

## **SECTION 2: OPERATING POLICIES**

Chapter 7      State Planning & Research (SP&R) Administration Process Research,  
Development and Technology Interaction



## **CHAPTER 7: STATE PLANNING & RESEARCH (SP&R) ADMINISTRATION PROCESS RESEARCH, DEVELOPMENT AND TECHNOLOGY INTERACTION**

The Research Center operates in accordance with the requirements found in the *FACT Act*, the Wyoming Statutes, Wyoming and Federal rules and regulations, and the Wyoming Department of Transportation Basic and Operating Policies. This Chapter outlines the requirements for managing the Research Center and the duties of the RAC, the Programming Engineer, and the Research Manager, as they pertain to the Research Center.

### **7.1 Wyoming Department of Transportation Research Center**

The core mission of the Research Center is *to provide high quality research that aligns with the mission, values, and overall goals for WYDOT*. The Research Center uses WYDOT's overall goals to meet strategic performance measures; balanced scorecard measures; chosen program goals and objectives; and the needs of the State of Wyoming.

The administration of the Research Center is the responsibility of the Research Manager, under the direction of the State Programming Engineer, who is also the State Research and Development Engineer. The State Programming Engineer and the Research Manager monitor all SP&R research projects to ensure the projects are within the proposed budget and timeline, as set out in the contract. Changes in scope of work, key personnel, disengagement from a project for more than three months, transfers of funds in budget line items, and requests for additional funding, are tracked by the Project Champion and Research Manager, and brought to the attention of the Programming Engineer and/or the RAC, as necessary. Depending on the type of change, the RAC may be informed of a change during the quarterly meeting, if the change is informational in nature, or the RAC may be contacted about the change via e-mail, if immediate action by the RAC is required. If the Principle Investigator or contractor is found to be non-compliant with the terms of the contract, the State Programming Engineer and the Research Manager investigate the non-compliance, and if it is found that the Principle Investigator or contractor cannot or will not become compliant, the State Programming Engineer and the Research Manager will work with the Wyoming Attorney General's office to determine if the contract can or should be terminated, and whether a new Principle Investigator should be considered.

The State Programming Engineer and the Research Manager maintain contact with other programs within WYDOT, with outside institutions, and with federal partners to ensure the most up to date federal and state rules and regulations are followed, and to determine the best research projects to bring to the RAC. They also provide advice and general guidance during formal project studies, and serve as an important conduit for the transfer of research results to stakeholders.

The Research Center houses the Research Library. Publications are catalogued and placed in the internal Research Library database, and finalized research projects and proposals outlining current research projects are placed on the WYDOT website<sup>1</sup>. The Research Manager assists

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<sup>1</sup> [https://www.dot.state.wy.us/home/planning\\_projects/research-center.default.html](https://www.dot.state.wy.us/home/planning_projects/research-center.default.html)

WYDOT employees in obtaining research material. It should be noted that the Research Center will not always be able to assist with fees for publications, but he/she may be able to find the publication at a lower price or in PDF format. The Research Manager also assists individuals in obtaining information from the Wyoming State Library and the University of Wyoming libraries.

## **7.2 Research Advisory Committee (RAC)**

The RAC reviews, evaluates, and prioritizes all research development and technology transfer proposals and problem statements. The RAC convenes quarterly (October, January, April, and July),<sup>2</sup> and at other times as deemed necessary. In order to meet or to vote on proposals, a majority quorum (fifty-one percent, or four members of the sitting RAC) must be present, either in person, via video conference, or via phone. A call for proposals will occur at least 45 days prior to a scheduled quarterly meeting, and is sent out to the RAC as well as other interested parties. During the quarterly meetings, the RAC shall review proposals for their merits; review the progress of current research projects to ensure they are timely and within budget; and review all innovative research projects for possible implementation.

