Idaho Transportation Department
2010 Research Program Peer Exchange

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Prepared for
Idaho Transportation Department
Research Section,
Transportation Planning Division
http://itd.idaho.gov/planning/research/

May 2010

1. Report No.	2. Government Accession No.		3. Recipient's Catalog No.	
4. Title and Subtitle Idaho Transportation Department, Research Program Peer Exchange			**5. Report Date** May 2010	
			6. Performing Organization Code	
7. Author(s) S. Sillick, D. Huft, J. Perry, and N. Parrish			**8. Performing Organization Report No.**	
9. Performing Organization Name and Address Idaho Transportation Department P.O. Box 7129 Boise, ID 83707-1129			**10. Work Unit No. (TRAIS)**	
			11. Contract or Grant No.	
12. Sponsoring Agency Name and address Idaho Transportation Department P.O. Box 7129 Boise, ID 83707-1129			**13. Type of Report and Period Covered** Final Report, May 2010	
			14. Sponsoring Agency Code	
15. Supplementary Notes				

16. Abstract

The objectives of the peer exchange were to:

1. Identify strengths, challenges, and opportunities for program and project management;
2. Understand management expectations of the ITD Research Program;
3. Review processes for project selection and management, research partnerships, implementation of research results, report writing and review, and access to research information; and
4. Identify useful ideas that each member of the peer exchange team can apply practically in his or her own organization.

The report describes peer exchange activities and identifies those participating in the exchange. Planned actions identified by each of the peer exchange team members are also included in the report. Steps planned to strengthen ITD's Research Program have been organized to show how they would help address each of ITD's vision elements: continuous improvement; transparency and accountability, efficiency, customer service, partnerships, teamwork, and employee development.

17. Key Word: Research, Peer Exchange	**18. Distribution Statement** Unrestricted. This document is available to the public at: http://itd.idaho.gov/planning/research/archived/closed.htm		
19. Security Classif. (of this report) Unclassified	**20. Security Classif. (of this page)** Unclassified	**21. No. of Pages** 16	**22. Price**

FINAL REPORT

IDAHO TRANSPORTATION DEPARTMENT
2010 RESEARCH PROGRAM PEER EXCHANGE

Introduction

The Idaho Transportation Department (ITD) hosted a research management peer exchange
May 11-14, 2010. Members of the peer exchange team were:

- Susan Sillick (Team Leader), Research Program Manager, Montana Department of Transportation
- David Huft, Research Program Manager, South Dakota Department of Transportation
- John Perry, Research Program Manager, FHWA Idaho Division
- Ned Parrish, Research Program Manager, Idaho Transportation Department

Research Program staff members, Inez Hopkins and Brenda Wynn, also participated in each of the sessions.

States participating in this peer exchange are part of a coalition of five rural states (Idaho, Montana, North Dakota, South Dakota, and Wyoming) that collaborate on a variety of transportation issues.

The peer exchange program was established to provide State DOT Research, Development and Technology Programs with the opportunity to examine and evaluate their own programs through a collaborative team of peers as required by 23CFR420.

Objectives

The objectives of the peer exchange were to:

5. Identify strengths, challenges, and opportunities for program and project management;
6. Understand management expectations of the ITD Research Program;
7. Review processes for project selection, project management, research partnerships, implementation of research results, report writing and review, and helping staff access research information; and
8. Identify useful ideas that each member of the peer exchange team can apply practically in his or her own organization.

Panel Activities

To prepare for the peer exchange, the team reviewed documentation describing the Idaho Transportation Department, South Dakota DOT, and Montana DOT Research Programs. During the exchange, team members compared practices and discussed the opportunities for individual and common program improvements.

