

Office of Research and Library Services Monthly Report

April 2007

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ORLS PROGRAM NEWS

Checking Out One Last Time

Steve Cochran, the WSDOT Librarian, turned in his library card and checked out of the building one last time on May 4th. After 18 months as the lead librarian for the agency, Steve migrates back to the Midwest to build his book binding business *Bound to Be Around*. During his tenure, Steve improved awareness of WSDOT Library Services through development of folios, Ex*Press articles, open houses, presentations, and training. He also actively participated in improvement of the national network of transportation libraries through his participation in the Library Connectivity Pooled Fund Project, participation in forums with the Special Libraries Association Transportation Libraries Section, and leadership of the Western Transportation Knowledge Network. Steve also fostered the development of the WSDOT Library Advisory Board and WSDOT Knowledge Network. He established a process to document the return on investment of several library services and continued to refine the process. Steve received kudos from many customers within and outside of WSDOT. He will be missed by the national transportation community and by his manager, staff, coworkers, and customers here at WSDOT. We wish him much success with his business.

TRB Conduct of Research Meeting

Leni Oman attended the Transportation Research Board's (TRB) Conduct of Research Committee Meeting and TRB State Representative Meeting in Irvine, California, April 4-6. Leni's travel costs were sponsored by TRB.

The [Conduct of Research Committee](#), of which Leni is a member, reviewed progress and next steps on the committee's strategic plan. The committee serves to increase the quality and effectiveness of transportation research through improved research planning, management, and operational processes and by assisting TRB with its role of stimulating research and serving as a national clearinghouse for research activities. The committee has sponsored TRB sessions and workshops on research collaboration, peer exchanges, and the [Seven Keys to a Robust Research Program](#). More information has been added to the committee's website and more effort has been made to reach out to other TRB committees through liaisons and presentations to other groups. Much more work remains to be done – particularly in the areas of tools and information to support research cooperation and collaboration. Many of these actions are closely tied to those of AASHTO's Research Advisory Committee.

TRB State Representatives Meeting

Leni also attended the TRB State Representative Meeting which provided an update on TRB programs and initiatives. Funding remains a concern for TRB in the wake of SAFETEA LU. Because FHWA's research funding was heavily constrained they had to reduce their contribution by half, reducing funding for TRB's Core Services by \$1 M. TRB has responded by not filling vacancies, restructuring conference fees and looking for opportunities to increase funding through subscription fees or other user fees. They are trying not to impact state DOTs as our sponsorship remains the same and, collectively, we are the largest contributor to their budget.

The meeting also provided updates on the new Cooperative Research Programs that are in development ([National Cooperative Freight Research Program](#) and [Hazardous Materials Cooperative Research Program](#)). Both programs have issued their first selected problem statements. An update was also provided on the [Strategic Highway Research Program 2](#). Start up has been rapid and several projects are underway. States are encouraged to participate in the Expert Task Groups to help ensure useful outcomes. A brief update was provided on the new online access to the [Transportation Research Records](#) (you can also access this through the WSDOT Library Intranet Journals page) and the TRB Research Needs database that is being populated by TRB Standing Committees.

Interactive sessions were also held on: Strengthening the Role of TRB State Representative; and, Facilitating State DOT Involvement in TRB Committees and Panels. Leni presided over the latter session.

For information on any of these activities, contact [Leni](#).

Western Transportation Knowledge Network.

The second meeting of the Western Transportation Knowledge Network (WTKN) was held on April 11th. Librarians and Research Directors in WASHTO states are discussing the development of this network in order to improve communication and collaboration between participants, and to enable participants to develop common principles, standards, and cooperative agreements. Networks such as this can expedite finding and retrieving resources, reduce costs of interlibrary lending and negotiated subscription rates, and improve management through sharing of practices. The Transportation

Library Connectivity Pooled Fund Study has helped support the development of the WTKN by convening the first two meetings. Steve Cochran provided a leadership role by drafting Guiding Principles and other documents to describe and initiate the partnership. The next meeting is planned for June 13th.

