WMP Subcommittee IV Report
8 September 2009

1. Introduction and Overview

The development of a Workforce Management Plan (WMP) is part of the overall strategic planning process at NCAR. It will lay the foundation to retain and continue to attract the high quality, motivated and well-supported staff necessary for NCAR to realize its evolving scientific goals and grow as a thriving national center. The subcommittee on **Scientific and Engineering Appointments** (WMP Subcommittee IV) was charged with identifying and addressing workforce issues pertaining to ladder-track scientific and research engineering appointments at NCAR.

Since January 2009 the subcommittee has met nine times. In addition, sub-groups of subcommittee members have gathered to discuss specific issues and develop associated recommendations. The entire subcommittee also often communicated via email.

To gather broad input from staff, the subcommittee organized a one-day retreat open to all NCAR Scientist Assembly (NSA) members. Approximately 90 people attended the retreat. Eight different working groups discussed issues and summarized thoughts in written reports[1]. Comments on the report were solicited from NSA members, NCAR management, the WMP Executive Committee, and the personnel committee of the UCAR Board of Trustees (UCAR BOT). This final version reflects much of the input received.

This process was focused in substantive terms on three broad areas: (1) overall organizational models for scientific appointments; (2) job security and academic freedom; and (3) the criteria and process associated with the NCAR appointment system. The remainder of this report is organized around these areas. We conclude that the basic NCAR appointment system is appropriate to its mission, and there is no need for radical change. However, we do make a number of significant recommendations that would both clarify and modify parts of the system.

One theme in these recommendations revolves around clarifying the NCAR policy on tenure, in order to move from what is currently perceived as an implicit or de facto tenure system to one that is clearly described and consistently applied. In this sense, the recommendations would move NCAR somewhat closer to a university model. However, the recommendation on tenure policy does not imply that tenured NCAR Scientists and Research Engineers would have a guaranteed lifetime position with unfettered freedom to pursue any topic of interest. Rather, we emphasize that such a policy would also include important responsibilities of tenured Scientists and Research Engineers. To that end, the recommendation for a formal tenure policy must be seen as packaged with other recommendations for a strengthened post-Appointment Review Group (ARG) review

[1] See http://www.cgd.ucar.edu/cas/jhurrell/downloads/NSA.Retreat/. Other supporting documents used at the NSA retreat are available as well.

process to guard against abuse of job security, and a clear delineation of position responsibilities for mission-oriented research and community service.

A second theme in the following recommendations is the intent to retain and strengthen the roles of NCAR management units (laboratories and divisions) in the scientific appointments process. Toward that end, we suggest transfer of the post-ARG review and some aspects of the ARG review to those units, reinforcing the expectation that quality control in scientific and research engineering appointments is best made at this level, and that these units must be held accountable for ensuring this quality. We also recommend that base budgets of the management units should be adequate to cover the salaries of the ladder-track scientists in those units if so required, emphasizing it is at that management level that restraint is needed to avoid budget over-commitment.

2. Organizational Models for Scientific Appointments

The current NCAR system for scientific appointments could be described as a mix between a pure university model and a model for an independent research institute. The NCAR system includes positions similar to tenure-track university faculty, as well as a substantial number of non-tenure track research positions. Visitors play an important role, but make up a relatively small fraction of staff. There are no formal limits on numbers of positions of particular types.

The WMP Subcommittee IV developed a set of alternate models of how NCAR scientific appointments might be structured. These alternate models were discussed within the subcommittee and at the NSA retreat. Models included:

1. Extreme-change examples:
    - A staff primarily based on visitors, with only a small or rotating "permanent" staff, closer to the original "Blue Book" concept or to the present European Centre for Medium-Range Weather Forecasting (ECMWF) structure;
    - A structure like that of the Lawrence Berkeley Laboratory, strongly based on teams conducting pioneering science and enabled/authorized to pursue lines of research of their own choice;
    - A strongly entrepreneurial center, perhaps following the example of RAL.
2. University models:
    - A stringent university system modeled, for example, after Stanford, with perhaps 50% or lower retention from entry to tenure;
    - A mid-to-upper-tier university system, where the retention rate might exceed 90%;
    - Innovative university models, providing extra pay for untenured positions, part-time tenure track, automatic time extension for parents, etc.;
    - Other models regarding promotion review structure, including who chooses the members of promotion and tenure committees, independence or interdependence of administrative versus faculty recommendations, etc.

