

RESEARCH PLANNING

The Research Advisory Council: A Special Report to Subscribers on the Research Planning Process

*Mark Knudson, Carollo Engineers
Chair, Research Advisory Council*

Introduction

The Research Advisory Council (RAC) is a volunteer committee appointed by AwwaRF's Board of Trustees to develop the research agenda for the Solicited Research Program. This article provides an overview of the RAC's mission and objectives, describes the processes and activities that are involved in carrying out this mission, and summarizes the RAC's 2005 planning cycle.

The research agenda developed by the RAC represents the single largest expenditure of AwwaRF's research dollars, which are derived largely from voluntary contributions by subscribers. Every project that the RAC recommends must demonstrably benefit AwwaRF subscribers and address subscribers' needs. Subscriber input and feedback are critically important to the RAC's success. The intent of this summary is to help shed some light on how the RAC functions, how subscriber input is used to help shape the annual research agenda, and how subscribers can participate in this process. Keeping subscribers well-informed of RAC activities helps to ensure the council's long-term vitality and effectiveness.

RAC Overview

The primary purpose of the RAC is to develop a recommended slate of projects under the Foundation's Solicited Program for approval by the Board of Trustees. The Solicited Program is the largest of AwwaRF's research programs in terms of both funding level and number of projects funded. Approximately 60 percent of the Foundation's total research budget, typically sufficient to

fund 30 to 35 projects, is allocated each year to the Solicited Program. The RAC strives to represent the collective priorities, needs, and interests of the entire AwwaRF subscriber base in developing the Solicited research agenda.

The RAC is comprised of a chair and a minimum of fifteen members appointed by the Board to three-year terms. The chair, who must be nominated from an AwwaRF subscribing utility, is eligible to serve one term. Other RAC members, who may represent AwwaRF subscribers or other stakeholder organizations, are eligible to serve up to two terms. To help ensure broad-based representation on the RAC, selected members are nominated by key water supply stakeholders: the American Water Works Association (AWWA) nominates three RAC members, and the Association of Metropolitan Water Agencies (AMWA) and the National Association of Water Companies (NAWC) each nominates one RAC member. Finally, at least one RAC member must represent the international water supply community from an organization outside of North America.

The 2005 RAC is similar to that of prior years, in that it is highly diverse, experienced, and well-connected to the subscriber base and the drinking water community. Seventeen of the nineteen 2005 RAC members are AwwaRF subscribers.

The RAC Process

The RAC is structured into work groups around four strategic goal areas:

RESEARCH PLANNING

Information about the research goal areas and related topics is provided in the Strategic Research Plan, available on the Web at <http://www.awwarf.org/theFoundation/ourPrograms/strategicResearchPlan.aspx>

- Efficient and Customer Responsive Organization
- Environmental Leadership
- High Quality Water
- Infrastructure Reliability

Each RAC member, with the exception of the chair, is assigned to one of the four work groups based on his or her particular expertise, knowledge, and interest. Each work group is responsible for planning research on the subset of research topics that fall under each goal area.

