

# Measures, Markers and Mileposts

## **Gray Notebook Lite, edition 16**

for the quarter ending March 31, 2008,  
*Gray Notebook* edition 29

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

### Welcome to the *Gray Notebook Lite*!

This *Gray Notebook Lite* is the sixteenth edition of our relevant highlights and performance topics selected from the *Gray Notebook*, WSDOT's quarterly performance report. This quarter's edition of the *Lite* includes annual excerpts from the 2007-2008 Post-Winter Report, Safety Rest Areas, our annual Freight and CVISN articles, and our annual aviation update. There are quarterly excerpts from our Incident Response program, Ferries, and Amtrak-Cascades.

The beige insert contains a quarterly summarized roll-up of WSDOT's Capital Project Delivery Program and a project delivery performance overview for the 2003 Nickel Program and the 2005 Transportation Partnership Account.

The complete edition of the *Gray Notebook* can be found at <http://www.wsdot.wa.gov/Accountability/GrayNotebook/default.htm>.

Please continue to let us hear your thoughts about what you would like to see in the *Gray Notebook Lite*. Send me an e-mail at:

[hammonp@wsdot.wa.gov](mailto:hammonp@wsdot.wa.gov).



# Annual Updates

## Highway Maintenance: 2007-2008 Post Winter Report

The winter of 2007-2008 turned out to be anything but typical. The combination of heavy snow and rains combined to make this past winter one of the most challenging for WSDOT.

Heavy rains from the December 3, 2007 storm produced flooding across western Washington, including in the Chehalis River Valley, where I-5 was under water and closed down from MP 68 to MP 88 for four days. WSDOT estimates that the December flooding produced \$18 million in damage to state highways and \$39 million for city and county roads.

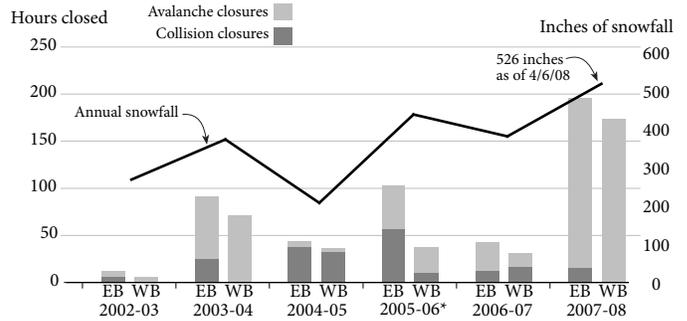
The Cascades experienced a winter that produced heavier-than-average snows, with significant snowfall occurring well into spring of 2008. Stevens Pass (U.S. 2) saw 562 inches of snow, while White Pass (U.S. 12) saw 645 inches. The near-record snowfalls produced higher than normal risk for avalanches: Snoqualmie Pass (I-90) was closed for a record 370 hours this winter, compared with only 75 hours in 2006-2007. The majority of closures were due to avalanches and avalanche-prevention activities.

The lengthy closures and maintenance operations took a financial toll this season. WSDOT spent \$40.1 million in winter maintenance activities as of March 31, 2008, \$9 million more than what was budgeted for this season.

The Post Winter Report can be found on pages 55-59 of the March 31, 2008 edition of the *Gray Notebook*.

## I-90 Snoqualmie Pass snowfall and eastbound/westbound highway closures

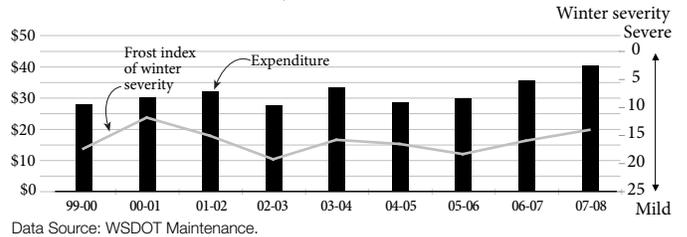
Eastbound and westbound I-90 avalanche and collision-related closures during the winter season



\*Does not include 2005-06 rock fall closures of 42 hours EB and 56 hours WB.  
Data Source: WSDOT Maintenance Office.