3. Models that feature:
    - Higher ratios of support staff to tenure-track staff and more autonomy for senior faculty members;
    - Limits on the number of positions or promotions (e.g., Yale);
    - Higher reliance on non-tenured term appointments to meet components of the primary mission (a trend at many universities).

Each model was considered in terms of how it might affect the ability of NCAR to meet strategic goals and, in particular, how it might affect the following set of important attributes:

- Reputation and quality
- Collegiality and work environment
- Links to the community
- Academic freedom (both in terms of freedom from dismissal for unpopular ideas or research areas, and freedom to devote some fraction of time toward basic, innovative research in areas favored by the scientist)
- Job security (related to academic freedom)
- Ability to address institutional goals and flexibility
- Fairness
- Overall attractiveness of positions as viewed by top-level scientists

The subcommittee's process, pursued at the NSA retreat, was to consider these attributes in terms of the current system at NCAR, and how they would be enhanced or degraded by a change to other models or parts of other models.

The overwhelming sense was that none of the other models considered has obvious advantages over the current NCAR system. The historical scientist appointment model at NCAR has been extremely successful in allowing the institution to recruit top scientists, achieve institutional scientific objectives, and maintain strong connections to the academic community.

There was considerable concern expressed at the NSA retreat and within the subcommittee, however, over: (1) the absence of a clear definition of the present system; and (2) the status and security of those in the Scientist III position. Several recommendations contained in the remainder of this report, in particular regarding the clarification of the NCAR policy on tenure, are aimed at addressing these concerns.

3. Job Security and Academic Freedom

3.1 Tenured Appointments

Policy: http://www.fin.ucar.edu/polpro/section6/6-5.html[2]

Scientific and Research Engineer positions at NCAR are loosely modeled after university faculty positions, with Scientist I and II positions corresponding in time to Assistant Professor positions, Scientist III to Associate Professor, and Senior Scientist to Full Professor. However, those corresponding faculty positions almost all benefit from extensive and explicit definitions of the associated tenure systems. In contrast, NCAR does not have a tenure system except for what has developed from common practice and understanding over decades. The result has been to regard Scientist III and IV positions as "tenure-like". Scientists (and now Research Engineers) in those positions undergo a thorough review at the time of promotion, with important weight given to external opinions in ways that parallel university systems where this review leads to tenure.

There are strong arguments for a formal tenure policy at NCAR:

- It would clarify expectations regarding job security in the tenured positions (Scientist and Research Engineer III and IV).

- It would be consistent with (and provide justification for) other accepted aspects of the NCAR scientific appointment policies, such as the "up-or-out" aspect of promotion to Scientist III, term limits on Scientist I/II appointments, and the necessity of post ARG-review.

- It would increase overall attractiveness of NCAR scientific appointments by offering tenure that is similar to that in university faculty positions.

[2] **Note:** Changes to the NCAR Scientific Appointments Policy 6-5 were approved by NSF on June 12, 2009. In particular, the revised policy incorporates the following changes:

- ❖ New Title – NCAR Scientific and Research Engineering Appointments Policy 6-5
- ❖ Addition of the Research Engineer position to the appointments system.
- ❖ Change from "authorization" to "approval" by the UCAR Board of Trustees of senior level appointments.
- ❖ Addition of the following text: "The involuntary termination of a level I, II or III Scientist or research engineer requires approval by the NCAR Director. The involuntary termination of a senior level Scientist or Research Engineer requires approval of the NCAR Director, the UCAR President and the UCAR Board of Trustees."

- It should, over time, increase the quality of the ladder-track scientific staff, both through attractiveness and through an associated increase in the value the institution places on the investment made in tenured positions.

- It would place the institution on record as supporting academic freedom.

