cause flooding and harm fish habitat. These treatment facilities also remove sediment, metals, nutrients and other pollutants from highway runoff.

In addition to removing pollutants and reducing flooding, this pond near I-5 milepost 96 protected a nearby wetland by trapping a 140-gallon accident-related diesel spill from the adjacent freeway.

Ponds that infiltrate treated runoff reduce flooding in the winter and help maintain stream flows in the summer.

In response to municipal stormwater permit requirements, WSDOT has tracked the number of new stormwater treatment facilities built in King, Pierce, Snohomish, and Clark counties where about 40 percent of statewide highway construction has occurred since 1996. In the past seven years, 300 treatment facilities (an average of 43 per year) have been built in those counties.

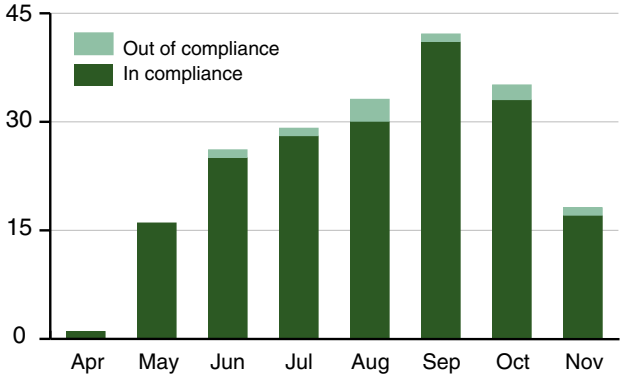
Out of 1,140 miles of highway within the four counties an estimated one percent of state highways have new stormwater treatment facilities constructed each year. These treatment facilities help to mitigate and manage the impacts of stormwater runoff from our state highways.

Monitoring Water Quality Impacts for Construction Sites: Annual Update

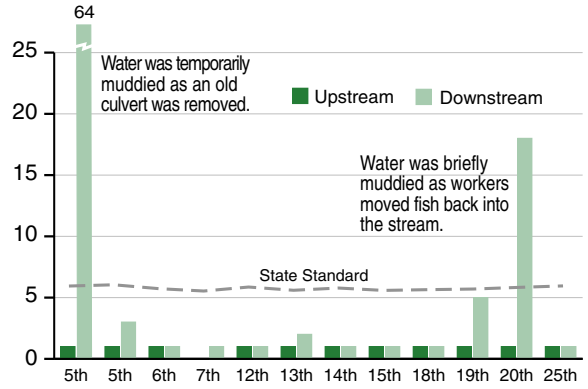
In 2003, WSDOT completed its first year of construction site water quality sampling under a new statewide monitoring policy. The policy requires sampling on at least 20 percent of all projects with substantial potential for water quality impacts. The chart at right summarizes sampling results that compare water quality upstream and downstream from 12 projects. Ninety-five percent of the samples met water quality standards for clarity.

Of the 200 samples taken, nine failed to meet standards. The water became muddy on five of the projects because work had to be done in the water or very near the shore. The other four projects experienced heavy rainfall ranging from ¾ to 3 inches, which overwhelmed the mandated design capacities of approved treatment facilities. In all cases, monitoring results prompted immediate corrective actions to regain compliance with water quality standards.

State Water Clarity Standards Compliance
Number of Samples for 2003



Water Clarity Monitoring
Golden Harvest Creek August 2003



Source for both charts: WSDOT Environmental Services Office.

Case Study: Golden Harvest Creek Culvert Replacement

The Golden Harvest Creek culvert replacement project on SR 21 near the town of Republic in eastern Washington illustrates the challenges associated with keeping sediment out of water when replacing culverts. Diverting water around work areas is very effective, but the installation and removal of diversions can briefly muddy a stream. While removing an old culvert that blocked fish migration, some dirt fell into the creek. After the new culvert was in place, the creek was re-directed into the new channel, stranding some fish in the temporary bypass. Workers entered the water and carefully moved the fish back into the creek. The state standard for clarity of water was exceeded twice during construction but returned to normal within minutes each time.

Erosion Control Preparedness – Annual Update

Erosion control is an important component of WSDOT's program to protect the environment. In addition to education, careful planning and stringent contract requirements, WSDOT routinely performs construction site inspections to verify the effectiveness of erosion control measures and makes improvements as needed. In the fall of 2003 moderate and high-risk projects (20 in all) were inspected to determine how well they were prepared for the wet season and whether or not erosion led to any water quality violations, site damage, or delays.

Erosion control measures on SR 18 in the Maple Valley area.

The October 2003 storm (see the September 30, 2003 *Gray Notebook* Special Features), for example, overwhelmed the treatment measures planned for the runoff from existing pavement. An inspection revealed that dirty water was entering Taylor Creek.

WSDOT's Environmental Compliance Assurance Procedures were initiated and crews immediately addressed the situation, the discharge of dirty water stopped, and the incident was promptly reported to the Department of Ecology.

Fall Assessment Results

This table outlines how well prepared WSDOT was during fall 2003 compared to its level of preparation in 2002.

Last year WSDOT identified areas where improvements in erosion control preparedness were needed. One area in particular included ensuring that erosion control plans are always on site and up to date with current project conditions (a condition of environmental permitting). Specific actions were taken at statewide meetings and training sessions that resulted in an improvement of 19 percent.

	Erosion and Sediment Control Assessment Results	2002	2003	Status
Excellent	Clearing limits/sensitive area boundaries identified and respected by contractor	100%	100%	stable
	Utility trenches excavated in manner to reduce erosion risk	100%	100%	stable
	Remove temporary erosion and sediment control measures when not needed	81%	100%	improved
Good	Contractor trained in proper use of erosion/sediment control measures	100%	95%	decreased
	Sediment trapping measures installed prior to soil disturbing activities	90%	90%	stable
	Control offsite erosion prevented by controlling flows	87%	84%	decreased
	Protect storm drains from sediment	74%	82%	improved
Fair	If a storm hit at time of site visit, water would meet state water quality standards	86%	80%	decreased
	If a storm hit at time of site visit, adjacent property would be protected	83%	80%	decreased
	Effectiveness of measures installed to trap sediment	96%	78%	decreased
	Erosion control plans are on site and up to date for all WSDOT projects	56%	75%	improved
Poor	Manage construction site water in manner reducing sediment deposition risk	100%	71%	decreased
	Perform maintenance on temporary erosion and sediment control measures	70%	70%	stable
	Construction access routes stabilized to prevent tracking of mud onto streets	98%	69%	decreased
	Effectiveness of measures installed to prevent erosion	91%	67%	decreased
	Temporary stormwater conveyance channels stabilized	90%	64%	decreased
	Protect cut and fill slopes from concentrated runoff	67%	50%	decreased
	Amount of disturbed soil actually covered with erosion control measures	65%	45%	decreased

Source: WSDOT Environmental Services Office.

In 2003, the overall assessment increased in three areas, while it remained the same or had little change in seven others. WSDOT's preparedness in the remaining eight areas decreased substantially creating an elevated risk to increased erosion when compared to last year. The decrease in the bottom five areas in the "Poor" category are directly attributed to one or both of the following reasons: (1) the extremely dry weather this fall extended large earthwork activities into the "wet season," delaying soil cover practices and (2) drought conditions reduced effectiveness of late spring and early fall seeding applications.

Summary and Next Steps

An analysis of the 20 projects documents that 12 had no problems preventing erosion. Projects experiencing minor problems increased by 16 percent from 2002, for a total of seven. The minor problems were promptly corrected without regulatory agency involvement or high repair costs. One project experienced major problems that involved one Notice of Violation. The plan to improve performance on issues in the "Poor" to "Fair" ranges includes increased technical assistance, improved contract enforcement, and increased emphasis in training.

Incident Response: Quarterly Update

Program Totals

WSDOT Incident Response Program provides roving service to clear roads and help drivers on Washington's heavily traveled freeways. Along with the WSDOT roving units, non-WSDOT units provide contracted roving services. These units include the Washington State Patrol (WSP) Cadets, Registered Tow Truck Operators (RTTO), and a Motorist Assist Van (MAV).

Incident Reasons and Clearance Times

Washington State's target is to clear all incidents within 90 minutes. During the fourth quarter, 71 percent of major incidents were due to motor vehicle collisions. Major incidents are, however, only two percent of all incidents on state roadways. The most frequently occurring incidents, which are likely to cause slowdowns during daily commutes, are disabled/abandoned vehicles or debris blocking traffic (82 percent of all incidents). During the fourth quarter, 85 percent of incidents were cleared within 30 minutes and 47 percent were cleared in less than 10 minutes.