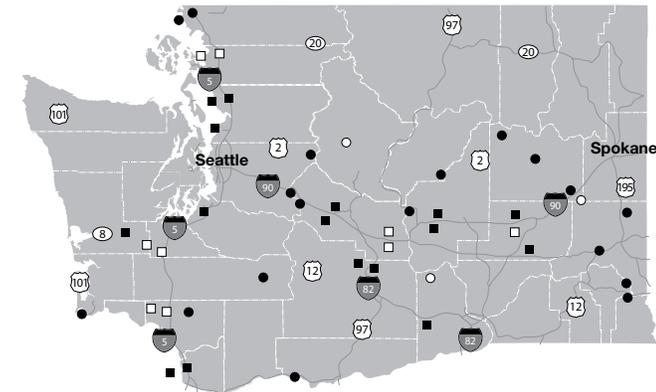
## Winter severity and snow and ice expenditures

Dollars in millions, winter severity is measured November 1 to March 31



Data Source: WSDOT Maintenance.

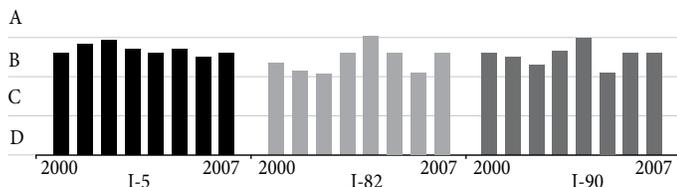
## Washington State safety rest area locations



- Rest area
  - Rest area with dump site
  - Rest area with wireless
  - Rest area with wireless and dump site
- Data Source: WSDOT Maintenance & Operations Division.

## Rest area service level trends for interstate rest areas on I-5, I-82 and I-90

Service level



Data Source: WSDOT Maintenance and Operations Division.

## Asset Management: Highway Safety Rest Areas

Washington State's Safety Rest Areas provide travelers a safe and comfortable place to rest and refresh themselves while traveling. WSDOT estimates that 20.8 million visitors used these facilities in 2007, a 3% decrease from 2006. The majority of Safety Rest Areas continue to be maintained in "good condition", receiving a "Level of Service" rating of B in the department's annual Maintenance Activity Program assessment (See the December 31, 2007 *Gray Notebook*, page 74). In its annual customer satisfaction survey, WSDOT found that 90% of visitors found the state's facilities to be in "very good" or "good" condition.

WSDOT continues to implement new measures to improve safety at Safety Rest Areas across the state. Security cameras, targeted patrols from both the Washington State Patrol and private security firms, and improved lighting were used at different facilities in 2007. For 2008 and beyond, WSDOT has major rehabilitation projects for facilities at SR 24, SR 401, I-5, and I-90, and is in the planning stage for two new facilities on SR 7 in Elbe and U.S. 101 on the northeast side of the Olympic Peninsula.

The Safety Rest Areas article can be found on pages 60-63 of the March 31, 2008 edition of the *Gray Notebook*.

# WSDOT's Capital Project Delivery Programs

## Executive Summary: Highway Construction Roll-Up of Performance

Each quarter, WSDOT provides a detailed update on the delivery of the highway capital programs in the *Gray Notebook* and on the web (at [www.wsdot.wa.gov](http://www.wsdot.wa.gov)) through the Project Pages and Quarterly Project Reports. The *Gray Notebook's* Beige Pages do not generally include planning studies of projects that do not have a construction phase. The total cumulative number of projects line represents projects that include construction. Since PEF projects are budgeted by program for improvement and preservation of the highway

system, the delivery of the work included on the PEF projects is reported programmatically in six categories of work. Each of the 153 Nickel and 238 TPA projects funded has a line item budget; they are monitored and reported at the individual project level. Program budgets for PEF, Nickel, and TPA in this edition of the *Gray Notebook* are based on the 2007 Budget, with references to the 2008 Supplemental Budget as appropriate.