The peer exchange team gathered information through discussions with ITD staff representing:

- Executive Management
- Bridge
- Districts
- Highway Operations and Safety
- Materials
- Motor Vehicles
- Planning

The team also participated in video conference/conference calls with individuals from two additional state DOTs and two Idaho universities. These participants were:

- Utah Department of Transportation
  Michael Fazio, Deputy Director of Research
  Abdul Wakil, Technology Transfer and Implementation Engineer

- Washington State Department of Transportation
  Kathy Szolomayer, Librarian
  Mike Wendt, Librarian

- Boise State University
  George Murgel, Associate Professor

- University of Idaho
  Karen Den Braden, NIATT Director
  Fouad Bayomy, Professor
  Stephanie Kane, Project Manager, Social Science Research Unit
  Michael Kyte, Professor
  Richard Nielsen, Civil Engineering Chair

Discussions followed an open format focusing on research program and project management. The exchange team had an opportunity to listen to ITD staff's successes and challenges, and to strategize about meeting their research program and project needs. Furthermore, the team responded to questions from participants and volunteered information pertinent to the discussions. A copy of the agenda for the peer exchange is included as Appendix A.

Observations

- States participating in this peer exchange face common research needs and challenges.
  o Implementation of research results
  o Quality of performed research
  o Quality of written reports
  o Funding and staffing constraints
  o Meeting the strategic needs of our agencies

- ITD enjoys a unique opportunity to establish a vital Research Program, following a major review in 2004 and subsequent efforts to reestablish the program.

- ITD management and staff recognize the value of research in achieving its strategic goals and objectives.

- The Research Program has made significant progress in establishing a process for project selection, report writing requirements, master agreements, website development, improving access to information.

- Safety research is assuming a greater role in all of our research programs.

- SDDOT finds the use of impact brochures an effective means of communication with executives and legislators.

- Regular communications among researchers and transportation department staff is vital to project success.

- The ITD Research Program relies on volunteer project managers from ITD technical areas, while SDDOT and MDT project managers are research staff.

Strengths

- Executive management and the Transportation Board view the Research Program as a useful resource in helping to meet the strategic needs of the Department.

- The Research staff is strongly committed to continuously improving the Research Program.

- ITD is working to develop a broad-based program that supports all areas of the Department. Projects and activities supported by the Research Program are directly related to many of the vision elements articulated by management.

- Sponsorship of research proposals by ITD managers ensures projects meet critical needs.

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- ITD Research Program staff provides valuable literature search and review services to support technical and policy decisions.

- ITD's Research Program and Idaho universities are developing collaborative working relationships.

- The ITD Research Program has worked to develop effective partnerships.

- Research projects focus on helping ITD meet the Department's strategic goals and vision.

- ITD's Research Advisory Council (RAC) plays an active and valuable role in selecting research projects.

- ITD has a core of experienced project managers drawn from operational areas of the Department.

Opportunities

- Defining the role of project managers could help ITD more effectively manage research projects.

- Greater use of technical advisory committees and defining their role could allow them to more effectively guide and manage projects and facilitate implementation of research results.

- Holding periodic research opportunity workshops, involving ITD staff, universities, industry, and other government agencies could help in identifying strategic research priorities and long-term needs.

- Establishing on-call research capabilities could enable the Research Program to respond to urgent information needs.

- Extending the current five-state collaboration to include research could allow us to leverage resources, address common transportation issues, and amplify the impact of our research efforts.

- Formalizing the research project management process could provide a common understanding of the process, improve consistency, improve efficiency, and ensure a greater likelihood of success.

- Increased emphasis on implementation during all phases of the research project process could maximize the return on research investments.

- Opportunities may exist for an increased role of the RAC in oversight of research and implementation.

- Opportunities may exist to use Idaho universities' library resources to access research information.

- Opportunities may exist to tap into external funding sources to support research efforts.

Planned Actions

Peer Exchange team members commit to applying successful practices learned while participating in the ITD Research Program Peer Exchange. Below are listed the specific action items for each team member.

Susan Sillick, Manager, Research Program, Montana Department of Transportation

- Consider performance payment for projects, as appropriate.

- Obtain information on SDDOT direction for implementation of research results.

- Develop an implementation planning and tracking process; develop checklists, forms etc. to accomplish this task.