Detection and Response by Roving, Notification and Call-out

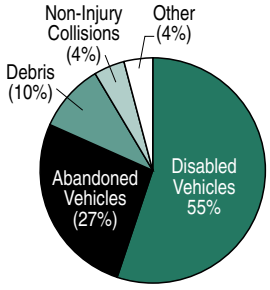
The roving Incident Response Program is an effective means to keep traffic moving on freeways because the responders quickly detect incidents on the roadways. During the fourth quarter, 70 percent of all incidents were detected by roving units. Roving units were notified of the remaining 30 percent of incidents. Call-out units respond to severe incidents that occur outside roving zones or during non-roving hours. There were 129 call-out responses during the fourth quarter, which amounted to one percent of all the incidents responded by the IR program.

Blocking versus Non-Blocking Locations

The location and duration of an incident can impact traffic greatly. Overall, 67 percent of all incidents were on the shoulders and medians of roadways, and did not block travel lanes. Seventy percent of the incidents that were cleared in less than 30 minutes occurred within shoulders/medians and did not block travel lanes. Of the major incidents lasting 90 minutes or more, 80 percent were blocking travel lanes.

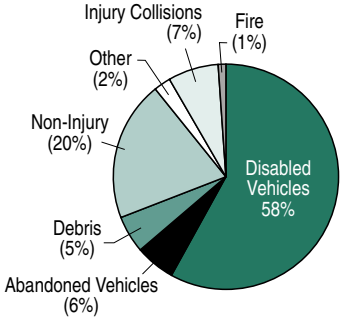
Source for all charts: WSDOT Traffic Office.

Incidents Lasting Less Than 15 Minutes



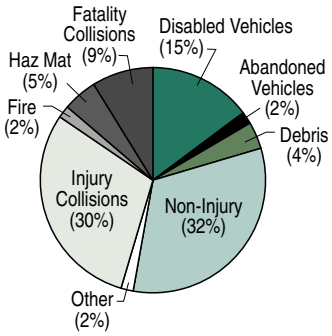
Injury Collisions, Fatal Collisions, Fire and Hazardous Materials were less than 1 percent each.

Incidents Lasting 15 to 90 Minutes



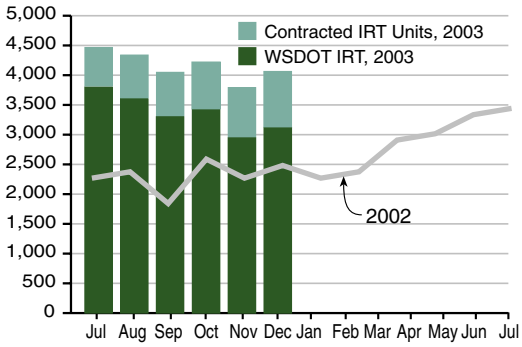
Hazardous Materials and Fatal Collisions were less than 1 percent each.

Incidents Lasting 90+ Minutes



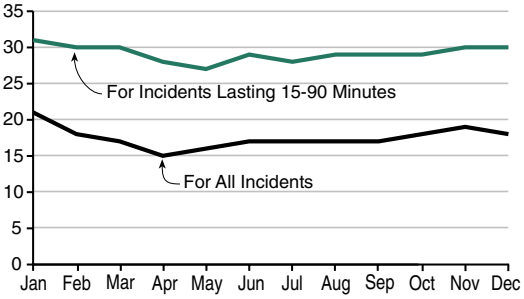
Total Number of Responses by Month

July 2002 to December 2003



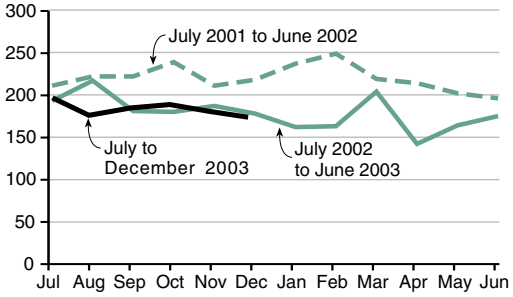
Average Clearance Time

(in Minutes) January 2003 to December 2003



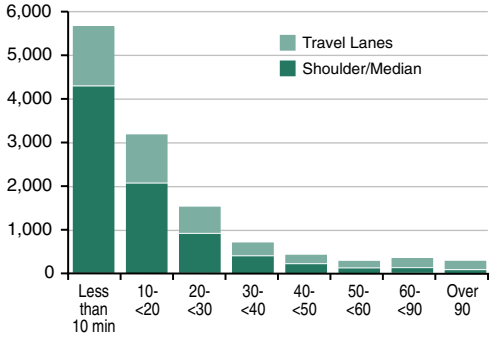
Average Clearance Time for Incidents Lasting Over 90 Minutes

3-Year Comparison: July 2001 to December 2003



Number of Incidents by Location and Clearance Time

October 2003 to December 2003



Over 90 Minute Incidents

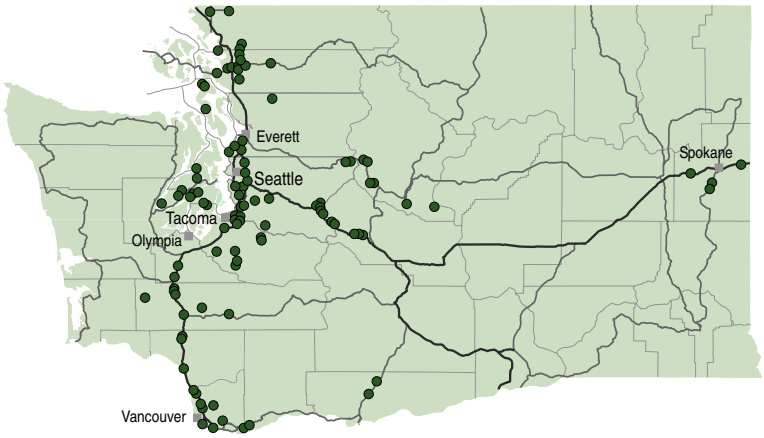
There were 243 incidents lasting 90 minutes or longer during the fourth quarter of 2003. Incidents are located by dots on the map. All incident records collected into the WSDOT Incident Tracking System (WITS) are being mapped for exact locations by state route and milepost for further analysis.

Examples of Incidents Over 90 Minutes

The following five incidents had the longest clearance times for the period between October 1, 2003 and December 31, 2003.

- October 1 – A fuel tanker truck overturned on I-5 in King County. A single northbound lane was intermittently closed as multiple tow trucks responded to the scene to try and right the truck. After multiple attempts the fuel was pumped from the truck so that it could be righted. WSDOT Incident Response set up traffic control until recovery was complete. 10.4 hours was required for Incident Response to clear the scene.
- October 8 – A semi truck traveling from westbound I-90 to northbound I-5 in Seattle drove off the elevated ramp falling approximately 30 feet and landing on the roadway below. The tractor-trailer and cargo were demolished on impact necessitating a lengthy and technical clean up. WSDOT Incident Response responded to the scene for traffic control, and clean up. 8.2 hours were required to clear the scene.
- October 12 – A loaded fuel tanker lost control on SR 9 just north of Wickersham in Whatcom County causing the rear trailer to roll on its side, leaking fuel onto the shoulder and into the drainage system. A detour route was set-up and a private contractor was called in to clean up the fuel spill. WSDOT Incident Response assisted with traffic control and helped to clear debris from the roadway. 16.4 hours were required to clear the scene.
- November 22 – A collision on U.S. 97 near Goldendale involving a semi truck resulted in multiple lane closures as the scene was cleared. WSDOT Incident Response set up traffic control and assisted other agencies. Responders were able to keep traffic flowing throughout most of the incident. 8.5 hours were required to clear the scene.
- December 9 – On SR 9 near the city of Sumas in Whatcom County, a semi truck lost control and drove off of the roadway, overturned, spilling its load of lumber. A detour was set-up for both northbound and southbound traffic. WSDOT Incident Response performed traffic control and cleared debris. 8.0 hours were required to clear the scene.

Over 90 Minute Incidents for Quarter Four, 2003



Service Actions

The Incident Response roving program provides various services to motorists. Traffic control is the most common service provided. On an average day during the fourth quarter, incident response personnel (all units) provided fuel to 14 vehicles, cleared 12 pieces of debris, changed 12 flat tires, pushed 8 vehicles, and performed 6 minor car repairs.

Response Types

October to December 2003

Total Incident Responses = 12,341

- 1,717 Collisions (14%)
- 10,624 Non-Collisions (86%)*

	Oct	Nov	Dec
Fatality Collisions	6	11	10
Injury Collisions	147	147	134
Non-injury Collisions	377	417	468
Disabled Vehicles	2,435	2,120	2,320
Abandoned Vehicles	787	705	784
Debris	420	330	290
Fire	24	17	27
Hazardous Materials	15	5	4
Other	132	139	149

**Some non-collisions fall into more than one of the above categories.*

Service Actions Taken for Non-Collision Responses

October to December 2003

	Oct	Nov	Dec
Traffic Control	425	370	429
Provided Fuel	324	286	269
Changed Flat Tire	323	255	220
Minor Repair	281	203	260
Pushed Vehicle	145	178	190
Towed Vehicle	160	115	144
Cleared Debris	90	84	84

Source: WSDOT Traffic Office.