### Performance Information

*As of March 31, 2008, dollars in thousands*

	Nickel (2003)	Transportation Partnership Account	Combined Nickel & TPA	Pre-Existing Funds
Total number of projects	153	238	391	769
Total biennial program (2007-09)*	\$3,951,257	\$9,409,158	\$13,360,415	\$4,127,777

### Schedule, Scope, and Budget Summary: Results of completed projects

#### Cumulative to date: 2003 – March 31, 2008

For Nickel and TPA details, see pages 5-7

See pages 33-39

Total number of projects completed	93	36	129	
% Completed early or on-time	89%	94%	91%	
% Completed within scope	100%	100%	100%	
% Completed under or on-budget	86%	78%	84%	
% Completed on-time and on-budget	78%	72%	77%	
Baseline estimated cost at completion	\$1,215,313	\$88,646	\$1,303,959	
Current estimated cost at completion	\$1,209,996	\$87,940	\$1,297,936	
% of total program over or under budget	0.4% under	0.8% under	0.5% under	

#### Biennium to date, 2007-09

Total number of projects completed	24	13	37	140
% Completed early or on-time	83%	100%	89%	-
% Completed within scope	100%	100%	100%	-
% Completed under or on-budget	79%	85%	81%	-
% Completed on-time and on-budget	71%	85%	76%	-
Baseline estimated cost at completion	\$460,671	\$73,727	\$534,398	\$1,214,539
Current estimated cost at completion	\$457,161	\$72,983	\$530,144	\$1,113,693

### Advertisement record: Results of projects entering into the construction phase or under construction

#### As of March 31, 2008

For Nickel and TPA details, see pages 8-15

See pages 33-39

Total number of projects in construction phase	24	61	85	N/A
% Advertised early or on-time	71%	87%	82%	-
Total award amounts to date	\$684,674	\$743,129	\$1,427,803	-

#### Biennium to date, 2007-09

For Nickel and TPA details, see pages 8-15

See pages 33-39

Total advertised	7	44	51	105
% Advertised early or on-time	100%	93%	94%	84%
Total award amounts to date	\$84,796	\$99,739	\$184,535	N/A

### Advertisement schedule for projects in the pipeline

Results of projects now being advertised for construction bids or planned to be advertised

April 1, 2008 through September 30, 2008		For Nickel and TPA details, see pages 14-15.		See pages 33-39
Total projects being advertised for construction bids	6	12	18	38
% On schedule or early	67%	75%	72%	-

# WSDOT's Capital Project Delivery Programs

## Highway Construction: Nickel and TPA Project Delivery Performance Overview

### Project Delivery Highlights for Nickel and TPA Combined:

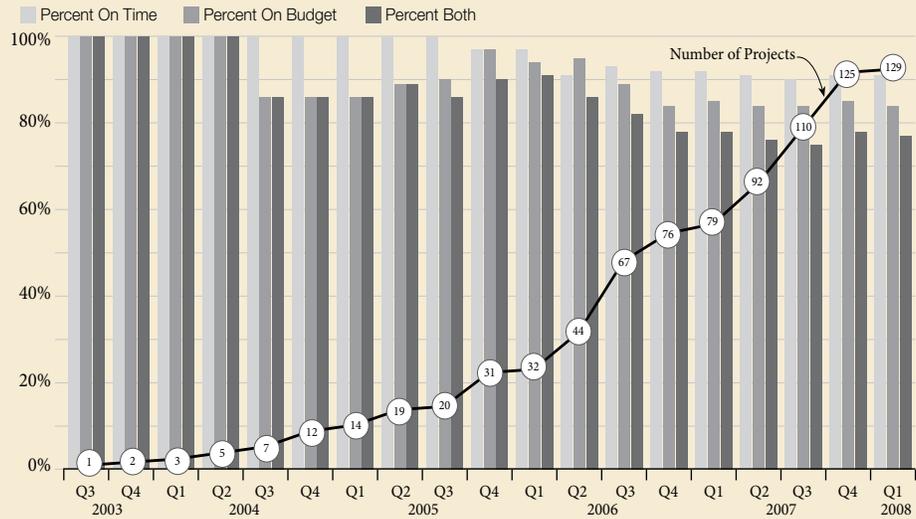
Both Nickel and TPA programs are 100% on or under their total legislative baseline of \$1.304 Billion to date.

91% of Nickel and TPA projects combined are early or on-time - same as last quarter.

84% of Nickel and TPA projects combined are under or on-budget - down one percent from last quarter.

77% of Nickel and TPA projects combined were on-time and on-budget - down 1% from last quarter.

### Cumulative performance of Nickel and TPA projects



Data Source: WSDOT Project Control and Reporting.