- Consider requiring a section in proposals where researchers explain how they are going to ensure report quality.

- Update PowerPoint on overview of MDT Research Programs.

- E-mail research project process and micro-deval (for Mike Santi) final report URLs to Ned Parrish.

- E-mail Summer Transportation Institute (STI) information to David Huft and Ned Parrish.

- Share market ready technologies with MDT staff.

- Investigate implementing a document delivery method similar to WSDOT.

- Consider using CTC and Associates for synthesis reports through MDT's Consultant Design short list process.

- Investigate compiling all synthesis reports on RITA's research management cluster website.

- Consider requiring an explanation of how literature searches will be conducted as a standard part of proposals for projects that include a literature review task to ensure appropriate databases are searched.

David Huft, Research Program Manager, South Dakota Department of Transportation

- Consider issuing a SDDOT Research Program Research Report Style Guide similar to that being developed by ITD's Research Program.

- Complete current efforts to establish formal research implementation planning and tracking procedures at SDDOT.

- Obtain and evaluate information about the Summer Transportation Institute for high school students from Sue Sillick.

- Provide the summary report of SDDOT's March 30-31, 2010 Research Opportunities Workshop to Ned Parrish.

- Work with SDDOT's Office of the Secretary to draft a research project statement aimed at credibly estimating economic and societal benefits of rural transportation investments.

- Reestablish functionality of the database that populates SDDOT's research project web pages.

- Evaluate MDT's training on information access for use at SDDOT.

- Establish a research project exit survey similar to MDT's, in which the project's technical panel evaluates the performance of the research contractor and research program support.

John Perry, Research Program Manager, FHWA Idaho Division Office

- Work with FHWA Headquarters Pooled Fund Program Manager to determine how best to ensure states leading pooled fund studies are accountable for their management.

- Utilize FHWA Resource Center technical experts to assist in reviewing draft research reports as a quality control measure.

- Explore feasibility of hosting an FHWA Summer Transportation Institute at an Idaho university.

- Ensure FHWA involvement on technical advisory committees for ITD research projects.

- Review and assist with implementation of Market Ready Technologies in Idaho.

- Consider the use of Technology and Innovation funds for assisting with research implementation in Idaho.

- Seek opportunities for FHWA Headquarters funding for Idaho representatives to attend or host peer to peer exchanges on a wide variety of topics.

- Ask Utah DOT to share list of TRB implementable ideas with other states.

Ned Parrish, Research Program Manager, Idaho Transportation Department

As noted earlier in the report, the research peer exchange included discussion of key aspects of the Research Program including project selection, project management, report writing and review, and research implementation. A number of opportunities to strengthen the program were identified in this process. The planned actions have been organized to show how they would help address ITD's vision elements.

Continuous Improvement

- Consider adopting a two-stage process for project selection in which the RAC initially screens projects based on brief (1-2 pages) project suggestions and later makes final decisions based on detailed project definitions.

- Develop a process for utilizing RFPs to select researchers for ITD research projects. This could ensure competition and may increase research quality.

- Discuss with ITD management what level of staff participation is desired at the TRB annual meeting and on TRB technical committees. Participation in TRB provides an opportunity to identify innovative practices that ITD could implement to help achieve its goal of being the best transportation agency in the country.

- Establish a more formalized process to help ensure implementation of research recommendations including:
    - Modifying the Project Request Form used in the project selection process to more explicitly address implementation;
    - Making implementation a key factor in the evaluation of research project requests being considered for funding;
    - Requiring researchers to provide implementation recommendations in each research report;
    - Involving technical advisory committees and champions in implementing research recommendations; and
    - Developing an action plan for each project to guide implementation of research recommendations. The plan should identify who is responsible for implementation activities, the schedule for implementation, and the mechanisms that will be used to assess the impact of implementation efforts.

Transparency and Accountability

- Use the Transporter electronic newsletter to communicate research results to staff and consider other methods to make staff aware of completed research.