Travel Information: Quarterly Update

Since the launch of 5-1-1 Travel Information Service in July 2003, calls have increased by 74 percent (from 30,478 to 52,903) during the first six month period.

5-1-1 is a three-digit travel information number, designated by the Federal Communications Commission (FCC), to provide around the clock traffic and road condition information.

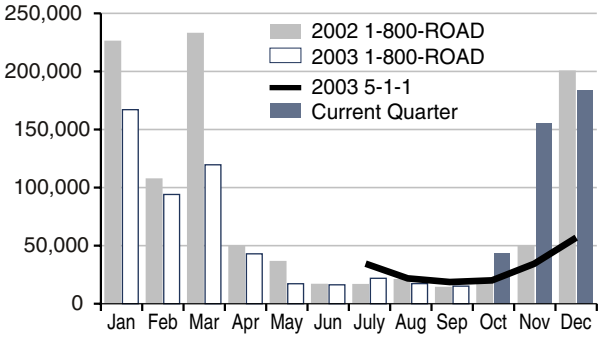
The 5-1-1 system lets the commuter check real-time traffic conditions using a cell phone and voice commands. Although some users have experienced difficulty at times with the voice recognition aspect of this system, it will continue to be enhanced as technology improves. WSDOT is currently developing a plan to address these issues and make the 511 system more user-friendly.

1-800-695-ROAD

In December 2003, the total number of calls to 1-800-695-ROAD slightly decreased from the level in December 2002. However, the total number of calls to Travel Information combining 1-800-695-ROAD and 5-1-1 calls together increased. It is likely that 5-1-1 is replacing some of the calls to 1-800-695-ROAD.

During the fourth quarter of 2003, the total number of calls to 1-800-695-ROAD and 5-1-1 increased by 78.6 percent with 481,706 calls in 2003 versus 269,675 calls in 2002.

Travel Information Service
Calls to 1-800 Road and 5-1-1
Calendar Year: 2002-2003

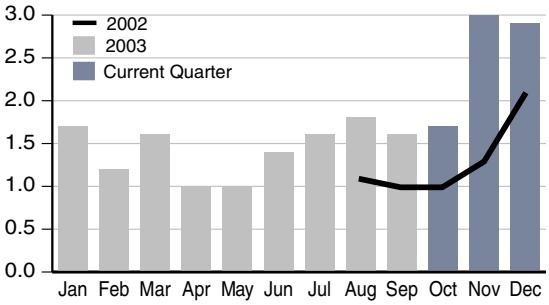


Source: WSDOT Traffic Office.

On the Web

Page views to Traveler information continue to increase. They are up an average of 93% over the same quarter last year.

Traveler Website Daily Usage
Daily Average Page Views per Month (in millions)



Source: WSDOT Communications Office.

Daily Average Page Views per Month
Quarter 2002 and 2003 (in millions)

	2002	*2003*	*% increase*
October	0.8	1.7	113%
November	1.3	3.0	131%
December	2.1	2.9	38%

In comparison to last year's numbers October saw an increase of 113 percent and November saw a 131 percent increase in daily page views.

Highest One Day Total

On November 19, 2003, WSDOT's web site received 6.8 million page views.

- 97% went to Traffic and Travel Information
- 87% of those views originated from the WSDOT site – the remaining were from WSDOT through news and other sites such as KIRO, KING and KOMO who used WSDOT's cameras and flowmaps.

WSDOT is also responding to the increasing number of requests for traffic and travel information to display on mobile devices. Developments will be reported as they occur.

Options to Drive Alone Commuting: Quarterly Update

Park and Ride Lot Occupancy at WSDOT-Owned Sites in King County

During the third quarter* of calendar year 2003, occupancy of the 8,500 parking spaces in the 32 WSDOT lots in King County averaged 73 percent.

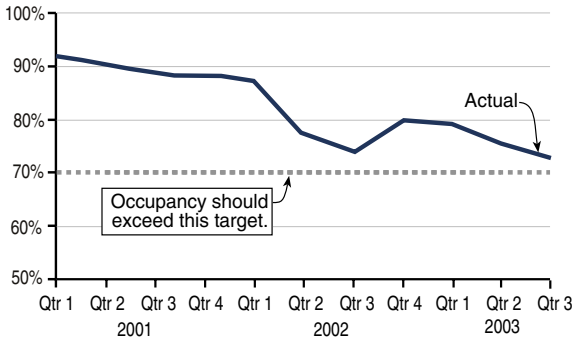
A three percent decrease in occupancy from the second quarter was due to summer seasonal declines in transit use. About 50 percent of WSDOT's park and ride lots in King County surpassed the target of 70 percent occupancy during the quarter. Parked cars regularly exceeded maximum capacity in five lots.

Highlights

- The new Issaquah Highlands Interim Park and Ride lot opened at the end of September. This Sound Transit lot offers 103 parking spaces for commuters. King County Metro is developing a permanent Park and Ride structure at Highland Dr. N.E. and N.E. High St. that is scheduled for completion in late 2005.
- The new 5-story Eastgate Park and Ride garage is scheduled for completion in June 2005.

WSDOT-Owned King County Park and Ride Lots

*Percent of Capacity Used: January 2001 through September 2003**



**Data availability has a lag of three months to allow the transit systems to collect and analyze the data. Data for the fourth quarter of 2003 will be available in the next Gray Notebook.*

Source: WSDOT Analysis of King County Metro data.

- Transit agencies throughout Puget Sound report persistent overcrowding at Park and Ride lots along major corridors due to lack of capacity and growing demand. Efforts to increase transit and ridesharing are hampered by insufficient capacity at many commuter Park and Ride facilities.

Vanpools in the Puget Sound Region

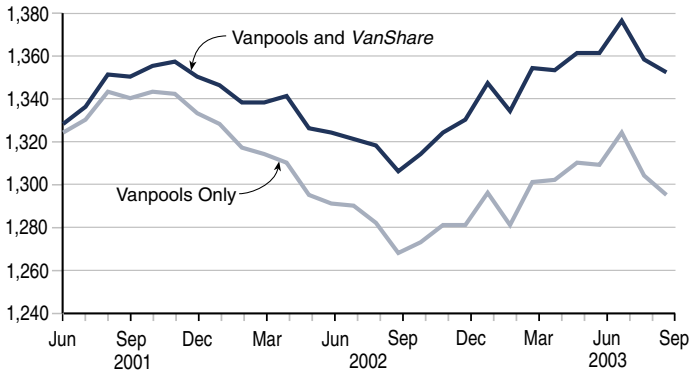
Beginning with this issue of the *Gray Notebook*, vanpool information and analysis will reflect a lag of three months in reporting data.* Reporting on the previous quarter will allow for more complete verification of the data. During the third quarter, the number of vanpools in operation in the region peaked in July (1,376) followed by small decreases in August (1,358) and September (1,352). Despite the recent decrease, the total number of vehicles on the road is up 3.5 percent since September 2002 when there were 1,306 vanpools.

Quarterly Regional Vanpool Highlights

There are now 62 vanpool *VanShare* groups in operation in the Puget Sound region. The *VanShare* program provides connections for employees between trains, ferries, park and ride lots, and their work sites. The VanShare program has proven to be very successful with Sounder trains on the Tacoma line (34 *VanShare* groups.) King County Metro staff have begun marketing the *VanShare* program to employees riding between Everett and Seattle.

- Enhancements to regional Internet ridematch service in Puget Sound will provide a direct benefit to vanpools. The improved service has the ability to:
  – Provide up to 30 names on a match list request
  – Allow easier route planning with map viewing of Park & Ride lots

Puget Sound Vanpool and *VanShare* Trends



**Data availability has a lag of three months to allow the transit systems to collect and analyze the data. Data for the fourth quarter of 2003 will be available in the next Gray Notebook.*

Source: WSDOT Transportation Demand Management Office.

  – Increase user ability to select newest names on the match list – an effective tool for vanpool groups looking for riders
  – Provide promotional email message to users about their company's rideshare incentives along with an Employee Transportation Coordinator (ETC) contact phone number.