### WSDOT has successfully delivered 129 Nickel and TPA projects under the \$1.304 billion Legislative budget

Since 2003, WSDOT has delivered a total of 129 Nickel and TPA projects for \$1.298 billion, almost \$6 million less than the \$1.304 billion legislative budget expectation. By March 31, 2008, more than half of the projects funded by Nickel and TPA will either be under construction or completed.

### WSDOT delivers four Nickel projects during the 3rd quarter of FY 2008

WSDOT's capital program delivery performance continues to show improvement in delivering projects on-time and on-budget through the third quarter of FY 2008, as another four Nickel projects were completed. The projects were all completed within scope, and two were completed on-time and on-budget.

### On-time and on-budget performance on individual projects declines slightly

For the 129 highway projects completed through March 31, 2008, changes from the previous quarter are:

- Cumulative on-time delivery performance is unchanged at 91%;
- Cumulative on-budget performance decreased one percent to 84%;
- Cumulative on-time and on-budget project delivery performance declined by one percent to 77% this quarter.

### 85 Nickel and TPA projects under construction or advertised for construction

This quarter, 31 new projects were advertised for construction. Eight projects were advertised earlier than scheduled and the rest were on-time. Nine projects are pending contract awards, and will be reported next quarter. Fourteen projects have been awarded for a cumulative construction contract total of \$38.7 million.

### 18 projects totaling \$836 million scheduled to advertise over the next six months

Seven significantly sized projects have budgets of \$20 million, while another four have budgets between \$10 million and \$20 million.

All but five projects are on their original schedule. SR 16 (Burley-Olalla Interchange) in Kitsap has been delayed to allow time to address wetland mitigation; SR 900/SE 78th St vicinity to I-90 vicinity in King County has been delayed to allow time to redesign retaining walls based on geotechnical investigation results and to purchase remaining right-of-way. SR 902 near Medical Lake Interchange in Spokane is delayed to provide additional time to determine the most cost-effective intersection improvements in light of rapid development growth and increased traffic in the area. The I-5/SR 16 Interchange is delayed to address new bridge and road standards.

## Annual Updates

### Trucks, Goods, and Freight

Efficient, safe, and secure freight transportation is crucial to the economic strength of Washington State. The Federal Highway Administration estimates that by 2035, Washington State will have 975 million tons of freight moving through the transportation system valued at \$1.2 billion (2002 dollars). WSDOT provides both direct and indirect support to the state's freight system through investment, coordination, and operations.

Commercial truck registration increased 2% in 2007 over 2006 numbers to 250,641 registrations. Interstate commercial truck registrations increased by 1%, to 26,185 registrations in 2007.

WSDOT's capital project delivery program plays an important role in truck freight operations through projects with direct and indirect benefits to the freight industry. The Legislature has designated two projects from the 2003 Nickel finance package and 35 projects from the 2005 Transportation Partnership Account finance package that will directly benefit freight operations in Washington State.

### Aviation

WSDOT's aviation program provides support to local airports, pilots, and other important aviation operations state-wide. Every year, WSDOT solicits grant proposals for its local airport grant program, supporting projects that improve pavement conditions, runway safety, and airport security. For the first round of grants awarded in the 2007-09 biennium, WSDOT awarded \$1.3 million for 88 projects, and leveraged an additional \$8 million in federal funds from the Federal Aviation Administration towards those same projects.

Over 80% of WSDOT's aviation grants were awarded for runway pavement projects. Currently, 23% of the state's airport runways are in disrepair or "poor" condition. WSDOT grants help to maintain existing pavements to prevent costly rehabilitations, and contribute to improving runway safety as well as enhancing usability of airports state-wide.

### Commercial Vehicle Information Systems and Networks (CVISN)

The Commercial Vehicle Information Systems and Networks program (or CVISN) is a program in which freight trucks are equipped with transponders that indicate the type and weight of their cargo, allowing them to bypass weigh stations while traveling (if certain criteria are met). In 2007, 20.7% of trucks moving through Washington State had CVISN transponders, a 0.5% increase over 2006. However, the number of allowable bypasses of CVISN-equipped trucks decreased to 81.5% in 2007.