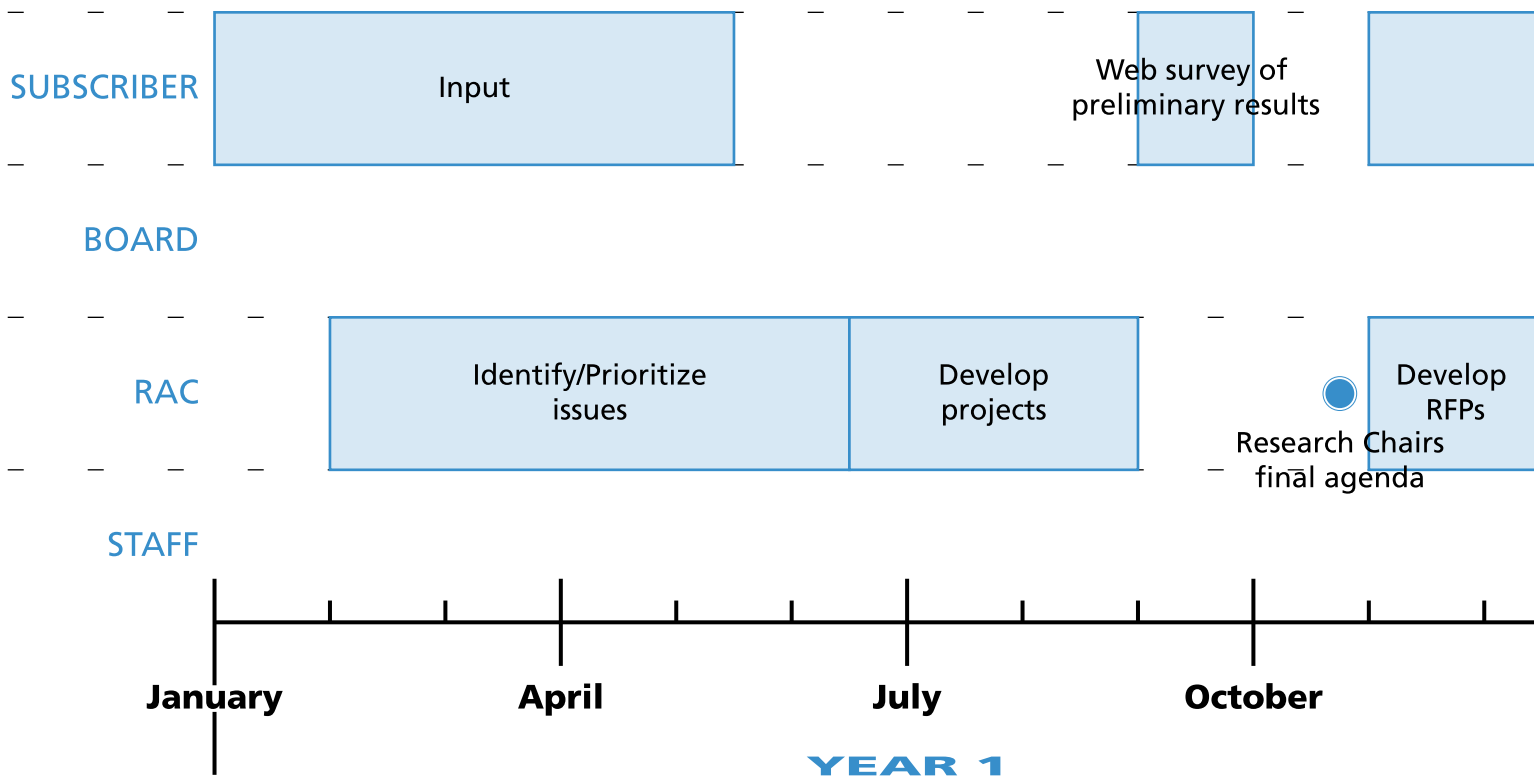
Annual Cycle

The majority of the research planning is conducted in an annual cycle, with most activities occurring between late winter and late summer each year. This cycle is depicted in Figure 1 and reflects the

overall process for planning and funding AwwaRF's Solicited Research Program. As the figure makes clear, the process from initial identification of need to development of a research idea to funding approval, procurement, and award takes longer than twelve months. Each year's planning cycle is for projects that will be funded and begin the following year; projects planned today typically will not yield useful results for two to three years. Thus, the RAC must be forward-looking in its planning and anticipate subscriber needs that in some cases may not yet be widely recognized or acknowledged.

The RAC's planning process can be characterized as an iterative winnowing, refining, and prioritizing of research needs and ideas. Each RAC work group is responsible for developing a separate,

Figure 1: Solicited Program



prioritized listing of projects within their respective goal area. Budget targets for each work group, established by the Board, dictate the total value of each work group's slate of projects. Research needs and ideas are prioritized based on a number of broad criteria. There is no shortage of pressing needs and good research ideas competing for limited funding; in the end, some needs must be left unaddressed, at least for the current planning cycle (see the sidebar *Why Didn't My Research Suggestion Get Funded?*).