Coming Next GNB Edition:
Commute Trip Reduction Task Force 2003 Report to the Washington State Legislature

Washington State Ferries: Quarterly Update

Customer Feedback

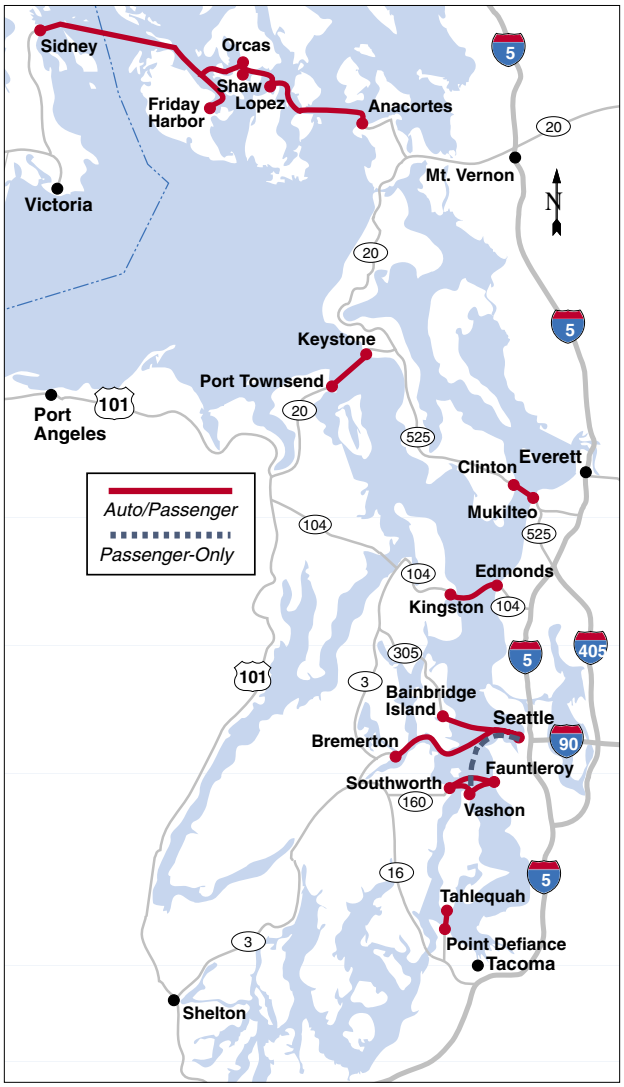
Washington State Ferries (WSF) collects customer complaints, compliments, comments, and suggestions. This information is recorded in the Automated Operating Support System (AOSS) database for measurement and action, based on database cross tabulation and analysis.

The charts show trends in the data for the last four fiscal years and the first two quarters of fiscal year 2004 (July 1 – December 31, 2003).

Customer complaints were up 12 percent from the preceding quarter. Complaints have increased for three consecutive quarters.

WSF received 53 food service related complaints during the quarter. This is only the second quarter in two and one-half years that food service has been in the top four comment types. A total of 46 food complaints were received on the Edmonds-Kingston route during a two-week period in November when the *MV Quinault* was in service on this route. The *MV Quinault* did not have galley service and is a much smaller vessel than the Jumbo Class ferry she was replacing.

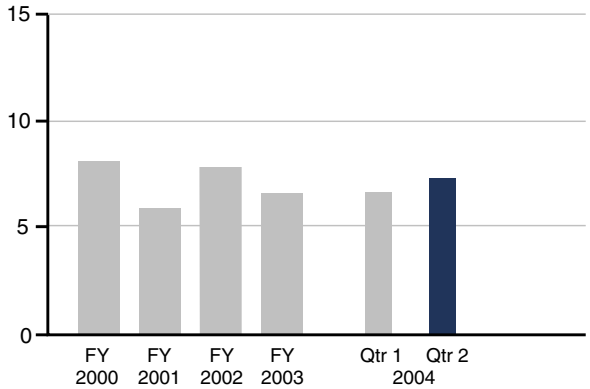
Vanpools exiting ferry on Bainbridge Island



Washington State Ferries Route Map

Total Customer Complaints

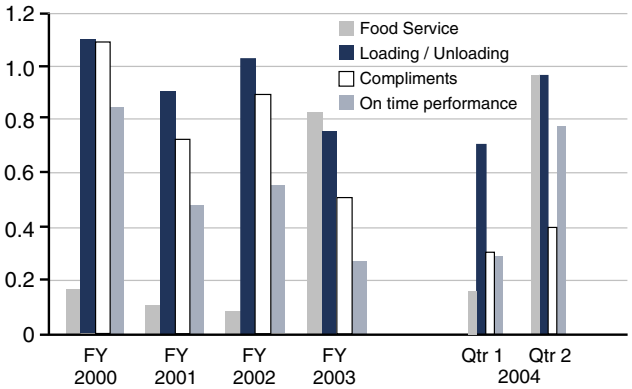
*Complaints per 100,000 Customers**



**Does not include compliments or suggestions.*

Most Common Customer Comments

Top Four Comment Types per 100,000 Customers



Source for all charts: WSDOT Ferries.

On-Time Performance

WSF has been collecting on-time performance data since June 2001. The table below compares WSF on-time performance across the system for the second quarters of fiscal year 2003 and 2004.

Delays in the San Juan Islands are due primarily to construction activity at Shaw Island (see "Trip Reliability" comments below).

Improved on-time performance was experienced on WSF's busiest route, the Fauntleroy–Vashon–Southworth route. Approximately one quarter of all trips by WSF are made on this triangular route structure. Fall schedule changes were developed with the Ferry Advisory Committees at Vashon and Southworth resulting in a schedule that increased on-time performance and allowed much needed late night maintenance on the three vessels serving this route.

On-Time Trip Delivery

	Second Quarter Fiscal Year 2003			Second Quarter Fiscal Year 2004		
	Number of Trips	Percent of Trips Within 10 minutes of Schedule	All Trips Average Delay From Scheduled Sailing Time	Number of Trips	Percent of Trips Within 10 Minutes of Schedule	All Trips Average Delay From Scheduled Sailing Time
San Juan Domestic	6,443	94%	2.7 minutes	5,591	85%	4.6 minutes
International Route	176	84%	3.7 minutes	152	85%	4.8 minutes
Edmonds/Kingston	4,564	94%	3.1 minutes	4,499	93%	3.5 minutes
Passenger-Only: Seattle/Bremerton	1,564	95%	2.8 minutes	Service discontinued		
Passenger-Only: Seattle/Vashon	1,041	94%	2.4 minutes	1,003	98%	2.2 minutes
Fauntleroy/Vashon/Southworth	9,534	91%	4.3 minutes	9,602	93%	3.2 minutes
Keystone/Port Townsend	1,852	96%	2.4 minutes	1,826	93%	3.2 minutes
Mukilteo/Clinton	6,178	98%	2.0 minutes	6,335	99%	2.0 minutes
Point Defiance/Tahlequah	2,708	93%	4.0 minutes	2,782	95%	3.1 minutes
Seattle/Bainbridge Island	4,031	96%	2.8 minutes	3,901	98%	2.6 minutes
Seattle/Bremerton	2,563	98%	2.7 minutes	2,451	97%	3.1 minutes
Total	**40,654**	**94%**	**3.0 minutes**	**38,142**	**94%**	**3.1 minutes**

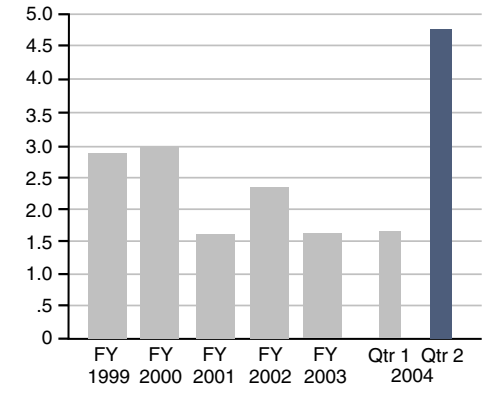
A trip is considered to be on time if it departs within ten minutes of the published scheduled sailing time. Missed trips are not reported using this measure. They are included in the Trip Reliability measure.

Trip Reliability

WSF scheduled a total of 41,678 trips during the 2nd quarter of fiscal year 2004. Of these trips, 486 were missed. Sixty-one percent (296) of the missed trips resulted from closures of the Shaw Island terminal during work on a $6.5 million preservation contract (see details on below). The chart below shows a system-wide average reliability index. Assuming that a commuter worked 200 days per year and made 400 trips on WSF, the statistical likelihood is that 4.7 ferry trips would be cancelled. This rating represents a 178% decline in the reliability rating from the preceding quarter and a 140% decline in performance over the same period last year.

