FORM 8

SIGNATURE SHEET FOR EVALUATIVE CRITERIA
APPROVED CRITERIA SHALL HAVE ALL REQUIRED SIGNATURES

Department/Office: _Environmental Science – Moore_

Department Chair: _Beth Christusku_ _BM Cu_
              Print   Signature

Academic Year (circle):   15-16   16-17   17-18   (18-19)   19-20

Date Sent to Dean/Supervisor: _11/8/18_

Signature   Date   Approved

_____   _11/12/18_   (Y) P / N
Dean/Supervisor:

_____   _____   Y / P / N
Add'l Admin:

_____   _3/17/19_   (Y) P / N
Provost/designee:

_____   _____   Y / P / N
President/designee:

Y = Approved	P = Approved pending modifications	N = Not approved

For P or N decisions, the departmental committee should be provided with the reasons for non-approval, as well as suggested changes to the criteria within a reasonable time to ensure timely approval for first year candidates.

DIRECTIONS: Sign each line and print or stamp name below the line. This signature page must accompany the evaluative standards throughout the entire approval process, and serves as a record that all levels have contributed to the approval process. After all levels have approved the evaluative standards, this cover page and the criteria shall be duplicated, and a copy sent to the Senate office for archiving. The original criteria packet is returned to the Department/Office.

SUGGESTED TIMETABLE:	DATE
Departmental approval, sent to Dean/Supervisor:	September 25 (earlier if possible)
Dean provides feedback regarding criteria	October 9
Final administrative approval and forwarding to Senate, Department, and Dean	November 1

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Criteria for Tenure and Recontracting
Department of Environmental Science
Eli Moore, Ph.D.

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Mission
To push the frontiers of environmental science so we can better understand how Earth systems work, and how they are being influenced by human activity. Ignite fascination about environmental science in students and the public through excellent teaching and outreach to create more rational citizenry, skilled environmental problem solvers, and dynamic environmental scientists.

Tenure and Recontracting Committee
A committee shall be composed according to the Recontracting and Tenure Memorandum of Agreement. The department chairperson shall be a member of the committee.

Criteria For Evaluation

1. **Teaching Effectiveness & Public Communication – 45%**
   a. Committee's evaluation of formal teaching activities, including:
      i. Peer observations
      ii. Student evaluations and candidate's response
      iii. Curricula, courses and teaching materials developed by the candidate
      iv. Candidate's self evaluation of teaching activities
   b. Candidate's plans for growth and development of future teaching activities

2. **Research/Scholarship Activity – 44%**
   a. Committee's evaluation of candidate's research activities, including:
      i. Publication record
      ii. Funding record
      iii. Other research-related activities
      iv. Evidence of research impact/Standing within peer-community
      v. Candidate's self evaluation of research activities
   b. External reviews, in the case of tenure and promotion
   c. Candidate's plans for growth and development of future research activities

3. **Service: Contributions to the University and Wider Community – 11%**
   a. Committee's evaluation of candidates service activities, including:
      i. Service to Department of Environmental Science
      ii. Service to School of Earth & Environment
      iii. Service to University
      iv. Service to scholarly community
      v. Scholarly service to broader community
      vi. Candidate's self-evaluation of service activities
   b. Candidate's plans for growth and development of future service activities
   c. Committee's evaluation of informal teaching activities (if applicable to this category)

Teaching & Public Communication
45 percent
Formal and Informal Teaching: In order to achieve tenure, faculty members must demonstrate that they are excellent and dedicated communicators. Both formal and informal teaching are valued activities.

Formal teaching activities, which are counted as teaching, include:

1. Traditional classroom and laboratory instruction, as well as mentoring activities on campus and on field trips.
2. Faculty are encouraged to embrace online teaching and should strive to develop at least one online or hybrid (partially online) course.
3. Contributions to the development of new curricula, including graduate and undergraduate majors, minors, and certificates of undergraduate study is a key educational undertaking and counts as both a teaching and a service activity.
4. Teaching collaborations with faculty both internally and externally are encouraged. The involvement of graduate students in undergraduate pedagogy is encouraged. The development of innovative pedagogical methods is valued.

Informal teaching activities, which are counted as teaching *or* service include:

1. A wide range of activities: Examples include talks, class lectures or even a lecture series to K-12 school groups, civic groups, university seminars and assemblies, and political forums, such as testifying before a governmental panel and is based on the faculty member's area of specialization.
2. Scholarly engagement with the media in all its forms (both traditional media and new media) is a highly valued activity and an important method of disseminating scholarly information, enhancing the public discourse, and boosting awareness of the university and its programs and activities.
3. Giving public talks is encouraged.
4. Invited talks in high-profile public venues, particularly those later distributed on the Internet, are a highly valued informal teaching activity.
5. Informal teaching engagement with the public.

