



RII Track-1: Consortium for Research on Environmental Water Systems Faculty Mentoring Plan

The NSF-EPSCoR sponsored Montana Consortium for research on Environmental Water Systems (CREWS) has many goals including high impact research into the effects of economic activities on water quality in Montana rivers and streams, workforce development through the training of graduate, undergraduate and post-doctoral researchers, community outreach and economic innovation. The bedrock underlying all of these activities is the participating faculty. Faculty develop projects, train students and post-docs, engage with community leaders and organizations, and often lead the push to transform intellectual property emerging from laboratory discoveries into commercial opportunities. When considering these tasks *in toto*, one realizes that no amount of prior training can prepare a new faculty member for the responsibilities and expectations that come with the job. Consequently, mentoring assumes a critical role for the development and professional advancement of *all* faculty and especially those who are early in their academic careers.

The CREWS program is strongly committed to its mentoring program for faculty. While the relevance of specific mentoring recommendations will vary from discipline to discipline, the CREWS leadership believes that some mentoring guidance *is* transferrable. This faculty mentoring plan provide strategies and tactics that will enable colleagues to 'take the next step' in their careers. The strategies and tactics described below are focused primarily on assisting junior faculty who will soon be considered for retention or promotion to Associate Professor with tenure. Subsequent editions of this plan will include mentoring suggestions for mid-career and senior faculty.

Collectively, we are all vested in ensuring that our colleagues excel in the classroom, in scholarship and in institutional citizenship. A culture of effective mentoring is an iron-clad means of realizing this goal.

1. Mentoring Junior Faculty.

Faculty are asked to juggle many roles: researcher, mentor, teacher, administrator, book-keeper and more. Ironically, junior faculty are often hired because of singularly focused accomplishments in only one of these roles: researcher. In order to navigate the demands and expectations placed upon Assistant Professors engaged in CREWS activities, the following practices will be employed:

Every assistant professor will be assigned a primary faculty mentor who will be able to advise in matters of professional advancement, strategies for building a research program, and development of teaching skills. The primary mentor should be from the assistant professor's discipline or a discipline that is closely aligned. Note, the primary mentor may be assigned this role independently by the home department's Department Head.

Every assistant professor will be assigned a secondary faculty mentor - *not* from the assistant professor's discipline - who will serve as an independent assessor of progress and as a sounding board for questions and concerns that cannot be asked comfortably in one's home department.

Assistant professors will be expected to meet with their primary and secondary mentors at least once per year. Furthermore, a second formal meeting between the assistant professor and her/his secondary faculty mentor is strongly encouraged. While the timing of mentoring

meetings is at the discretion of all three parties involved, late in an academic year may be optimal given that this period is a very good time to prioritize research/promotion activities leading into the summer and to anticipate tasks that will need to be accomplished in the following academic year.

In the remaining pages, some general advice (for assistant professors and mentors alike) is shared in the hopes that some of it may prove helpful.

2. Know the rules.

Every year Retention, Promotion and Tenure (RPT) Committees meet at the Department, College and University levels to assess and evaluate individual dossiers and decide whether or not peers should be retained, awarded tenure, and/or promoted. The basis for these assessments are benchmarks that will be found in each department's Role and Scope (R&S) document. Read the R&S and let those benchmarks guide how you prioritize your activities and responsibilities. Language in a R&S document is often vague so that the department RPT committee has some discretion when evaluating a dossier's strengths and weaknesses. Nevertheless, the R&S document will always be the first assessment tool used to resolve the question: does the candidate meet the criteria for retention/promotion?

2. Preparing for retention.

When a faculty member is hired as an assistant professor, the letter of hire should include responsibilities, expectations, and a timeline for establishing independence prior to being considered for promotion to associate professor with tenure. The threshold for retention will often require that a faculty member demonstrate effectiveness in teaching, scholarship, and service. Often during this early stage of a faculty member's career, teaching and scholarship are of primary and equal value. Service, however, is also an important feature of every faculty member's role.