Trip Reliability Index

Missed Trips per 400 Sailings

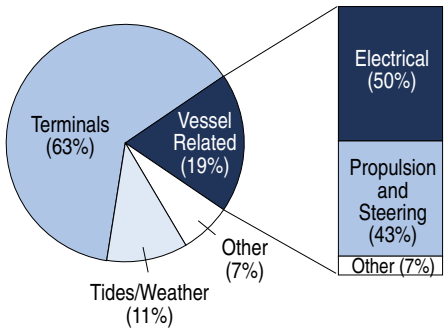


$$\text{Trip Reliability Index Number} = \frac{\text{Cancelled Trips}}{\text{Total Scheduled Trips}} \times 400 \times \text{(Average Annual Number of Commute Trips)}$$

Source for all charts: WSDOT Ferries.

Most Common Trip Cancellation Causes

Second Quarter, Fiscal Year 2004



WSF is undertaking a $6.5 million preservation contract at the Shaw Island terminal this biennium. Extensive pile driving and "over water" work was accomplished this quarter to optimize environmental construction windows and seasonal traffic lulls. WSF worked closely with the community on Shaw Island and throughout the San Juans to craft mitigation strategies aimed at minimizing disruptions.

Because Shaw is a single slip facility, closures were necessary during regular service hours. There was no service to Shaw Island during midday from September 22 through November 7. One weekend closure was necessary, September 27 and 28. Finally, WSF completely shut down service from November 8 to November 11. All closures were coordinated with the community.

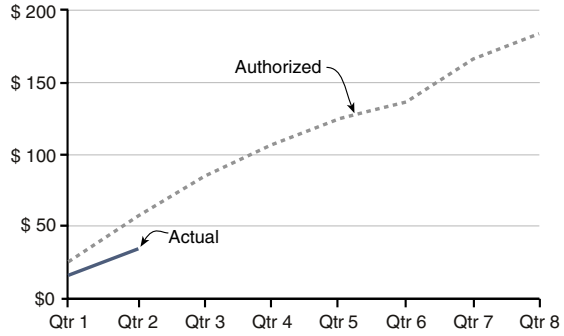
Capital Expenditure Performance

WSDOT makes capital investments in the Ferry System through the Washington State Ferries Construction Program. The program preserves existing and builds new ferry terminals and vessels, supporting the Ferry System the capability to deliver responsible and reliable services.

WSF planned to spend $59.5 million over the period July-December 2003. Actual expenditures were $32.6 million.

- Terminal Construction activities are under-spending by $20.1 million. The Port Townsend Preservation and Improvement projects are $6.3 million under the plan because project scopes have been revised and work deferred to later biennia. Spending for property acquisition and design of the Edmonds Multimodal Terminal is $4.0 million behind due to a cautious approach to environmental issues and to negotiations with tribes. System-wide projects are behind in spending by $2.5 million, particularly in system planning activities and technical support to construction. The Eagle Harbor Preservation project is $1.7 million behind in spending. The Anacortes Multimodal Terminal project is $1.4 million behind in spending. Both projects are experiencing slow starts. The Shaw Terminal Preservation project is under-spending through December by $1.5 million and is expected to be completed under budget. The Mukilteo Multimodal Terminal is underutilizing new law funds by $1.0 million. This reflects WSF's use of current law federal grants first before expending new law funds and a time lag between consultant work and billings. The Kingston Sewer Outfall project was paid for in the prior biennium freeing $0.8 million budgeted in the current biennium for other projects.
- Vessel Construction activities are under-spending by $6.2 million. Variances include: The *MV Spokane* is $5.5 million behind planned expenditures due to slower than expected billings for equipment procurement. The *MV Klahowya* is $2.3 million behind because work is deferred to later in the biennium. The *MV Cathlamet* is $1.7 million over plan because of unanticipated carry forward costs from the prior biennium.
- Emergency Repair activities are under-spending the plan by $0.6 million.

WSF Construction Program Expenditures
2003-2005 Biennium, 2nd Quarter, Cumulative Dollars in Millions
Authorized vs. Actual



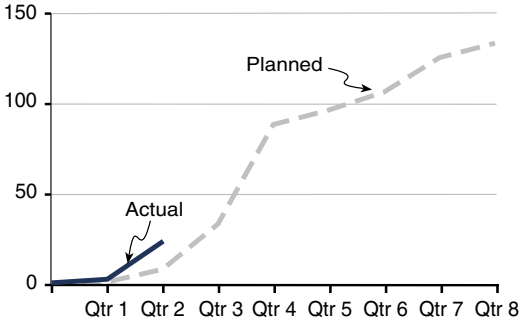
Life Cycle Preservation Performance

WSF terminals and vessels consist of several thousand components, divided into Category 1 and Category 2 systems and structures. Category 1 systems and structures are vital to the protection of people, the environment, and infrastructure. All other terminal and vessel components are designated Category 2. Each component should be refurbished or replaced at the end of its life cycle to assure that WSF can provide responsible and reliable service.

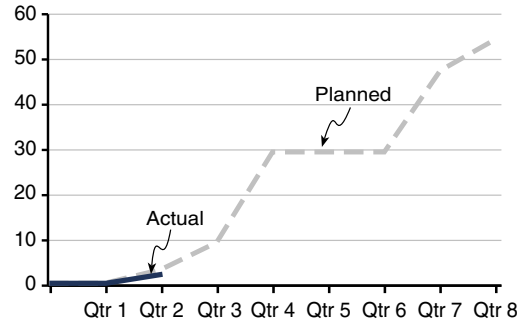
WSF has a work plan, based on legislative funding, to address the backlog of systems and structures that are past due as well as those constituting on-going deterioration of terminal and vessel components. This biennium WSF plans to replace or refurbish 133 Category 1 systems and structures and 54 Category 2 components. Twenty-three Category 1 systems and structures, and two Category 2 items were completed through the second quarter.

WSF uses life cycle ratings to measure the impact of its preservation activities. The life cycle rating for Category 1 terminal and vessel components is projected to increase from 77 percent at the beginning of the biennium to 81 percent at the end of the biennium. The life cycle rating for Category 2 components is projected to decline from 58 percent to 54 percent.

Category 1 Terminal & Vessel Systems & Structures Preserved
Cumulative Systems Preserved Planned vs. Actual
2003-2005 Biennium, Quarter 2 Ending December 31, 2003



Category 2 Terminal & Vessel Systems & Structures Preserved
Cumulative Systems Preserved Planned vs. Actual
2003-2005 Biennium, Quarter 2 Ending December 31, 2003



Source for all charts: WSDOT Ferries.

Ridership and Revenues

The Legislature's Joint Task Force on Ferries (JTFF), comprised of legislators, citizens, ferry management, and ferry workers was formed in 2000. The Task Force reviewed the workings of the WSF system and made recommendations including tariff increases designed to raise the farebox recovery rate to 80 percent of operating costs over six years. The Transportation Commission instituted this recommendation and approved tariff increases of 20 percent in June 2001 and 12.5 percent in May 2002.

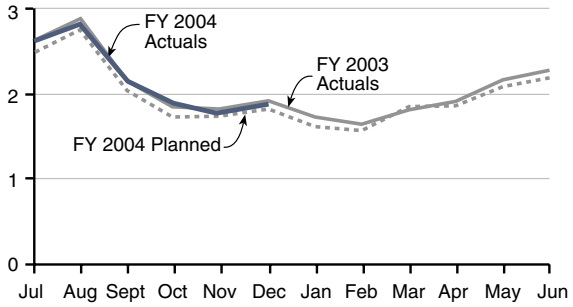
In the fall of 2003, WSF management developed a new strategic plan aimed at balancing revenue generation necessary to capitalize the aging fleet. The new plan reduced the size of the tariff increases for fiscal years 2003-2004. In the spring of 2003, the Transportation Commission adopted fare increases of five percent in May 2003 and an additional five percent in May 2004.

As a result of the lower tariff increases, ridership is not projected to fall as rapidly as anticipated in the original plan. Repeating the pattern from fiscal year 2003 through the second quarter of fiscal year 2004, WSF has experienced slightly higher than projected ridership and revenues.

Fiscal year to date, ridership has exceeded the plan by four percent or 488,000 riders. Farebox revenues exceeded the plan by three percent or $2 million. (Plan is based on June 2003 forecast).

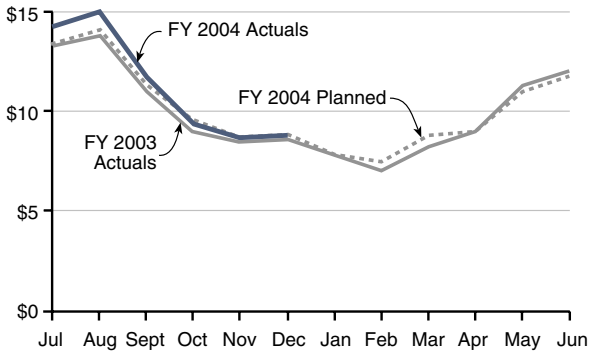
Ferries Ridership by Month

in Millions



Ferries Farebox Revenues by Month

Dollars in Millions



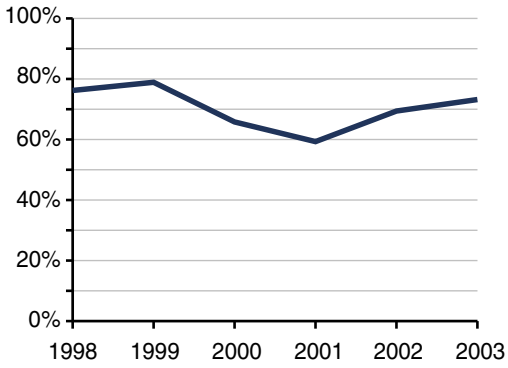
Source for all charts: WSDOT Ferries.