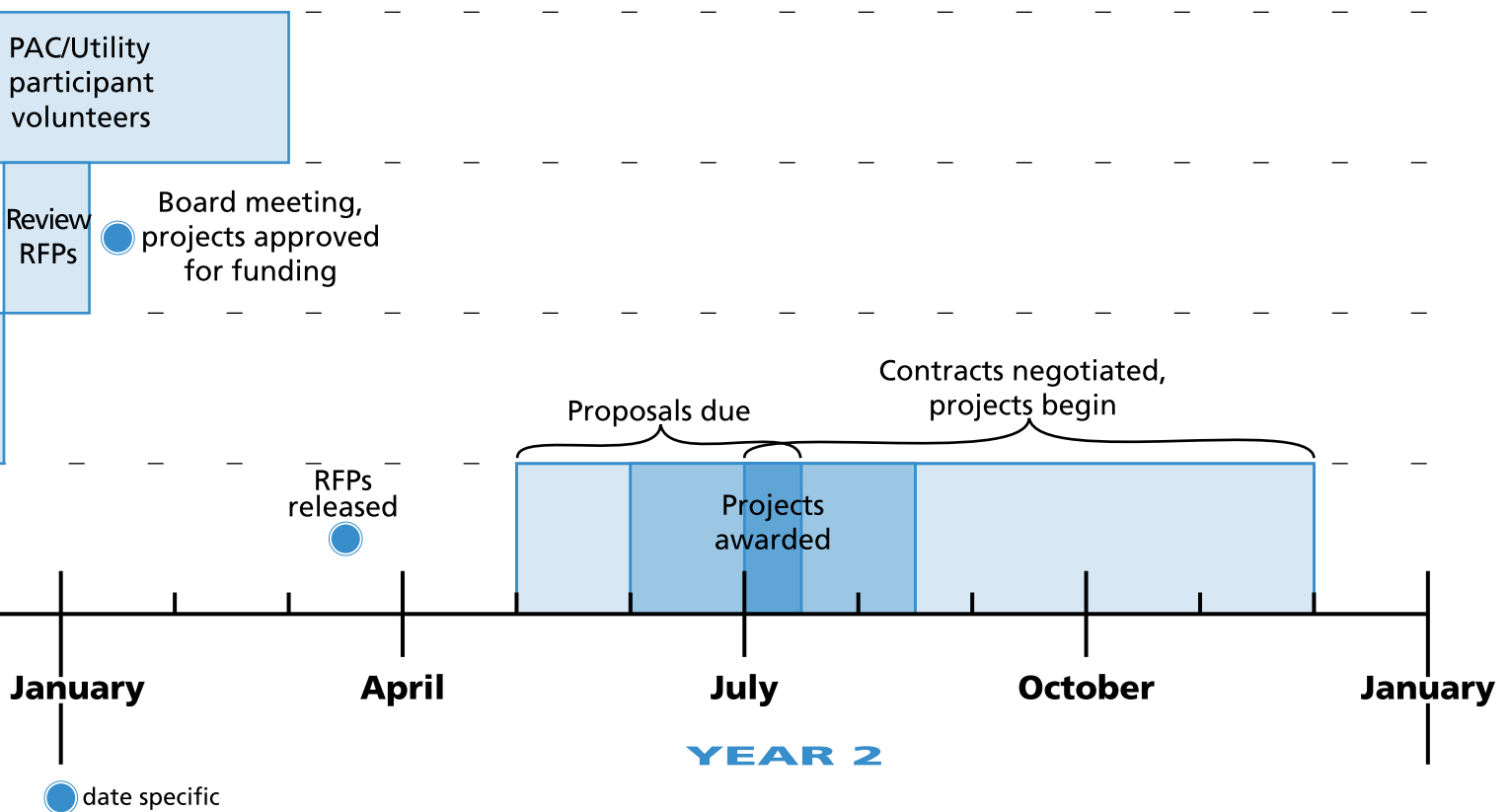
The agenda of the four separate RAC work groups are incorporated into a single, prioritized list of proposed projects at the research chairs' meeting in late October. The research chairs include the RAC chair, the chairs of each RAC work group, and the chairs of AwwaRF's two other key research planning committees: the

Unsolicited Proposal Review Committee and the Tailored Collaboration Review Committee. It is the responsibility of this group to prioritize projects between, as well as within, the four goal areas. The final agenda developed by the research chairs is forwarded to the Board for funding consideration.

Subscriber Input

There are many different sources of subscriber input to the RAC process. AwwaRF expends considerable effort to obtain research planning input from subscribers. A few examples include: face-to-face subscriber meetings by RAC members and AwwaRF staff, expert workshops and focus groups convened around particular topics, e-mail "blasts" to subscribers, requests for input from AWWA committees, and research needs identified

Planning and Funding Cycle



during ongoing and previous AwwaRF projects. Input is also sought from other stakeholder groups, such as the research community and AwwaRF's Public Council on Drinking Water Research.

The timing of input is very important. While the RAC can consider input at any time, it is most valuable early in the annual cycle (ideally during the first quarter of the calendar year), which allows the RAC ample time to incorporate it into their planning process. The form of the input is also critical. The most valuable input focuses on issues—needs, challenges, and opportunities for improvement—rather

than specific research ideas and clearly articulates the nature of the issue and why it is important to AwwaRF subscribers. Issue-based input presents potential *drivers* for research. It then falls to the RAC to identify and develop the most appropriate research response (project) to address the issue.