Proposals shall be presented to the RAC as follows:

1. The Project Champion or other interested party shall inform the Research Manager of a possible research proposal and/or question.
2. The Research Manager shall place a proposal on the RAC agenda.
3. Electronic copies of the proposal shall be forwarded by the Research Manager to the RAC members, the executive staff, and to the FHWA representative.
4. The Project Champion and the Principal Investigator, or his/her designee, shall be present at the RAC meeting, either in person or via video conference.
5. The Project Champion, Principal Investigator and/or his/her designee shall have 15 minutes to provide the RAC with an overview of the proposal.
6. The RAC shall have 15 minutes to ask questions of the Project Champion, Principal Investigator and/or his/her designee.
7. Voting on the project will occur at the end of the RAC meeting. Only sitting RAC members are allowed to vote on proposals.
8. To determine the merits of the proposal, the RAC shall use the proposal checklist for RAC (See Appendix 5). It should be noted that the template is an example only, and the checklist will be tailored to fit each proposal.

Further, to determine whether a project has sufficient merit to warrant further study, the RAC determines:

- Whether the proposed problem is adequately understood and defined.
- Whether the proposal is important and beneficial to the Wyoming stakeholders and WYDOT.
- Whether the proposal will have a positive long-term affect on WYDOT and the stakeholders, in other words, will the proposal provide a continuing, cooperative, and comprehensive impact that can be measured by WYDOT.

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<sup>2</sup> WYDOT, *Operating Policy 4-1(II.C)*

- Whether the proposal falls under at least one of the measures found in the Balanced Scorecard and meets at least one of the WYDOT goals.
- Whether the proposal sets out planned payoffs which the Project Champion intends to use from the outputs and the long term results.

The sitting RAC is composed of permanent, non-voting members and rotating voting positions.<sup>3</sup>

- Permanent positions include the Research and Development Engineer (State Programming Engineer); State Research Manager; and a representative from FHWA representative.
- The State Research Manager is a non-voting member of the RAC. This individual acts as the chairperson of the RAC.
- The Research and Development Engineer (State Programming Engineer) is a non-voting member of the RAC. This individual acts as the chairperson of the RAC in the absence of the Research Manager.
- The FHWA representative is a non-voting member of the RAC. This individual is invited to attend the meetings by virtue of his/her office or position. Hershel acts as liaison between WYDOT and FHWA.
- Rotating positions include:
  - State Bridge Engineer.
  - Geographic Information System/Intelligent Transportation System Program Manager.
  - State Field Operations Engineer.
  - State Highway Development Engineer.
  - State Highway Safety Engineer.
  - State Materials Engineer.
  - State Planning Engineer.
  - State Traffic Engineer.
  - Chief Engineering Geologist.
  - Lands Management Administrator.
  - District Engineers.
  - District Maintenance Engineers.

Because the RAC membership is in addition to a member's normal workload, the Research Center rotates membership through senior staff position. Two district staff engineers and five program managers serve on the RAC each year. Membership on the RAC is by position and not by person. In the event a position is vacant, the new person hired for that position assumes the RAC duties for the remainder of that rotational period.

The rotation process for the RAC is as follows:

- District Engineers: District Engineers will rotate sequentially for one-year appointments according to district number, beginning with District 1.

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<sup>3</sup> WYDOT Policy Number 4-1(II)(B)

- District Maintenance Engineers: District Maintenance Engineers will rotate sequentially for one-year appointments according to district number, beginning with District 2.
- Program Managers: The Committee's membership is broad-based and includes most program managers, who serve a two-year appointment.

### **7.3 Research and Development Engineer/State Programming Engineer :**

The State Programming Engineer supervises the overall operations of the Research Center. This individual coordinates all WYDOT research activities with TRB and AASHTO-RAC, which includes decisions of participation, membership expenses, and correspondence.

The State Programming Engineer also has the following responsibilities concerning the Research Center:

- Manages WYDOT's participation in regional and national research, development, and technology (RD&T) efforts, including TRB, NCHRP, and other cooperative projects with outside organizations.
- Makes decisions on membership expenses, correspondence, and meeting participation for the Research Center, only. All travel decisions must follow the WYDOT internal policies.
- Ensures completion of research projects and distribution of results to applicable divisions and branches, and other state DOT's.
- Sits on the AASHTO SCOR Standing Committee on Research.
- Supervises the Research Manager and all aspects of the Research Center.
- Meets with executive staff and/or program supervisors regarding the Research Manager's duties and the operation of the Research Center.
- Is the primary contact with all program supervisors regarding Research Manager's duties and responsibilities, and the operations of the Research Center.
- Approves invoices from contractors.
- Approves no-cost extensions.