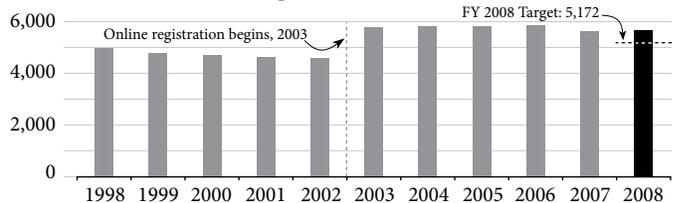
Because of CVISN, an equipped truck can save up to five minutes by bypassing the weigh station, saving an estimated \$1.25 a minute. This translates into a savings of \$5.6 million for CVISN-equipped trucks in Washington State for 2007.

The CVISN article can be found on page 69 of the March 31, 2008 edition of the *Gray Notebook*. The Trucks, Goods, and Freight article can be found on pages 64-68 of the same edition.

WSDOT manages and finances some of its aviation operations through the annual aircraft registration process. Every year, WSDOT sets a goal for aircraft registrations, and for 2008, WSDOT exceeded its goal of registering 90% of active aircraft by gathering 5,746 aircraft registrations. WSDOT has been able to consistently meet its goal for aircraft registrations since the implementation of the on-line registration system which went live in 2003.

The Aviation article can be found on pages 70-74 of the March 31, 2008 edition of the *Gray Notebook*.

### Number of aircraft registrations, 1998-2008



Data Source: WSDOT Aviation.

## Quarterly Reports

### Washington State Ferries

For the March 31, 2008 edition, WSDOT introduces expanded service reliability data. The *Gray Notebook* now includes a 'missed trip' average for each of its 10 ferry routes, and overall ferry system reliability average. The missed trip performance measure estimates

the number of cancellations a commuter making 400 trips a year (200 days a year) would have on a ferry route based on the number of cancellations experienced during the previous quarter.

The Washington State Ferries article can be found on pages 79-82 of the March 31, 2008 edition of the *Gray Notebook*.

### (Selected) Missed-trip reliability comparison

Route	Third quarter, fiscal year 2007			Third quarter, fiscal year 2008		
	Number of missed trips <sup>1</sup>	Missed trip index (average) <sup>2</sup>	Overall reliability average <sup>3</sup>	Number of missed trips <sup>1</sup>	Missed trip index (average) <sup>2</sup>	Overall reliability average <sup>3</sup>
San Juan Domestic	39	0.1	99.97%	3	0.2	99.99%
Fauntleroy - Vashon - Southworth	15	0.6	99.85%	304	12.7	96.92%
Keystone - Port Townsend	143	30.8	92.31%	91	21.2	94.98%

Data Source: WSDOT Ferry System.

<sup>1</sup>Number of missed trips<sup>1</sup> is the difference (net) between the number of cancelled trips and the number of replaced trips (or those that were 'made-up'; see above text).

<sup>2</sup>'Missed trip index' is based on the number of missed trips per year for one commuter making 400 trips per year, including a departure and return trip on the same day, or 200 days per year. In previous editions of the *Gray Notebook*, this measure was referred to as the 'trip reliability index'.

<sup>3</sup>The overall reliability average is calculated by dividing the recorded number of net trips (scheduled trips - cancelled trips + make-up trips) divided by the number of scheduled trips.

## Quarterly Reports

### Incident Response

WSDOT and the Washington State Patrol (WSP) continue to work together to reduce the duration of over-90-minute blocking incidents on major corridors in Washington State. For the quarter ending March 31, 2008, WSDOT and WSP responded to 106 over-90 minute blocking incidents, including four extraordinary (six-hours-plus) blocking incidents. The average clearance time for the quarter was 159 minutes, 7% longer than the previous quarter, and 14% longer than the same quarter a year ago.

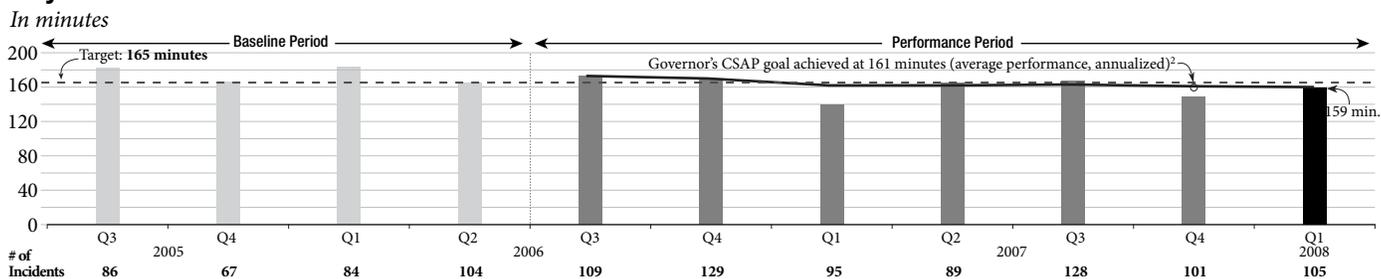
This quarter's report features an analysis of the Major Incident Tow program (MIT). The Legislature provided WSDOT \$346,000 in 2007 for a pilot incentive-based project designed to entice local, qualified, tow companies to respond more quickly to incidents