- It would emphasize that scientists have special responsibilities that include contributing to the mission of NCAR and to the thematic projects that NCAR undertakes.

- It would bring NCAR appointments more in line with university faculty appointments, potentially making interchanges between NCAR and faculty appointments easier and more parallel.

Potential negative impacts of a tenure policy were also considered by the subcommittee. They include:

- Resentment by non-ladder track staff over the enhanced level of job security for tenured Scientists and Research Engineers at NCAR;

- Resentment from parts of the university community who might believe that ladder-track scientific and research engineering staff at NCAR already have sufficient job security;

- Loss of flexibility to change programmatic direction or address fiscal difficulties of the institution;

- Loss of flexibility of management units (laboratories and divisions) to hire new Scientists and Research Engineers because of the need to assure sufficient base funding to support them;

- Reduction of the fraction of NCAR scientific staff on the Scientist/Research Engineer tracks, perhaps leading to more research carried out by Project Scientists and visitors;

- Decrease in collegiality resulting from enhanced competition among scientists associated with an increase in the threshold for or number of available appointments; and

- The possibility that securing tenure might lead to a tendency for some to neglect the programmatic needs of NCAR or decrease the level of their scientific effort.

Overall, the committee felt these potential negatives are strongly outweighed by the positive benefits of a formal tenure policy. Some of the potential negative impacts, for instance, are either not likely (e.g., a decrease in collegiality) or they would be effectively mitigated by some of the additional recommendations made in this report. For instance, a

decrease in scientific effort or neglect of programmatic needs would be addressed by an effective post-ARG review process, independent evaluations and salary adjustments, and retention of dismissal for cause or budget stringencies.

Issues:

- In the NCAR appointment system, Scientist and Research Engineer III/IV positions are thought of as "tenured" appointments. However, there is no clear statement on what "tenure" at NCAR means in terms of an individual's rights, responsibilities, and job security. Moreover, the term does not appear in policy statements.

- Although both Senior Scientist and Scientist III positions are thought of as "tenured" appointments, they are not given the same protections with regard to termination.

- Prestige and job security of the Scientist III position is inadequate. In past experience, this position was sometimes the most vulnerable to involuntary termination among the scientist positions.

Recommendations:

- More specific clarification should be provided for the meaning of "tenured" appointments at NCAR. A draft NCAR scientist tenure policy is in the Appendix of this report. It includes procedures for the involuntary termination of a tenured scientist for reasons of incompetence, neglect of duty, or misconduct, or because of financial exigency or reduction in program.

- NCAR should take steps to increase the prestige and job security of the Scientist III position. Several pertinent issues are discussed in the Appendix, and many of the other recommendations in this report are intended to address this need. Key aspects of the draft tenure system in the Appendix that contribute are:

    - For consistency with university tenure systems, authorization[3] by the UCAR Board of Trustees should be required for appointments to the Scientist and Research Engineer III positions.

    - Adoption of the tenure system specified in the Appendix and other recommendations in this report would contribute to this goal by, over time, strengthening the standards for promotion to Scientist III, and perhaps also Scientist IV at the division or laboratory level.

[3] The subcommittee recommends the NCAR Scientific Appointments Policy 6-5 state that senior level appointments require "authorization" rather than "approval" by the UCAR Board of Trustees (see the previous footnote).

3.2 Balance between fundamental scientific research and community service

Issues:

- NCAR Scientists and Research Engineers often struggle with allocating their efforts between the two key missions of basic scientific research and community service (internal, national and international). NCAR scientists need to contribute to both of these. There is concern, however, that the relative roles of each (at least for some staff) are:

    - Not well balanced, possibly due to the loss of support staff with recent budget pressures.

    - Not well communicated, especially to incoming and early career scientists. This includes both the expectations of how much time should be spent on basic science versus service and the level and type of support that is available at NCAR for community services.

    - Not appropriately weighed in the ARG promotion process or the hiring process.

Recommendations:

- Quantify expectations for each ladder-track position in terms of percentage of time devoted to independent research, mission-oriented research, and both internal and external service. Regularly update these percentages as part of the annual review process.