When possible and appropriate, faculty are encouraged to integrate university resources outside the classroom into their teaching such as the Jean and Ric Edelman Fossil Park, Edelman Planetarium and Observatory, and the Virtual Reality Cave among others. Faculty are also encouraged to take advantage of the rich inventory of field sites available in close proximity to Rowan University such as the cities of Camden and Philadelphia, Tall Pines State Preserve, Scotland Run Nature Park, and the Wharton State Forest among others. Faculty are encouraged to develop and teach online courses where compatible with faculty background and training, department needs and goals as well as Rowan Global policies. Teaching collaborations such as team teaching and developing new pedagogical approaches are encouraged. The development of innovative pedagogical methods is valued.

The Department's Tenure and Recontracting Committee will gauge the candidate's teaching effectiveness using a variety of approaches, which are highlighted in Appendix A.

Faculty will have to define within their packet if their informal teaching accomplishment will count as teaching (Section I) or as service (Section III).

Curricular development activities for Eli Moore: The candidate is expected to contribute to the development of the B.S. and B.A. in Environmental Science as well as the Ph.D. in Environmental Science. Dr. Moore does not have teaching responsibilities during his first year, as the department curricula is under development. Therefore, curricula development will be Dr. Moore's primary teaching effort during his first year.

Research/Scholarship Activity
44 percent
In order for faculty to achieve tenure and promotion, they must demonstrate a sustained record of excellence and productivity in their fields of study. They must also have laid the foundation, including planning and previous research success, for a productive research agenda that extends beyond the awarding of tenure or promotion. Research includes a variety of scholarly activities, which include peer-reviewed publications, grant submissions and related activity, applied projects of a scholarly nature, and conference presentations. The impact of scholarly activities may vary and various activities carry differing weight, with respect to achieving tenure.

Peer-reviewed publications:
Peer-reviewed publications in reputable scholarly journals are of the highest importance. It is incumbent upon the candidate to explain the significance and prominence of each journal where the candidate's published work appears. Impact factors, Altmetric scores, Plum Analytics scores, number of citations, number of downloads, coverage by media, editorial highlights/features, and other metrics can also be used to illustrate the impact of publications. It is recognized that top disciplinary journals in particular fields may carry lower impact factors than broad-topic journals. Nevertheless, publication within top disciplinary journals is important.

Unless specifically outlined as a focus area in the position description, peer-reviewed publications in Scholarship of Teaching and Learning (SOTL) will be viewed as complementary to the candidate's publications in their primary research area and will carry less weight. Peer-reviewed book chapters and peer-reviewed conference proceedings are appropriate scholarly contributions, but carry less weight than peer-reviewed journal publications.

Authorship: In the field of Environmental Science and related fields such as Biology, Chemistry, and Geology, first authorship usually carries the most weight. Beyond that, weight may depend on the order an author's name appears. For example, in a paper with three authors, the second or middle author is the second-most important. Third author or the last author may be the least important. In some cases the last author may be the Principal Investigator of the lab from which the work originated thus signifying significant weight. In this case, the principle author is usually also the corresponding author. Exceptions to these conventions such as authors being listed alphabetically must be explicitly stated by the candidate. Coauthoring peer-reviewed publications with undergraduate and/or graduate student co-authors is encouraged and enhances the value of the publication from an institutional standpoint. For each publication, the candidate must explain their role and its significance to the study and their relative contribution.

Non-peer-reviewed publications and other creative works (e.g., developing environmental impact statements, informational or topic-based websites, toolkits, datasets), that have an impact on the field will generally not be considered as a research contribution for tenure, unless an adequate case can be made, by the candidate, for their scholarly value.

Books: Sole and co-authored books, published by a university press or major publishing house, may constitute a major accomplishment. Engaging in a book project, prior to the awarding of tenure, should be carefully considered and weighed against the need for publishing peer-reviewed journal articles, which are essential for a successful tenure application. Books that introduce new scholarly information and/or synthesize information in new and significant ways will be considered as contributions to the faculty member's research portfolio. Books that primarily review or consolidate existing works, such as textbooks and children's books, will be viewed as part of the candidate's scholarly and teaching output, but (depending on content) might not constitute a contribution to the candidate's research output. Edited volumes, in which the candidate has assumed a lead role in the selection and curation of varied scholarship on a theme, introduced/contextualized it, and/or contributed a chapter (s) may be considered part of the candidate's research output depending on the degree to which information presented is synthetic or novel. It is incumbent upon the candidate to contextualize contributions to books and the candidate must explain their role in each project.