- Develop a process to evaluate researcher performance and research project success at the end of each project.

- Track implementation efforts for research recommendations and monitor the impact on department operations (cost and time savings).

- Develop a research impact brochure for use with the policymakers and the general public.

Efficiency

- Require interim deliverables and/or technical memoranda where appropriate so that information is available to staff on a timely basis. This could help better ensure projects and report preparation remain focused and on schedule.

- Strengthen ongoing communication between researchers and ITD staff throughout the research process. Consistently use project kick-off meetings, quarterly project meetings, and project wrap-up meetings to encourage the regular communication that's needed for project success.

- Complete development of a guidebook with report writing requirements for ITD research reports and an electronic template researchers can use when writing reports for ITD.   This is intended to streamline the report writing process.

Customer Service

- Share the results of research with department staff. This could include:
    - Presentations to Technical advisory committees;
    - Training sessions for Headquarters and district staff; and
    - Articles in the Transporter

- Consider producing an electronic research newsletter two to four times a year.

- Work with FHWA Division Office staff to explore additional funding opportunities. This could allow the Research Program to better meet the needs of its customers.

- Consider devoting a portion of Research Program funding to support "on-call" research requested by department management to address urgent information needs.

Partnerships

- Conduct training for researchers working on ITD projects regarding their role and responsibilities, and ITD requirements for projects and report writing.

- Provide guidance to researchers on how to conduct literature reviews.

- Explore the feasibility of conducting a "research opportunities workshop" every two to three years with ITD management and staff, the university research community, industry representatives, and individuals from other government agencies. These workshops could help identify strategic research priorities and long-term research needs.

- Look for opportunities for researchers at different universities to work collaboratively on projects.

- Explore the possibility of establishing an annual research peer exchange for members of the five-state coalition. Participants would share the results of research done in each state and discuss opportunities for collaborative research or regional interest.

- Investigate the possibility of obtaining access to university transportation-related databases to strengthen information services.

Teamwork

- Share results of the peer exchange with the department's Research Advisory Council (RAC).
    - Discuss the role of the RAC and the frequency of meetings; and
    - Discuss possible program improvements and develop a prioritized action plan for implementing peer exchange recommendations.

- Consistently establish technical advisory committees comprised of headquarters and district staff for each research project to strengthen project management. Where appropriate, include partners from industry and other agencies on these committees.

Employee Development

- Take steps to strengthen management of ITD research projects. The department often relies on volunteers drawn from operational areas of ITD to serve as project managers. Planned actions include:
    - Developing a guidebook and training for ITD staff who serve as project managers and technical advisory committee members to better define their roles and responsibilities;
    - Considering assigning an experienced project manager to serve as a mentor for operational staff serving as new project managers;
    - Holding quarterly project manager meetings to facilitate sharing of lessons learned and discussion of project management efforts; and
    - Exploring the feasibility of contracting out for project management services for selected projects.

- Develop written guidance for ITD staff to help them more effectively search for transportation literature research information.

2010 RESEARCH PEER EXCHANGE AGENDA

Tuesday May 11th 6 p.m.   **Kick-off Dinner**
                                                 Sue Sillick, Team Lead MDT
                                                 Dave Huft, SDDOT
                                                 John Perry, FHWA - ID
                                                 Ned Parrish, ITD Research
                                                 Inez Hopkins, ITD Research Librarian
                                                 Brenda Wynn, ITD Research Admin Asst.