### **7.4 State Research Manager (RAC Chairperson)**

The State Research Manager is responsible for the administration and operation of the Research Center. General duties and responsibilities of the State Research Manager are as follows:

- Provides literature reviews and searches for proposals, as needed.
- Monitors all SP&R funded research projects for WYDOT.
- Facilitates the exchange of research information with other agencies, researchers, state DOTs, and interested parties, and formulates strategies for technology transfer.
- Develops public and private research partnerships.
- Monitors national and international research for potential federally funded and sponsored projects.
- Prepares periodic status reports of research projects and conducts interim evaluations for the Research Center.

- Initiates requests for research proposals.
- Drafts research contracts and amendments for Attorney General's approval as to form.
- Reviews research proposals for accuracy, performance measures, and budget requirements.
- Reviews research invoices and forwards them on to the WYDOT budget office for payment.
- Monitors the yearly research-operating budget.
- Updates and publishes the yearly Work Program.
- Distributes all research documents and reports to the federal repositories, the Wyoming State Library, the RAC and other stakeholders, as necessary.
- Maintains and archives project files from research studies.
- Monitors state and federal rules, regulations and statutes for changes, addendums and revisions in areas which affect the Research Center, research funding and research projects, including but not limited to general research, intellectual property, privacy, data management, metadata, archiving, guidelines, procurement, budgets, and evaluations.
- Writes and updates the Research Center mission statement and goals, performance measures, input and output measures, efficiency measures, and tracks all requirements and measures as set out in past evaluations for consistency.
- Maintains the publications housed in the Research Library and assures the publications are placed in the Research Center Library Database.
- Manages the Research Center web pages housed within the WYDOT website.
- Distributes transportation technology information to interested parties.
- Updates the Research in Progress (RiP) and Transportation Research Information system (TRIS) databases with Wyoming specific research information.
- Updates the Pool Fund sites for projects Wyoming is the lead state.
- Catalogues all data and metadata that is generated by the research projects.
- Tracks all performance measures and evaluation recommendations for the Research Center.
- Writes and updates the Guidelines.

The Research Manager is the chairperson of the RAC. At times and under such circumstances when the Research Manager is not available, the Research and Development Engineer shall act as chairperson of the RAC. As chairperson, the Research Manager does not vote on any proposals or other issues that affect the RAC. The duties of the Research Manager during RAC meetings are as follows:

- Calls, convenes, and chairs the RAC meetings.
- Arranges the agenda, time, and meeting room.
- Accepts problem statements and/or proposals for consideration by the RAC.
- Serves as the RAC secretary in meetings.
- Drafts and distributes RAC minutes.
- Monitors the presentations and the discussion section of the meeting.

## 7.5 Project Champion

The Project Champion is a WYDOT employee, who voluntarily or by assignment, assists the Principle Investigator in assuring the research project remains within budget, that the research project remains on track, answers technical and other questions the Principle Investigator may have, and addresses any changes in scope of work, key personnel, and disengagement from a project. The Project Champion further updates the Research Manager to any changes in the project, and is tasked with assisting with the implementation process for the research project.

The Project Champion must:

- Agree to act as the liaison between the research project, contractors, and the Research Center.
- Keep the scope of the research within the project's intent.
- Answer technical questions when they arise.
- Monitor financial expenditures and progress reporting.
- Proofread the final report for technical accuracy.
- Assist in assuring that the outcome based performance measures<sup>4</sup> set out for the project are being implemented.
- Assist in implementing the data management plan.
- Assist in implementation of the project findings, if necessary.
- Provide the RAC with an implementation report at the end of the project.

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<sup>4</sup> 23 U.S.C. 502(a)(7)