Farebox Recovery Rate

Farebox recovery is the percent of annual operating and maintenance costs recovered through tariffs and other non-tax revenues. In line with WSF's strategic plan, farebox recovery rates for fiscal year (FY) 2003 were up 5.4 percent from FY 2002. This is largely due to the May 2002 tariff increase combined with cost saving initiatives. A complex blend of cost increases also affected farebox recovery rates. For example, total operating, maintenance, and support costs increased $4.4 million, fuel costs increased $4.5 million, insurance increased $1.3 million, and self insurance premiums and tort claims were up $1.6 million.

Top performing individual routes in FY 2003 were Edmonds – Kingston (121 percent), Bainbridge – Seattle (110 percent), and Mukilteo – Clinton (95 percent). On average, auto routes recovered 76 percent of operating costs through the farebox, while passenger only routes recovered 27 percent. WSF also views each route's farebox recovery performance over several years, as the trend is more important than a snapshot. Extraordinary maintenance costs, service interruptions or even route closures for terminal construction, and many other isolated activities can dramatically effect farebox recovery during a one year period.

WSF Annual Farebox Recovery Rates



Source: WSDOT Ferries.

State-Supported Amtrak *Cascades* Service: Quarterly Update

Ridership

Ridership on state-supported Amtrak *Cascades* trains was 90,664 in the fourth quarter of 2003. This was nearly identical to the fourth quarter of 2002. Trains that showed slight ridership increases during the quarter include the morning Seattle-Portland train, both midday trains between these cities, and the two Seattle-Bellingham trains. The Seattle-Vancouver, BC trains experienced the largest ridership decreases during the final quarter of 2003, contributing to a decline of over 8,000 riders for the entire year on this route. Factors that led to this decline include an increase in the number of cruise ship passengers departing from Seattle rather than Vancouver, BC, the overall effect of tourism, and a lower exchange rate for the U.S. dollar in Canada.

For the entire year, ridership was 385,585 on state-supported trains, also a slight increase over 2002. For all trains in the Amtrak *Cascades* system, including those financially supported by the state of Oregon and Amtrak, ridership was 589,743. This represents the ninth consecutive year of ridership increases.

Customer Satisfaction

Amtrak's Customer Satisfaction Index (CSI) is based on surveys of riders using the service. The scores represent three-month rolling averages. The CSI goal for Amtrak *Cascades* is 91 (out of 100) or better. In the most recent survey period, the overall score for Amtrak *Cascades* was 90. This score continues to be one of the highest in Amtrak's national system, and is nine points higher than the national average for routes of similar distance. Survey responses showed high customer satisfaction with access to trip information prior to boarding the train, the smooth and comfortable ride, and the friendliness and helpfulness of train conductors. Survey questions that produced lower scores include the quality and variety of food available on the trains and on-time performance.

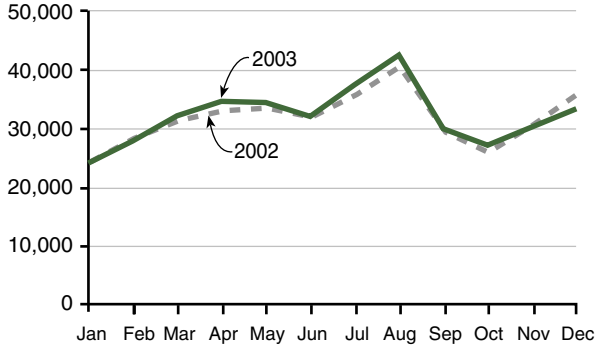
On-Time Performance

On-time performance for state-supported Amtrak *Cascades* trains averaged 67.2 percent for the last three months of 2003. This was nearly eight points below the performance for the same period in 2002 and well below the goal of 80 percent set by WSDOT and Amtrak. The primary cause of delays during the fourth quarter of 2003 was rail freight traffic congestion throughout the corridor and speed restrictions imposed by the railroad where rail line maintenance was taking place. For the entire year, on-time performance for Amtrak *Cascades* trains averaged 71.9 percent, up slightly from 2002.

Photo by Jeffrey T. Schultz

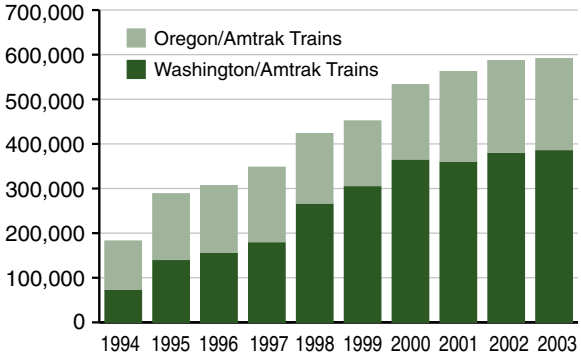
State-Supported Amtrak *Cascades* Monthly Ridership

Number of Passengers



Amtrak *Cascades* Annual Ridership

1994-2003



Source for all charts: Amtrak and WSDOT Rail Office.

Farebox Recovery

The farebox recovery per train measures the percentage of total annual operating costs generated through ticket fares. The average farebox recovery rate for the eight Amtrak *Cascades* trains financially supported by WSDOT was 39.9 percent in federal fiscal year (FFY) 2003, which was three points lower than in FFY 2002. This rate decline was driven by slightly lower revenues in FFY 2003 (-1.5 percent) when compared to the preceding year, and a six percent increase in total operating expenses. Costs that grew in FFY 2003 included diesel fuel and equipment insurance. WSDOT and Amtrak hope that economic recovery in the Pacific Northwest will support higher revenue yields and improved farebox performance for Amtrak *Cascades* in 2004.

King Street Station Update

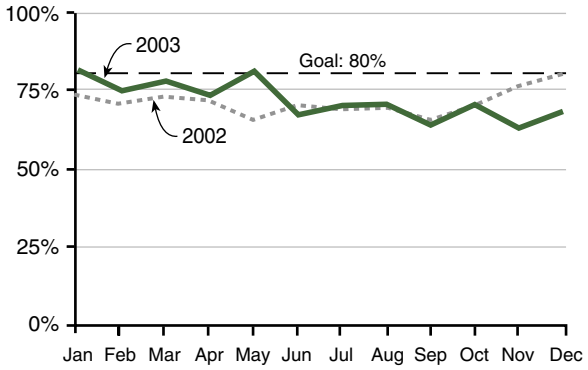
The renovation of King Street Station in downtown Seattle continued in the last quarter of 2003. Projects included final installation work on the temporary restrooms on the east side of the building, construction work on replacement restrooms, and removal of some interior walls on the first floor of the facility. The elimination of these walls has exposed portions of the original interior walls and ceilings, much of which has not been seen by visitors to the station in over 40 years. The newly exposed sections inside the station will eventually become part of an enlarged passenger waiting area by Summer 2004.

Washington Grain Train Update

The Washington Grain Train carried 301 carloads of grain in the last quarter of 2003. This was 77 percent higher that in the final quarter of 2002. Quarterly growth was driven by slight increases in grain car usage by cooperatives near Moses Lake and Walla Walla, and by the new grain train operating between Marshall and Pullman. In 2003, the Washington Grain Train carried 1,058 carloads, a 21 percent increase over the total of 874 for 2002. The 2003 traffic increase was largely attributable to the third Washington Grain Train that began service in April 2003.

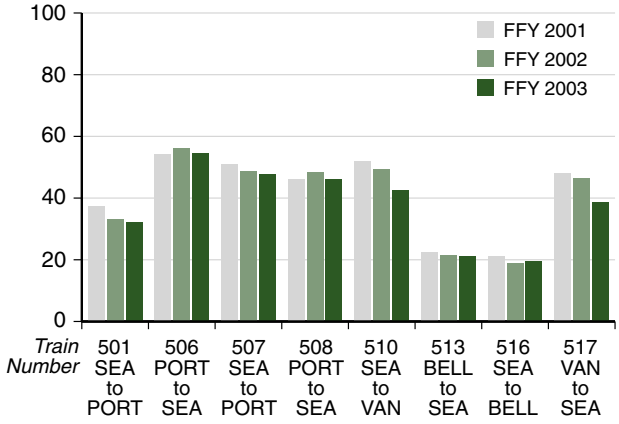
The Washington Grain Train is a financially self-sustaining transportation program that supports the state's agricultural community while helping short line railroads maintain a sufficient customer base for long-term financial viability. The 94-car fleet is jointly owned by WSDOT (76 cars) and the Port of Walla Walla (18 cars). The ports of Walla Walla, Moses Lake, and Whitman County share fleet management responsibilities.