Expectations:

- Grant writing activity – Early career faculty should be working hard to submit proposals to the federal agencies and, if appropriate, foundations. At the retention stage, committees will likely NOT expect that grant proposals have been awarded, but the effort needs to be there.
- Scholarship – Early career faculty need to show evidence that they are building a vigorous and sustainable research program. Metrics may include numbers of new graduate students, supported post-docs, and/or scholarly products.
- Pedagogy – Most faculty contracts will require commitment to teaching. Early career faculty are expected to teach courses (typically assigned by the Department Head) and show evidence of being effective. Efforts need not be excellent, but they do, at the very least, have to be effective.
- Service – Service can take many forms including service to one's profession (through society activities such as reviewing manuscripts, organizing activities, etc.) or by serving on a graduate admissions and other committee and service is important.

Mentoring advice:

- *Guard your time.* New faculty members have high visibility and many opportunities to collaborate. These opportunities should be assessed carefully and new faculty should be wary of signing on to projects where contributions will be viewed simply as incremental.

- *Better to hire wisely and slowly rather than desperately and quickly.* New faculty may feel a need to hire people (post-docs, grad students, research technicians) quickly in order to create activity. One should be aware, however, that a weak or ill-prepared hire may demand even more time and be less productive than no hire at all. Prospective new hires should be vetted rigorously.

3. Preparing for promotion.

A tenure dossier will include your own contributions (personal statement, teaching philosophy, CV, etc.) as well as peer reviews from colleagues and external evaluation letters solicited from experts in your field. Typically, these experts will be highly renowned scholars who will be asked to comment on your research program's contribution to your discipline.

Expectations:

- Metrics for success are extramural grant support, publications (as corresponding author) in peer-reviewed journals, and evidence of an active, sustainable research program. Teaching is also important. A successful candidate will have shown that she/he can teach classes at a variety of levels and do so effectively.
- For tenure, faculty members are expected to develop a continuous record of scholarly contributions including publications as corresponding author in quantities and quality comparable to colleagues in these peer departments. Since research in some areas produces fewer publications for a given effort, the number of publications *per se* is less important than quality and consistency, and will be considered in light of norms for the field.
- A faculty member should exhibit teaching competence, enthusiasm, effectiveness and sound standards in their assigned courses. Involvement in teaching at both the undergraduate and graduate levels, and in both the classroom and the research laboratory is required for demonstration of effectiveness in teaching.
- If an Assistant Professor has fulfilled professional demands (i.e. reviewing manuscripts, grants, etc.) and institutional expectations (i.e. serving on student and department committees, participating in multi-PI proposal initiatives, etc.), then a strong case can be made that the service requirement has been met.

Mentoring advice:

- *Know the culture.* Every new hire is supposed to make a department better. What is the average publication rate for colleagues in a faculty member's department? For those who have been promoted recently? These numbers should help set goals. Different fields will have different norms/expectations re: publication numbers and rates. Faculty preparing a dossier should know these expectations.
- *Pay attention to a research program.* Different fields will have different average times to degree. Nevertheless, 5 years into a career, an Assistant Professor wants to be able to show that she/he can build a research program and have graduate students in good standing making progress towards their degree. If post-doctoral researchers have worked in the group, the faculty member wants to ensure— to within the best of their ability — the post-doc has moved on to a well-regarded professional positions in the field.
- *Finish things.* One of the most common challenges an Assistant Professor faces is finishing something. In the case of a grant proposal, submission deadlines will

usually ensure that the proposal gets submitted. Making sure that you have enough time to write a cohesive, compelling proposal is an iterative and sometimes arduous process that can't be done in day. Manuscripts are trickier. The nature of research necessarily means that a given study will generate as many new questions/hypotheses as were addressed. Especially early in one's career, an assistant professor *should not* sit on a story or let discoveries accumulate without writing them up.

- *Be aware of timing.* A tenure dossier is assembled at the end of one's 5th year. While some items such as your CV can be updated during the 6th year as the dossier passes through different levels of review, the body of work defining your accomplishments as an assistant professor should be largely intact after five years.
- *Don't overextend.* The most important favor you can do for yourself – especially as an Assistant Professor – is to choose your responsibilities wisely. Time is a valuable commodity; make sure that you have enough time to carry out excellent scholarship, mentor your students and post-docs, and focus on developing new projects. Better to be able to point to a smaller number of high-impact accomplishments than a long list of commitments without much to show.

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