In addition to up-front input, the RAC seeks subscriber feedback on the draft research agenda. This process occurs late in the planning stage and most recently has included a Web-based survey of utility subscribers each September (see Figure 1). Utility subscribers are asked to rate each project's relevance to their utility and to

“Why Didn't My Research Suggestion Get Funded?”

The RAC, like any research planning entity, must cope with the reality of limited funding and making choices between competing needs and ideas. Issues are weighed both on their own merit and against one another in the process of deciding which needs have greatest priority in a given planning cycle and which must wait for later consideration.

While the evaluation of research needs is necessarily subjective and relies heavily on professional judgment, there are a number of qualitative criteria that the RAC and the Board consider when making these decisions. These criteria include:

- *Weight of evidence.* Is the issue being raised often? Is it being identified by a broad cross-section of subscribers or other stakeholders?
- *Role of AwwaRF.* Is AwwaRF well-positioned to address the issue? Is it appropriate for another water research organization or utility sector to take the lead?
- *Relevance to subscribers.* How relevant is the issue to AwwaRF's subscriber base? What are the potential impacts if the issue is not addressed?
- *Extent of issue.* How broadly and deeply does the issue affect subscribers? Is it widely cross-cutting or confined to a particular region or other subset of subscribers?
- *Urgency of need.* Is the driver for the issue time-critical, e.g, a pending regulation? Can research deliver timely results to subscribers?
- *Potential for major breakthrough.* Does the issue pose the potential for a major advance in technology or understanding?
- *Potential for collaboration.* Does the issue have a high potential for leveraging of funds and knowledge through partnering with another organization?
- *Status of ongoing work.* Is there ongoing work by AwwaRF or others that should be substantially completed before additional work is undertaken?

Research needs and ideas that rank lower in a given year are generally carried over to be reconsidered during the following year's planning cycle. It is not unusual for a particular idea to be carried over through several annual cycles before it is eventually recommended for funding.

explain the rationale for their ratings. The results of this “reality check” are used at the meeting of the research chairs in finalizing the RAC’s project recommendations to the Board.

Project Funding and Procurement

The final slate of projects from the research chairs meeting is forwarded to the Board for funding decisions at their winter meeting. Most of the funded projects are awarded to research contractors via a competitive request for proposals (RFP) process during the following spring and summer (Figure 1). A handful of RAC-developed projects each year are procured through sole-source awards to AwwaRF collaborative partner organizations approved by the Board. The partnering process often results in substantial leveraging of the Foundation’s research dollars. The RAC helps both in identifying particular projects that may be well-suited for partnership and in identifying prospective partner organizations for these projects.

Summary of 2005 Results

The research chairs met on October 27 and 28, 2005, to finalize the RAC-recommended agenda of solicited research projects. A total of 37 projects was recommended for potential funding in 2006. The projects receiving final approval by the Board for 2006 funding will have been determined by the time this newsletter reaches you (the Board met on February 10). The list of the final, approved, solicited projects will be available on the Foundation’s Web site by the end of February at <http://www.awwarf.org/research/plansAwardsFunding/newProjects.aspx>. RFPs for projects

approved by the Board will be released on the Foundation’s Web site by March 31, 2006.

During the latter part of 2005, AwwaRF staff and the RAC identified collaboration opportunities for twelve of the RAC-recommended projects. These twelve projects will be recommended to the Board as partnership projects. Assuming approval by the Board, AwwaRF will release RFPs for five of the projects; seven will be sole-sourced to the partner organization.

With Board approval of the proposed research agenda, the RAC completes its 2005 planning cycles. At the same time, work on the 2006 planning cycle is already beginning. The RAC will begin actively seeking input from subscribers, AWWA committees, and other organizations during the next several months. Subscribers are invited to share their ideas and opinions about high-priority needs, challenges, and opportunities for improvement that the water supply community will face in the coming years. An on-line issue submittal form is available at <http://www.awwarf.org/research/getInvolved/submitAResearchIdea.aspx>.

AwwaRF is also actively seeking Project Advisory Committee (PAC) and utility participation volunteers for the 2006 recommended projects. Subscribers and others are urged to get involved in projects of interest by volunteering at <http://www.awwarf.org/research/getInvolved/volunteer.aspx>. 💧