State-Supported Amtrak *Cascades*
On-Time Performance
2003 vs. 2002 Percent On-Time
2002 Average: 70.8%
2003 Average: 71.9%



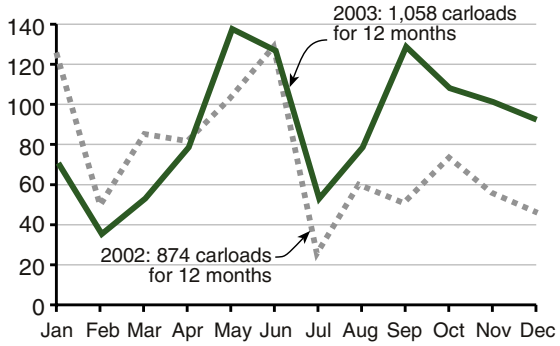
The on-time performance goal for Amtrak Cascades *is 80% or better. A train is considered on-time if it arrives at its final destination within 10 minutes or less of the scheduled arrival time.*

State Supported Amtrak *Cascades*
Farebox Recovery
Per Train



Source for above charts: Amtrak and WSDOT Rail Office.

Washington Grain Train Carloads
Carloads Per Month, 2002 vs. 2003



Source: WSDOT Rail Office.

Special Features

Organic Recycling Earns Award for WSDOT

The Washington Organic Recycling Council (WORC) presented WSDOT with an award December 11th for "fulfilling the vision of innovative application and specification of compost in Washington State roadside development." Everyone benefits when organic materials are recycled into products of value. These products improve the quality of landscape materials. They have a positive impact in our environment by improving soil and plant health, conserving water, reducing erosion, and reducing the use of fertilizers and pesticides. They also replace other sources of wood for paper and fuel production.

The award recognized, in particular, the work of the Roadside and Site Development Unit.

WORC credits WSDOT with the use of one-third of the compost produced in the state. For more information on good composting practices, visit *www.compostwashington.org*.

WSDOT Receives 2003 Federal Performance Letter "Report Card" from FHWA

Each year, the Washington Division of the Federal Highway Administration (FHWA) audits WSDOT's compliance with federal rules and regulations. In summarizing this year's overall results, the 2003 Performance Letter, signed by FHWA Division Administrator Daniel M. Mathis, stated, "Based on the inspections, reviews, program evaluations and audits conducted in FY 2003, it is my finding that WSDOT has complied with federal laws and regulations in expending federal-aid highway funds allocated to the State of Washington."

The performance letter evaluates WSDOT's performance in 21 project and program areas such as bridge inspection standards, financial billing, environmental commitments and program efficiencies. The letter called out a positive example of WSDOT's work: "construction costs reported in the *Gray Notebook* are accurate and track closely with the data we have compiled." In addition, FHWA noted some areas for improvement such as ensuring all bridge inspections are completed within the 24 month frequency requirement, using the pavement smoothness standard more consistently, and establishing a tracking database to assure that environmental commitments are not affected by project changes.

Mathis concluded the letter by commending WSDOT "for continuing to strengthen your performance management initiatives such as the *Gray Notebook...* your continued efforts in enhancing these tools provides further evidence that WSDOT is focused on being accountable for state and federal transportation funding." The 2003 Performance Letter can be found on-line at: *www.wsdot.wa.gov/accountability/FHWA_FY2003_performancereport.pdf.*

Global Positioning at WSDOT

Surveyors have been using Global Positioning Systems (GPS) for years. Most people are acquainted with non-survey level GPS technology as a navigational aid in their vehicles, for wayfinding on a hike, and even for keeping tabs on a child or family pet.

WSDOT is using GPS to inventory the locations of roadway features such as signs, guardrails, pavement conditions, trees, utility devices, drainage systems, bridges, traffic devices, light poles, etc. It can accurately record the location of maintenance procedures such as mowing, spraying, or striping. GPS is also being used for wetland delineation.

In future editions of the *Gray Notebook*, WSDOT will be presenting more detailed information on how GPS is being utilized.

Highlights of Program Activities

Quarter Ending December 31, 2003

Project Starts, Completions, Updates

SR 290 Trent Avenue Bridge as it appeared on Dec. 4. The bridge had been slated for opening on Dec. 16.

- WSDOT began on Dec. 17 charging its contractor penalties of about $3,000 per weekday for every day that opening of the **State Route (SR) 290 Trent Avenue Bridge** in Spokane was delayed. Working days were re-negotiated and added to the project's contracted schedule in May 2003 when some unanticipated construction conditions were discovered. At that time, WSDOT approved a new schedule submitted by the contractor, Ross Bros. & Co. of Salem, Oregon for a mid-December completion. In late November, it became apparent that Ross Bros. was not going to be able to meet that schedule. Penalties will be withheld from the final payment of the $8.9 million contract.
- The **SR 519 (South Royal Brougham Way)** project near the Seattle waterfront, Safeco Field, and Seahawk Stadium cleared a major hurdle when the old ramp from Fourth Avenue South to eastbound Interstate 90 was demolished. The demolition contractors, R.W. Rhine, finished the task in 10 days. This allowed WSDOT crews to re-open the vital I-5 and I-90 exits to Fourth Avenue South along with several major streets and intersections in the area. The new structure created by this project separates vehicle, pedestrian and rail traffic, and provides a greater margin of safety for all.
- A series of late October storms dumped record setting rain, severely damaging SR 20 in several locations, causing the earliest closure of the **North Cascades Highway** ever. Some of the worst damage occurred at Pyramid Creek (MP 126) and Ketchum Creek (MP 124) where large sections of roadway disappeared, guardrail was left hanging, and torrential rain, rocks and dirt rendered large culverts useless. WSDOT's contractor, Pacific Road and Bridge, made progress stabilizing and rebuilding the roadway portions damaged by water, and a primitive, but passable, road is now in place. Crews will return next spring to lay down the final layer of asphalt. However, on November 9, a huge rockslide thundered down the mountainside just east of Newhalem, slamming into Highway 20, taking out portions of roadway and cutting off access to the town of Diablo in Whatcom County. URS Corporation, the contractor monitoring and surveying the hillside, has placed monitoring equipment on the unstable slope. The instruments will indicate if the hillside is moving, where it is moving, and by how much. This information is critical to keeping crews safe as they move in and out of the area.
- Crews installed several large steel girders across I-5 in Lynnwood in late November in association with the construction of Sound Transit's **Lynnwood Park & Ride Direct Access Project**. The steel girders formed the skeleton of a new ramp over I-5 south of 44th Ave. W., which will provide direct access to and from the I-5 high-occupancy vehicle lanes for buses, carpools, and vanpools. The project is currently on time and on budget, with completion scheduled for fall 2005.
- **SR 11**, better known as **Chuckanut Drive**, near Bellingham was closed after a large rockslide blocked the highway on Oct. 29. Up to 60 tons of rock and debris came loose from the hillside above the roadway and crashed onto the highway, blocking both lanes of traffic just south of Larrabee Park and north of Oyster Creek. Crews worked seven days a week to stabilize the hillside to reopen the road to traffic on Nov. 14.
- Crews on the **SR 162 Voights Creek Bridge Replacement** project near Orting are using some of the latest technology to protect the environment. Because of the bridge's close proximity to a fish hatchery, workers are using an oscillator to excavate the bridge shafts. The oscillator twists as it presses the casing down into the ground, minimizing disturbance to the surrounding environment. In addition, three 134-foot 'supergirders' will used to support the bridge deck. In past bridge projects, five to eight girders are typically used. This new technology means less intrusion on water habitat and fewer maintenance requirements. The $2.1 million replaces an aging, wooden structure with a concrete bridge, and realigns SR 162 to eliminate a high accident location. Work is scheduled for spring 2004 completion.
- Three options to replace the **SR 520 Floating Bridge** are being explored. They include a four-lane structure with shoulders, wider lanes and a pedestrian/bicycle lane, a six-lane option that also adds a high-occupancy

vehicle lane in each direction, and an eight-lane option that adds the elements of the six-lane and a general-purpose lane in each direction. This fall, WSDOT worked with divers to better identify objects on the floor of Lake Washington that could potentially affect the construction of a new bridge. With at least $2 billion, 15 years and a main connection across Lake Washington on the line, WSDOT wanted to know all the impacts every step of the way to assure that time and taxpayer money are not wasted. Preliminary side-scan sonar images showed three objects in the water, some 1000 feet north of the current SR 520 Bridge. Two objects appear to be barges. The third object is a large boat, estimated at 150 feet in length.