Research Funding: Candidates are expected to demonstrate the feasibility and sustainability of their research agenda. It is important to exhibit a sustained effort in applying for adequate grant funding and faculty members working towards tenure are expected to apply for federal funding on a regular basis to the extent that it is necessary to sustain their research agenda. Federal research awards add a commonly recognized external validation of a candidate's research agenda, in addition to financial support. That said, the departmental committee acknowledges that availability of federal funding is dependent on congressional appropriations to funding agencies which are strongly influenced by incumbent political administrations. In addition, there is significant variability in the amount of grant funding available to scholars across the diverse subfields of Environmental Sciences. These points will be considered when evaluating candidates for recontracting and tenure. In addition, seeking state, local, and foundational awards is encouraged and valued. Research support generated through philanthropy from private foundations, institutions, individuals, or other entities will also be evaluated positively. Candidates are encouraged to creatively seek a variety of avenues of support for their research.

Faculty members are encouraged to take advantage of internal funding opportunities, which are important for program building and proof-of-concept studies. Internal awards, however, will be weighted lower than external grants if they are peer reviewed and competitive. If they are not peer reviewed and competitive, they will not be recorded as accrued to research funding.

Research Expectations For Reappointment and Tenure

Pre-tenure reappointment

For recontracting submissions prior to the submission for tenure, the faculty member should provide evidence of:

1. A well-constructed research plan that includes near-term and long-term goals. This may include:
   a. Publication and collaboration strategy
   b. Funding strategy
   c. Plans for data collection
   d. Plans for fieldwork
   e. Equipment plans and needs
2. Consistent and methodical attempts to secure research funding
3. A vigorous record of scholarly manuscript submissions

Tenure

To qualify for tenure, a candidate is expected to have demonstrated a sustained recorded of high-level achievement in his or her scholarly field. By the time of tenure consideration, the candidate should have developed a robust program of research poised to make future advances. It is the candidate's responsibility, within the application materials, to elucidate the significance of their research within their discipline and its broader impact to science and/or society.

Specifically, the tenure committee will look for:

1. A robust record of peer-reviewed publications
2. Acquisition of adequate funds to support the candidate's research objectives and a consistently strong track-record of applying for extramural funding. The availability and award amounts vary between sub-fields of Environmental Science which will be articulated by the candidate and taken into consideration by the committee.
3. Evidence that the candidate has developed a strong and sustainable research program/group/lab, that includes the participation of students
4. An ambitious and achievable plan for future research
5. Evidence that the candidate has become a recognized scholar in their field, with some evidence of a national or international reputation, among scholars as evidenced that includes but not limited to invited scholarly contributions to major peer-reviewed journals, invitation to speak at major research institutions and universities, organization and convening symposium/conferences/workshops, invited editor of a book or scientific series, and/or service as a panelist or lead on federal funding panels

External Review: The Memorandum of Agreement requires that candidates for tenure hired after July 2014 provide an evaluation of their research by one external reviewer at another institution with expertise appropriate for assessing the candidate's research.

The department will consider and encourages more than one reviewer's comments, if the candidate agrees. A minimum of four reviewers, while voluntary, is considered appropriate. The candidate will provide a list of a minimum of 8 potential external reviews from which the Chair of the R&T committee will select a maximum of 4 to solicit reviews from.

The department will ask the external reviewer(s) to comment on:

1. The quality of the candidate's scholarship
2. The appropriateness of the volume of research production

3. The quality and appropriateness of the candidate's funding sources
4. The candidate's standing in the field including
    a. Scholarly reputation
    b. Accomplishments relative to scholars of similar experience at equivalent public institutions

External reviewers will be provided with the Recontracting and Tenure Memorandum of Agreement, the candidates complete T&R application file, information about the university's research infrastructure (both positive and negative), and the candidate's teaching load. External reviewers will be asked to take these factors into account when completing their evaluation.

Service: Contributions to the University and Wider Community
11 percent

Service to the department, school, university, academic discipline, and broader public is expected from all tenure-track professors.

Pre-tenure
Pre-tenure service is expected to be limited and certain functions, such as serving on tenure committees or serving as department chair are prohibited. Pre-tenure faculty are expected to participate in routine departmental meetings and certain departmental, school, and university committees. Pre-tenure faculty are expected to participate in course and curriculum development and are strongly encouraged to engage in various forms of STEM outreach and scholarship-based outreach.

Informal Teaching
As defined in section I on teaching, informal teaching may also be used for service contributions instead of teaching. A candidate must clearly identify informal teaching accomplishments and list them under the category they believe is most appropriate to strengthen their R&T packet.