Library Advisory Board Meeting

The WSDOT Library Advisory Board (LAB) met for its 3rd meeting on April 25th. Members reviewed the six month action plan created in December. Activities included the following:

- Market Library Services: Two presentations made at TRB Annual Meeting; Library Week activities; several resources provided to the Library internal and public web pages; and, presentations to offices on request. The LAB recommended continuing these activities, particularly attendance at meetings where example products can be shared.
- Understand agency information interests: Mining web page search data; tracking the affiliation of patrons requesting assistance. Library staff provided an update on a current project that is applying a controlled vocabulary to index research reports. A before and after search will be conducted to see if search returns are improved by the application of the controlled vocabulary. The LAB suggested categorizing journals available on through the Library web site to make it easier for users to access.
- Develop a concept for an information clearinghouse: a draft concept was prepared for and reviewed favorably by the LAB. They asked that the concept development continue.
- Compare Library Salaries: Salary information found in studies conducted by the American Libraries Association and Special Libraries Association were compared to state salaries for Library and Archival Professionals. It is not surprising to find that state salaries run below those of the industry at large. What is not apparent in the studies is how benefits compare. Information will be forwarded to Human Resources and an inquiry made of the Washington State Library regarding efforts to improve the salaries. This is a particular concern for agency librarians based in Seattle but is also a growing concern in general.
- Assess all publications and photographs produced by the department: In December the LAB had commented that this was an ambitious and difficult task. A spreadsheet listing agency [folios](#) has been developed and other states were surveyed for information about how they manage photographs. We are working with Communications to hot link all folios from one site. Our intent is to maintain a stable clearinghouse of folios, identify those that have been superseded by more recent publications, and reduce duplicative storage of the files on web servers.
- Continue to improve library resources: Websites were created by the WSDOT Library to provide centralized resources for the [Legislative Session](#) and Governor's [Plain Talk](#) initiative. A number of trial service subscriptions are being tested. The holdings at the Vessel and Terminal Engineering Libraries will be uploaded to the Online Computer Library Center within the next six months. We will continue to build resources as we identify value added opportunities.

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LIBRARY ACTIVITIES

Taking a Closer Look

WSDOT celebrated National Library Week April 16 – 20th, and had a full schedule of events, as well as information tables on every floor of the library. Training sessions were held on Wednesday and Thursday of the week, and an open house was held Thursday afternoon. A very popular promotional item this year was a bookmark magnifier that encouraged users to “take a closer look at the library.” What follows are some of the highlights of that week.

Librarians in Training

Two training sessions were held on two separate days, and were well attended both days. A workshop on using the library’s portal to find engineering and transportation information generated some interest, but a workshop on Google tips and tricks to improve searching for information on the Internet was a real hit, generating requests for taking it “on the road” and giving it on a regular schedule. We plan to do conduct this and other information trainings on a monthly basis, and are willing to take it to the regions, either in person or via GoToMeeting, given the interest.

My House Is Your House

On Wednesday, April 18th, the library held an open house from 2:30 – 4:30 in the afternoon. Food and drink was set-up further back in the library and left the tables empty, except for the literature we made available, so people were encouraged to look more closely at the collections, meet the staff, and find out more about the resources and services we offer state-wide. In total, we hosted between 75 and 90 guests, an increase of more than 100% over last year’s open house. We even issued a new library card to one happy employee.

Libraries on Display

Employees at the Headquarters building couldn’t help but notice the sign encouraging them to “Celebrate National Library Week” when they came in from the garage. Additionally, there were display tables on the Service Level, second and third floors, describing different aspects of the library’s collections, services, and digital resources. Additionally, an article appeared on the Intranet Home page announcing National Library Week and its various activities.

Library Usage

Circulation – Checked out 21 items to WSDOT employees

Interlibrary Borrowing – Obtained 19 items on behalf of WSDOT employees.

Interlibrary Loans – Lent 36 items to other libraries; unable to fill 4 requests.

Collection – Added 65 new items to WSDOT Library collection

Library Cards – Issued 9 new library cards to WSDOT employees, renewed 6

Web Page (Mar)

- Intranet Total Home Page Views: 532
- Intranet Total Page Views: 1,136
- Average Daily Intranet Page Views: 38

- Popular Intranet Pages: Standards and Manuals; 2007 Staff Legislative Notebook; and Journals, Newspapers, Books, and Reports
- Internet Total Home Page Views: 1,201
- Internet Total Page Views: 2,385

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RESEARCH PROJECT NEWS

Research Project Activity

Two new research project agreements were started this month.

- GCA5192 was initiated with the Chico Research Foundation at California State University. This \$80,000 project would determine/document the benefits of pavement preservation and demonstrate these benefits to decision makers. Accomplishments of this project will help consolidate and secure the funding for future pavement preservation activities for the Western Pavement Preservation Partnership (WPPP). It expected that the project will be completed by December 31, 2008. This will be a Pooled Fund project. We are awaiting commitments from other states before finalizing the contract.
- GCA5245 was transmitted for signature to Eastern Washington University. This agreement provides \$23,761 for an update to the 1995 Tribal Transportation Guidebook. The project will be completed by June 30, 2007.