- WSDOT's Aviation Division is participating in a project to install an irrigation system to support new turf growth at the **Stehekin Airport** near Lake Chelan. Non-native plants growing on the airport runway have been the targets of a spray program, paid for by the Aviation Division, for years. The National Park Service provided funding that allows the division to reseed the airport with a dense native grass to choke out the weeds. About 20 pilot organizations volunteered to install the irrigation system. The airport's new turf will be ready for use next year and pilots will be able to operate from a smooth runway, free of dust and gravel.

Materials for the airport project are barged across Lake Chelan.

- Workers finished seismic retrofit work at the **SR 20 Deception and Canoe Pass Bridges** by installing 10,000 bolts into the underside of the bridge decks. The bolts connect the bridge decks to their supporting steel structures, creating a connection that makes both bridges safer and more stable in the event of an earthquake. Both bridges now meet current seismic codes.
- Just prior to the deluge of fall rains, crews completed a $1.7 million paving project on **SR 112** between the Makah Reservation and Hoko River Bridge in Clallam County. Start of the job was delayed until August, after young eagle fledglings near the project left their nest. SR 112 was designated as a scenic highway in 2002. The highway terminates at Neah Bay on the northwest tip of the Olympic Peninsula, and provides motorists access to one of the most remote areas of our state.

Savings and Efficiencies

- A pilot project to compare the use of **salt** to the use of **other anti-icing chemicals** for improving winter driving conditions is being repeated. An unusually mild winter weather in 2002-03 limited the amount of data collected and the initial study results did not show a clear-cut advantage to using one anti-icing product over another in all cases. WSDOT is evaluating the use of rock salt and salt brine in comparison to other anti-icing chemicals to determine the effect on driving conditions, corrosiveness to various types of metals, impacts to the roadside environment, and cost of snow and ice control. This year's results will be combined with last year's for a complete report and made available to those who are interested.
- The National Association of State Aviation Officials (NASAO) named the **WSDOT's Aviation Division** the "Most Innovative State" of 2003 for developing an "On-line Pilot Registration" program. The On-line Pilot Registration program began in January 2003 to improve customer service and streamline administrative processing. WSDOT found that the improved service increased the number of pilots, mechanics and aircraft owners who registered with the WSDOT. Since the implementation of online registration, revenues that support air search and rescue have increased more than $100,000. Additionally, over 4,000 aviators have subscribed to the Aviation News Service, which has improved communication between WSDOT Aviation and its customers.

Rail

- The Federal Railroad Administration recently awarded $1 million to WSDOT for highway-rail grade crossing improvements. The funds are designated for crossing improvements on the **Pacific Northwest Rail Corridor** in Cowlitz County, and at several crossings between Marysville and Bellingham in Snohomish and Whatcom counties. Washington is one of only ten states receiving funds. The Pacific Northwest Rail Corridor extends 466 miles from Eugene, Oregon, via Portland and Seattle, to Vancouver, British Columbia.

Public Transportation and Commute Trip Reduction

- WSDOT teamed up with local jurisdictions, transit agencies, and private companies to launch this year's **Rideshare Weeks** (Oct. 13 – 24) an annual campaign encouraging commuters to incorporate carpooling, vanpooling, transit, cycling, and walking in their travel to work. Flexing work hours and working from home or an alternate location also helped meet the campaign's two major goals: exposing commuters to their choices in transportation while saving space on the roads. Rideshare Weeks was being featured in public service announcements donated by the *Seattle Post-Intelligencer*, in radio spots in Puget Sound and Spokane, and at worksites participating in the state's Commute Trip Reduction program. WSDOT has coordinated with 16 public agencies to develop promotions and shared messaging. For more information, see www.wsdot.wa.gov/partners/wsro/rideshare.
- On Tuesday, October 21, WSDOT joined transportation providers at the Omak Senior Center to highlight **new bus service in Okanogan County** made possible through $460,748 in state and federal public transportation grants. WSDOT presented giant symbolic checks and a key for a new minibus to Colville Confederated Tribes, Northwestern Trailways, and Okanogan County Transportation.

Awards and Recognition

- Linda Pierce of WSDOT Materials Lab, and Steve Muench and Joe P. Mahoney of the University of Washington, have been awarded the **national Premier Award** sponsored by National Engineering Education Delivery System (NEEDS) for the new WSDOT Pavement Guide – Interactive. The WSDOT Pavement Guide Interactive is now the official textbook for the primary pavement-oriented course in the UW Department of Civil and Environmental Engineering.
- WSDOT received the prestigious **national leadership award** from the **Association for Commuter Transportation (ACT)** for creating balanced transportation solutions that integrate commute options into highway planning projects in the Puget Sound region of Washington state. WSDOT Transportation Demand Management (TDM) Resource Center has been heavily involved in research to determine ways to improve travel choices – such as vanpools, carpools, and bicycles – in transportation projects planning. TDM focuses on reducing drive-alone auto trips by making other choices more available and attractive. The ACT award recognizes that WSDOT is leading the way to incorporate alternatives to driving alone into new plans for transportation corridors such as State Route 520 and Interstate 405.
- WSDOT and the Department of General Administration received Governor Locke's **Governor's Award for Organizational Learning and Growth**, for the Deschutes Parkway Reconstruction Project. The project was completed in October 2002, 18 months after the Nisqually Earthquake destroyed major portions of Deschutes Parkway, which surrounds Capitol Lake and links Tumwater to downtown Olympia. RCI Construction Inc., the project contractor, contributed to an accelerated repair schedule, and the project was completed many months earlier than first estimated and two months ahead of the contract schedule. The completed project cost $698,000 (16%) less than the original engineer's estimates. Taxpayers saved an additional $525,000 when a previously planned utility upgrade was completed at the same time as the road repairs, instead of later. This project changed the ways GA and WSDOT collaborate, which is already saving money on other projects.

Celebrations and Events

- Washington State Ferries (WSF) employees volunteered their time and skills to assist on the annual **Special Peoples Holiday Cruise** for the Puget Sound region's children and adults with special needs. The event took place aboard the MV Puyallup and is sponsored by the Active Ferry Employees Charitable Trust (AFECT). The afternoon outing has been hosted by AFECT for almost 20 years. No state funds are used. The annual event is supported by donations of time and money, including the Marine Corps Toys for Tots program, Chevron Oil and Sodexho Corporation. Many other local groups provide entertainment and support.
- WSDOT maintenance crews closed **SR 410/Chinook Pass** on Monday, Nov. 17, and **SR 123/Cayuse Pass** on Tuesday, Nov. 18, for the season due to heavy snowfall and snow slide danger. Cayuse Pass connects Chinook Pass and White Pass at the east end of Mount Rainier National Park. Cayuse and Chinook passes typically close for the season in November and reopen in April.
- **Studded tires** became legal in Washington on Saturday, Nov. 1. Studded tires are restricted in Washington due to the amount of wear and roadway damage they cause to state highways, estimated at $10 million per year. The tires are legal between November 1 and March 31. WSDOT is requesting legislative action to ban studded tires because of the damage and ruts they cause to highways, and due to safety considerations. Research shows that cars with studded tires take longer to stop than cars with other tires under most situations.

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Americans with Disabilities Act (ADA) Information

Persons with disabilities may request this information be prepared and supplied in alternate formats by calling the Washington State Department of Transportation ADA Accommodation Hotline collect (206) 389-2839. Persons with hearing impairments may access Washington State Telecommunications Relay Service at TTY 1-800-833-6388, Tele-Braille 1-800-833-6385, Voice 1-800-833-6384, and ask to be connected to (360) 705-7097.

Civil Rights Act of 1964, Title VI Statement to Public

Washington State Department of Transportation (WSDOT) hereby gives public notice that it is the policy of the department to assure full compliance with Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, and related statutes and regulations in all programs and activities. Persons wishing information may call the WSDOT Office of Equal Opportunity at (360) 705-7098.

Other WSDOT Information Available

The Washington State Department of Transportation has a vast amount of traveler information available (including Puget Sound area traffic, mountain pass reports, highway closures, ferry schedules, and more). Call the WSDOT statewide toll-free number: *1-800-695-ROAD.* In the Seattle area: (206) DOT-HIWY [368-4499].

For additional information about highway traffic flow and cameras, ferry routes and schedules, Amtrak *Cascades* rail, and other transportation operations, as well as WSDOT programs and projects, visit *www.wsdot.wa.gov*

For this or a previous edition of the *Gray Notebook*, visit *www.wsdot.wa.gov/accountability*

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