- Better inform new and prospective employees about the dual roles of NCAR scientists and research engineers, expectations of their involvement in basic research and community service projects, and the level and type of support that is available for community services.

- Clarify how the promotion process weighs scientific contributions to basic research and community service, to ensure that all expected activities are considered appropriately in scientific promotions.

3.3 Base support and expectations of external funding

Issues:

- A substantial fraction of Scientist and Research Engineer positions are supported by external funds. These positions would be at risk if those funds were no longer available.

- Expectations for obtaining external funding vary widely across NCAR and are often unclear to early-career scientists. Expectations for substantial fund raising can be problematic, especially to early career scientists, for several reasons:
    - The relevance of fund raising to the promotion process is unclear.
    - Given the growing dependence of programs on external funds in order to maintain support staff, hardware/software, and travel, there may be pressure to generate funding even if it is not directly related to priority scientific goals.
    - NCAR scientists have inherent limitations on their fund raising potential, including limits on funding available from NSF, discouragement from competing with universities, ineligibility for funding from private foundations with overhead limits, the general requirement to include funding for university co-investigators in proposals (which reduces the funding coming to the NCAR PI), and perceptions by some funders that NCAR staff do not need financial support. The opportunities vary greatly with research area, so pressure to obtain external funding can have undesirable influence on research directions of scientists.

Recommendations:

- Many groups at NCAR are presently deficient in support for scientists, and scientists are inefficient in their work as a result. Those groups need to take steps to address this imbalance, even if this requires hiring fewer Scientists and Research Engineers. This is a critical aspect of the work environment that is making NCAR less attractive to Scientists and Research Engineers, who see greater opportunities to work efficiently in university environments where they have greater control over support.
- NCAR units should make a commitment to cover the salary of ladder track positions from base funds if so required. This inherently limits the number of ladder-track positions a laboratory or division can support. While external funds can temporarily provide salary relief, units should manage budgets so that ladder track positions can be covered when these funds are no longer available.
    - External funding should aim to support NCAR's strategic goals.
- External funding expectations need to be defined, clearly communicated, and incorporated into criteria for review and promotion.
    - Communication of expectations is especially important for new scientists and should be in writing.

- Review and promotion criteria regarding fund raising need not be uniformly applied across NCAR, since different units face different conditions regarding external funding. However, successful fund raising should be explicitly recognized as evidence of scientific excellence and productivity.

- NCAR/UCAR management should improve communication with funders and the university community about the funding needs of NCAR scientists. For example, external funding supports many activities that directly support the science done by university colleagues.

4. Criteria, Process and Policy for Scientific and Research Engineering Appointments

4.1 Appointment criteria and expectations for promotion

ARG procedures: http://www.ncar.ucar.edu/central/arg

Current criteria: http://www.ncar.ucar.edu/central/arg/docs/criteria.pdf

Issues:

- Various existing documents specify criteria for hiring, evaluating and promoting scientists and research engineers. They share common goals, but each document has different emphases on the importance of and balance between service and science, leadership (scientific and organizational), innovation and discovery, impact, and relevance to NCAR. The appointment criteria have not been reviewed and approved by current management or current NCAR Senior Scientists. It is not clear, therefore, that the criteria reflect the collective judgment of the current institution or provide good guidance regarding requirements for promotion. It is also not clear that a single set of criteria can adequately accommodate the highly diverse backgrounds of both NCAR scientists and research engineers.

- Some standardization of criteria is desirable. It is an opportunity for communicating institutional values. Similar templates can guide evaluations for hiring, annual review, promotion (ARG), and post-ARG review. A more standardized set of criteria can also facilitate comparisons across institutional units. Objective metrics (publications, citations, web hits, etc.) are important and should be used across the board, but they must also be understood (e.g., publication rates and citation counts can differ greatly across disciplines).

- While a summary list of criteria for promotion is provided, practical advice for fulfilling those criteria is not readily available. Much of the advice, available from NCAR websites, is from panel discussions and "Staff Notes" articles in which individuals describe their understanding of the expectations and process. It is

difficult for early-career scientists to assess how reliable and generally accepted these statements are.