Two project modifications were requested and approved –

- A two month time extension was granted to T2695 – Liquefaction Phase III – Evaluation of Liquefaction Hazards in Washington State. The time extension will allow for additional time to complete a comprehensive report detailing the work that has been done to produce the software program. This project is led by Steve Kramer at the University of Washington.
- A supplement of \$8,200 was granted to T4118, Task Order 11 – Highway Systems Evaluation Student Studies to fund additional support for Guohui Zhang through the spring quarter

Three New Research Report Published

WA-RD 666.1 [Performance of a Portland Cement Concrete Pavement with Longitudinal Tining, Transverse Tining, and Carpet Drag Finish](#), Washington State Department of Transportation, April 2007, Keith W. Anderson, Jeff Uhlmeyer, and Linda Pierce.

WA-RD 669.1 [Improving Predictions for Camber in Precast, Prestressed Concrete Bridge Girders](#), Washington State Department of Transportation, April 2007, Keith W. Anderson, Jeff Uhlmeyer, and Linda Pierce.

WA-RD 671.1 [Managing Pedestrian Safety I: Injury Severity](#), Washington State Transportation Center (TRAC), April, 2007, Anne Vernez Moudon, Lin Lin, and Phil Hurvitz.

Four Research Reports Requested

The following research reports were requested from ORLS. Other reports are downloaded from the website or requested through the WSDOT Library or through other libraries that have added our reports to their collection.

Requested by private consultants and vendors:

WA-RD 173.1 [Rest Area Usage Design Criteria Update](#), Washington State Department of Transportation, January 1989, Melton W, Tran A, Levenson J.

WA-RD 216.1 [Development of Standard Specifications for Bending Straightening Concrete Reinforcing Steel](#), University of Washington, October, 1991, Kramer SL.

WA-RD 246.1 [Constructability Improvement of Highway Projects in Washington](#), University of Washington, December 1991, Hosin Lee and Pam Clover.

WA-RD 409.1 [A Framework of Constructability Review of Transportation Projects](#), University of Washington, May 1996, James F. McManus, Nathalie A. Phillip, John F. Stanton, and George M. Turkiyyah.

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MULTIMODAL TRANSPORTATION RAC

Synthesis on Washington Data of Public Transportation Benefits

Cathy Silins, Acting Director, of the WSDOT Public Transportation Division and Peter Thein, Executive Director, of the Washington State Transit Association (WSTA) requested a review and compilation of relevant research regarding the use of public transportation, with a focus on statistics and research highlighting Washington State. A review of state and national published literature, websites and periodicals with the assistance of the WSDOT Library is underway. The project will be completed by June 1, 2007.

Freight Data Framework Research Project

The goal of this project is to develop a framework for the state of Washington that will aid in developing freight policy plan for freight system needs and support freight project delivery and performance evaluation. Two separate half-day meetings were held on March 5 in Seattle and March 12 in Spokane. Freight data users and producers were in attendance. Attendees were briefed on the purpose of the project and a matrix of existing data sources was developed. Discussion addressed freight data uses/needs for policy, program planning and project analysis purposes. Gaps that exist in the availability and quality of freight information were then identified and potential solutions suggested. The project is scheduled for completion by June 30, 2007.

Update of Tribal Planning Guidelines

Eric Phillips, Regional Coordination Branch Manager, of the Strategic Planning and Programming Division, requested assistance in contracting with Eastern Washington University for an update to the WSDOT Tribal Planning Guidelines. Richard Rolland of the Tribal Technology Center at EWU has agreed do the update to be completed by June 30, 2007. Work is underway to initiate and interagency agreement with EWU.

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PROJECT DELIVERY RAC

A Study of Deer and Elk Habitats Near State Nearing Completion

Washington State Department of Fish and Wildlife briefed WSDOT environmental staff on the results of their statistical analysis of 2005 road kill data to examine deer/elk habitat locations and conditions near specific state highway mile posts. The data was obtained from WSDOT maintenance records statewide. This statistical modeling analysis may help pinpoint certain types of mitigation that can be deployed to prevent future vehicle accidents. The study is scheduled to be complete in June 2007.

Effect of Intermediate Diaphragms to Prestressed Concrete Bridge Girders in Over-Height Truck Impacts.

The Research Office is working with the Bridge Office and Washington State University to initiate a contract for work pertaining to collision impacts of over-height trucks on bridges. The Bridge Office is looking for recommendations and guidelines on the design of intermediate diaphragms that absorb the impact of over-height trucks. The work is short-term, so results should be available by the end of 2007.