involving badly damaged heavy vehicles (40,000+ lbs). If qualified operators remove these blocking vehicles from the roadway in less than 90 minutes, they receive an additional \$2,500 in compensation. Since the program began in July 2007, there have been 11 MIT activations, with nine activations successfully meeting the under-90-minute goal. The pilot project is expected to last another 18 months, and expansion of the program is being considered.

To aid in tracking and evaluating response times, the WSDOT Incident Tracking System (or WITS) was updated and a new WITS database was developed for and with incident responders to improve data collection and collaboration with WSP.

The Incident Response article is on pages 75-77 of the March 31, 2008 edition of the *Gray Notebook*.

### Reducing average clearance time for incidents lasting over 90 minutes (on key highway segments<sup>1</sup>) July 2005 - March 2008



Data Source: Washington State Patrol and WSDOT Traffic Office.

Baseline Data Source: 2007-08: WSP, Computer Aided Dispatch System, 2007-08: WSDOT Incident Response Tracking System.

<sup>1</sup>Selected Key Highway Segments--I-5 (Oregon to Canadian Border), I-90 to North Bend, I-405, SR 18 to I-90, SR 16 to Purdy, SR 167, SR 520, SR 512, and I-205.

Clearance Time (for this measure only) is the time between first recordable awareness of an incident and all lanes open.

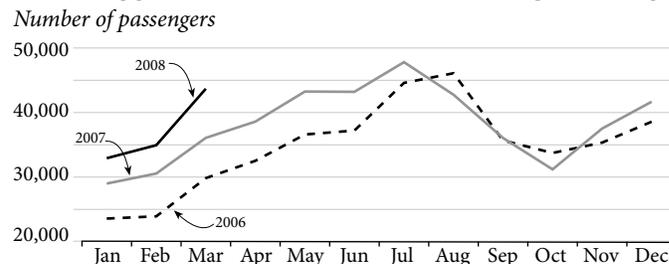
<sup>2</sup>The Governor's Cabinet Strategic Action Plan (CSAP) goal for IR sought to reduce the average duration of over-90-minute road closure times on the key highway segments by 5%, from 174 minutes to 165 minutes for the performance period Q3 2006 to Q4 2007.

### State-supported Amtrak Cascades

Ridership on the state-supported Amtrak *Cascades* was 111,552 for the corresponding federal fiscal quarter (October through February), a 16.7% increase from the same quarter a year ago. It was also a 12.6% increase from the previous quarter. Rising fuel prices continue to create increased demand for rail service as people seek economical alternatives to driving. On-time performance of Amtrak *Cascades* was 58.1%, and increase of 5.2% for the same quarter one year ago.

The Amtrak *Cascades* and Washington Grain Train articles can be found on pages 84 and 85 (respectively) in the March 31, 2008 edition of the *Gray Notebook*.

### State-supported Amtrak Cascades monthly ridership



Data Source: Amtrak and State Rail and Marine Office.

### How to find performance information

The electronic subject index gives readers access to current and archived performance information. This comprehensive index is easy to use and instantly links to every performance measure published to date. Measures are organized alphabetically within program areas. A click on the subject topic and edition number provides a direct link to that page. A copy of the subject index is also provided in the back of each edition.

To access the index electronically, visit: <http://www.wsdot.wa.gov/Accountability/GrayNotebook/SubjectIndex.htm>

The information presented here is a snapshot of what you'll find in the full version of the *Gray Notebook*. The full version for the quarter ending March 31, 2008 is available on line at: <http://www.wsdot.wa.gov/Accountability/GrayNotebook/default.htm>

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