Notes on Post-tenure Service
Post-tenure faculty are expected to bear their share of faculty leadership and administrative responsibilities. These duties may include serving on tenure and promotion committees, on faculty senate, on variously high-level departmental, school, or university committees, or as department chair. High-level service to one's discipline is appropriate for post-tenure faculty, such as serving as a journal editor or organizing conferences. Additionally, post-tenure faculty are expected to use their academic standing and platform to engage in vigorous public communication, STEM outreach, community engagement, etc. Senior-level faculty members are expected to demonstrate leadership on scholarly issues both within the university, in their fields of study, and in society.

Collegiality, Professionalism and Intellectual Responsibilities
While not a separate criterion, collegiality, professionalism, and intellectual integrity influence the efficacy of a professor. Thus, teaching, scholarship, and service occur within a framework of professional expectations. A faculty member's responsibility, with respect to their discipline, is to seek and to state the truth as they see it. At the same time, faculty members must accept the obligation to exercise critical self-discipline and judgment in using and transmitting knowledge. Intellectual honesty is expected of all faculty members. Although faculty members may pursue interests apart from their obligations to the university, these interests must not seriously compromise their freedom of academic inquiry.

Faculty members are expected to conduct themselves in a professional manner and must engage other faculty members, members of the administration, staff, and students with courteousness and respect at all times. Faculty members must hold themselves and their students to the highest levels of academic integrity. Faculty members are also expected to respect the confidential information of students and colleagues. Faculty members are expected to take appropriate action if instances of discrimination or harassment are observed that directly effect students, faculty or staff.

Appendix A. Criteria for evaluating teaching effectiveness in the Department of Environmental Science.

1. **Classroom observation of the candidate's teaching:**
   a. Mastery of content
      i. Accuracy and clarity of factual material
      ii. Subject relevance within the curriculum and the field
      iii. Ability to put material into a context that accessible to the students
   b. Structure and organization
      i. Structure and flow of the course
      ii. Effective use of class time within each session
      iii. Use of class space, materials, and resources for instruction
      iv. Development and maintenance of course schedules
      v. Consistent, fair, and effective evaluation of student learning outcomes
   c. Effective communication
      i. Comprehensive presentation of the theories, knowledge, and values that comprise the content of the course material.
      ii. Clarity of presented material and instructions
      iii. Responsiveness to student questions and comments
      iv. Timely information on variation in syllabus and schedule
      v. Consistent, timely, and clear feedback to students on evaluation and progress in the course
   d. Appropriate teaching methods
      i. Clear and consistent written and oral delivery of materials
      ii. Emphasis on student-centered and inquiry-based teaching
      iii. Engagement with a consistent and appropriate model of inquiry
      iv. Promotion of interaction, respect, and learning by students
      v. Accumulation of learned material to contextualize new concepts
      vi. Application of appropriate technology for both skills and subject
   e. Promotion of positive learning environment
      i. Enthusiasm of subject conveyed to audience
      ii. Fairness and impartiality in classroom conduct and evaluation
      iii. Cultivation of student comfort to participate and question
      iv. Promotion of student participation and appropriate classroom behavior
      v. Diversity and creativity of student engagement strategies

2. **Student evaluations of teaching effectiveness:** Candidates effectiveness for teaching will be based on the students responses to official online evaluations, SIR forms, or other evaluation measure accepted at Rowan for items dealing with:
   a. communication effectiveness
   b. organization and planning
   c. overall quality of teaching

   The spirit of student evaluations is to solicit the students' collective and individual opinions regarding the instructor's abilities to promote and enable student learning. This information is gathered in spite of the many studies that demonstrate the bias in such data (e.g., easy teachers get better marks, gender, appearance, etc), and we therefore use this data with care, caution, and context.

3. **Examination and evaluation of the candidates teaching materials and procedures:** The candidate will be evaluated on the quality, clarity, breadth, depth, and effectiveness of materials and procedures the candidate uses to communicate the organization and objectives of courses taught. Items which may be evaluated include course syllabi, in-class activities, web sites, multimedia presentations, or other relevant matter.

4. **Curricular currency and innovation:** The periodic and progressive review, evaluation, and update by an instructor of the course material, context, and applications is essential. Review of a candidate's development and implementation of high quality curricular innovations is an important component of the evaluative process.

5. **Trajectory of teaching quality:** In addition to evaluating the current level of a candidate's teaching competence, we believe that the tenure and recontracting process must also consider the direction of change in teaching performance over time. The candidate needs to provide evidence that there is an ongoing and successful effort to develop and implement a strategy for continuous teaching improvement. In the case of very high initial assessments, we expect candidates to maintain those high levels as they progress toward tenure.