Experimental Features Projects

Within the last month or so, the Materials Laboratory has requested the approval of three experimental features projects: The first two have been approved by the FHWA and the last one is pending a decision.

- Quieter Pavements on SR 520 - The SR 520 Quieter Pavements experimental feature will test two types of open-graded friction courses with a control section of Superpave hot-mix asphalt.
- PCCP Features of Smoothness and Noise on SR 395 - The SR 395 PCCP Features for Smoothness and Noise will test carpet drag and longitudinal tining versus transverse tining.
- The Use of High Slag PCC on SR 543 - The SR 543 Higher Slag PCC experimental feature will test a concrete with a high (greater than 25%) slag content versus a concrete with slag content of around 23%.

Research Module at Transportation Planning Symposium

The Research Office is organizing an hour long module on Thursday, November 15th at the 2007 Transportation Planning Symposium in Spokane at the Red Lion Park Hotel. The hour-long presentation will include an introduction, presentation of a research case study and questions. The focus of the presentation is on how research promotes greater transportation efficiency and improved project delivery.

Bijan Khaleghi, the Bridge Design Engineer and Concrete Specialist at the Washington State Department of Transportation in Olympia will present on current seismic research. Seismic design and detailing of bridges made of precast prefabricated members is a challenge among bridge engineers and bridge builders. Bijan will discuss the applicability of the bridge design and construction specifications to precast bridges in areas of high or moderate seismicity. Bijan will discuss the different seismic design methodologies and their application to precast bridges and their contribution to transportation efficiency and improved project delivery.

Working/Discussion Review Draft of Project Scoping Practice in Washington State

A working/discussion review draft of Project Scoping Practice in Washington State was submitted by principal investigators; Dr. Ken Casavant and Dr. Eric Jessup of the School of Economic Sciences at Washington State University in Pullman, Washington. Mark Gabel, Director, of the WSDOT Office of Cost Risk Assessment, is the project Technical Monitor. This goal of this pilot research is to describe the state of the art in program scoping in the United States, specifically identifying scoping methods that are accurate or within reason for the typical level of development and timely or in alignment with the legislative process for budget development. The final project will be completed by June 30, 2007.

A Study of Deer and Elk Habitats near State Nearing Completion

Washington State Department of Fish and Wildlife briefed WSDOT environmental staff on the results of their statistical analysis of 2005 road kill data to examine deer/elk habitat locations and conditions near specific state highway mile posts. The data was obtained from WSDOT maintenance records statewide. This statistical modeling analysis may help pinpoint certain types of mitigation that can be deployed to prevent future vehicle accidents. The study is scheduled to be complete in June 2007.

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OPERATIONS RAC

Simulation Lab Project

The UW TRAC Office has prepared a draft report describing how to document a simulation model being developed for WSDOT. This documentation has been reviewed by TRAC staff and is out for review by WSDOT staff that develops or manages VISSIM modeling efforts.

To view the document, go to: <ftp://maclink.trac.washington.edu/uploads>. Open the file named "vissimdocguide4.doc". There are really three "documents" included in this one file. The first section (through page #7) describes what this document is intended to accomplish, and where it comes from. The next section (page numbers 8 through 24) is the actual Documentation Guide. The rest of the document (pages 25 through 73) is an example of what the documentation would look like if you follow our guide.

Pacific Northwest Snowfighters (TPF-5(035))

A solicitation has been posted on the transportation pooled fund website for the research project titled "Determine the longevity and cost effectiveness of corrosion inhibitors added to liquid and solid deicing chemicals." WSDOT, along with other PNS members, are in the process of choosing a Principal Investigator. They are also looking into the ability of hiring a technical advisor for this project. There are multiple other states interested in this project, such as Oregon, Idaho, Montana, and possibly Colorado and California.

Western Pavement Preservation Partnership (TPF-5(137))

The first meeting of the WPPP was held on April 2nd in California. In attendance were representatives from California, Hawaii, Nevada, and Washington DOT's as well as the Principal Investigator from Chico State. The meeting was held to discuss the direction of this project as well as the proposed scope of work.

Statewide Operations Archive Project

The prototype design of the statewide operations archive has been completed. The operations archive concept involves defining the mechanisms needed to combine “operation” data (data that is both temporally and spatially dense such as travel times or Vehicle Miles Traveled) with “event” data such as Variable Message Sign reports or incident data (i.e., data on events that impact traffic operations or that describe operational control decisions) to create analysis datasets that can be used in a variety of analytical techniques.

A “preliminary build” of this archive process has been developed for testing. The “prototype build” allows the flexible combination of incident and freeway operations data. Work is currently ongoing in the testing of that prototype. The project is expected to be completed by June 30.