Wednesday, May 12th
8:30-9:30 a.m.   **Meeting with ITD Leadership**
    Introduction of peer exchange team   Peer Exchange Team with ITD Leadership:
    Peer exchange schedule   Brian Ness, ITD Director
    Overview of ITD Research Program   Scott Stokes, ITD Deputy Director
    Mgmt input of goals/focus of the peer exchange   Matt Moore, ITD Trans. Planning
Administrator

9:30 - 10:30 a.m.   **Program Overview**
    Overview of program mgmt. in each state: Peer Exchange Team with Program staff:
        Program Staffing   Inez Hopkins, ITD Research Librarian
        Program budget/activities   Brenda Wynn, ITD Admin Asst.
        Program procedures

11:00 a.m. – 12:30 p.m.   **Project Selection**
    Overview of project selection in each state: Peer Exchange Team with RAC Members:
        One step vs. two step process   Matt Moore, ITD Trans. Planning
Administrator
        Determining funding needed for projects   Devin Rigby, ITD Dist. Engineer*
    Role of the Research Advisory Council

2:00 – 3:30 p.m.   **Project Management**
    Overview of Project Manager responsibilities in Peer Exchange Team with ITD Project
Managers
        each state   Mike Santi, ITD Asst. Materials Engineer
    Use of Technical Advisory Committees   Matt Farrar, ITD Bridge Engineer
    Discussion of ways Research Program   Cathy Ford, Roadside Program Manager
        staff can support PMs   Kelly Campbell, ITD Safety Research
Analyst

Geologist   Keith Nottingham, ITD District 3

4:30 – 6:00 p.m.   **Research Partnerships**
    Overview of contracting process in each state   Peer Exchange Team with selected Researchers:
    Ways to reduce risks of project problems   Karen Den Braven, UI NIATT Director*

Communication between researchers and	Michael Kyte, former UI NIATT
DOT staff	
Director*	
DOT staff	Fouad Bayomy, UI Researcher*
Requiring interim deliverables	George Murgel, BSU Researcher
Use of Co-PIs	
Invoicing and payment for work	
Ways ITD can better support university research	

hursday, May 13ᵗʰ

8:00 – 9:30 a.m.	**Research Implementation**
Overview of implementation process and successes in each state	Peer Exchange Team with:
	Alan Frew, ITD DMV Administrator
Methods used to address implementation in project selection and project agreements	Mike Santi, ITD Asst. Materials Engineer
	Matt Farrar, ITD Bridge Engineer
Remaining focused on implementation throughout the research process	Cathy Ford, ITD Roadside Program Manager
Use of implementation plans	Michael Fazio, UTDOT Deputy Director*
	Abdul Wakil, UTDOT Technology T&I Engineer*

10:00 – 11:30 a.m.	**Report Writing/Review**
Overview of the report writing and review process in each state	Peer Exchange Team with:
	Inez Hopkins, ITD Research Librarian
Problems with report writing and review from DOT perspective	Richard Nielsen, UI Civil Engineer Chair*
	Stephanie Kane, UI Program Manager
Comments from researchers on ITD's review process	Social Sci. Res. Unit*
Discussion of ways to improve the process	

1:30 - 3:00 p.m.	**Helping Staff Access Research Information**
Overview of efforts to help staff access research information in each state	Peer Exchange Team with:
	Matt Moore, ITD Planning Administrator
Discussion of ways information can be packaged for DOT management and staff	Brent Jennings, ITD Highway Operations and Safety Engineer
Methods to better meet information needs	
Timeliness of responding to requests	Ron Wright, ITD Chemist
Synthesis of information	Inez Hopkins, ITD Research Librarian
Use of RAC listserve surveys to gather information	Kathy Szolomayer, WSDOT Librarian*
	Mike Wendt, WSDOT Librarian*

3:00 – 5:00 p.m.	**Begin Report Preparation**
6:30 – 8:30 p.m.	**Evening Report Work**

Friday, May 14th
8:00 - 10:45 a.m.   **Complete Report Preparation**

11:00 – 12:00   **Peer Exchange Closeout Meeting**
                                                        Peer Exchange Team with ITD Leadership
                                                                Brian Ness, ITD Director
                                                                Scott Stokes, ITD Deputy Director
                                                                Matt Moore, ITD Planning
                                                                        Administrator
                                                                Pete Hartman, FHWA Idaho Division
                                                                        Administrator
                                                                Gus Shanine, FHWA, Idaho Division
                                                                        Asst. Administrator

        * Participated by video or teleconference.