- The primary decisions for promotion are made at the division/program level, but the procedures and criteria are often obscure to the Scientists and Research Engineers being considered. There are considerable differences among divisions/programs in how promotions are handled. The criteria are not always in line with the criteria used in annual performance appraisals.

- The current guidelines specify that the ARG meets in January and again in April or May. It is therefore not clear how cases can be brought to the attention of the ARG outside of this normal cycle. Not having such flexibility, and not being able to "fast-track" certain cases, might possibly put NCAR at a competitive disadvantage in the recruitment for Scientist and Research Engineer III/IV positions.

Recommendations:

- The current ARG criteria are a good starting point but some revision is desirable. The ARG recognizes a single over-arching criterion - scientific excellence - as demonstrated by substantial measures of: (1) productivity; (2) leadership; (3) national and international reputation; (4) contribution to NCAR programs; (5) breadth; (6) scientific and technical service in the NCAR context; (7) broad community service; and (8) awards. We recommend more explicit recognition of some other characteristics including creativity, innovation, and scientific insight. We also recommend some consolidation of the programmatic criteria (items 4, 6, and 7) in order to make the criteria easier to understand, including for external referees (e.g., they often struggle with the meaning of item 6).

- A uniform and standardized set of criteria should be developed by the ARG and reviewed and approved by current NCAR management and Senior Scientists. These criteria should be applied for hiring, evaluating, and promoting NCAR scientists and research engineers.
- The same broad criteria should apply to both Scientist and Research Engineer ladders, although each specific case may present a different balance of various metrics.

- Scientists at all levels should have easy access to clear descriptions of the promotion processes, including those within divisions and laboratories, and should receive ongoing advice regarding their progress toward meeting the qualifications for promotion. Annual performance review criteria should be closely aligned with the criteria for promotion, thereby facilitating better assessment of progress towards promotion.

- There should be uniform promotion/review criteria across laboratories and divisions, although the relative weighting of the criteria may be different, depending on the mission of the division/program and the job requirements of the scientist and research engineer.
- More of the responsibility for promotion review should be assigned to the nominating laboratory or division, because it is expected that the primary quality control will be imposed at that level. Laboratories and divisions should solicit an initial set of letters of reference for their own deliberations, assemble and review nomination packages, reach their own recommendation on whether or not the case should proceed to the ARG, and summarize the process, deliberations and recommendation in writing along with their assessment of the strengths and weaknesses of the case.
- The laboratory or division has full responsibility for deciding which cases will be taken forward to the ARG. Failure of a nomination at the ARG level should trigger consideration by the NCAR Director of why quality control failed at the level of the nominating entity. The nomination packages, all solicited letters and the written summary prepared by the laboratory or division should be forwarded without change to the ARG, which will remain authorized to solicit additional letters of reference, if necessary. ARG review will thus continue to maintain standards for the institution, but will also assess how well the standards are being maintained at the laboratory and divisional levels.
- A systematic and documented review at the time of promotion from Scientist I to Scientist II should be instituted by the home laboratory or division, providing more formal guidance to scientists and research engineers regarding their career development.
- The ARG procedures should provide for enough flexibility to consider cases out of the normal ARG cycle.

4.2 Entering and exiting the ladder track: defining "up or out"

Issues:

- The "up-or-out" aspect of promotions on the NCAR Scientist and Research Engineer Ladder is part of an overall scientific appointments policy that is intended to be similar to university faculty appointments. However, Scientist and Research Engineer level III/IV positions do not have the tenure protections given to university faculty appointments.
- The policy is ambiguous as to whether or not "out" means out of the organization or out of the Ladder.
- The policy does not address the conditions under which candidates not currently on the ladder may enter the track.

Recommendations:

- There are a number of other job categories at NCAR in which a scientist's contributions could be of great benefit to the organization, so the "up-or-out" policy should apply only to continued appointment on the Scientist and Research Engineer Ladder and not explicitly to continued employment at NCAR. Consequently, those on the Ladder who are unsuccessful in being promoted to II and III levels should be given fair consideration for positions in other job categories that become available and are openly advertised and competed.

- For consistency with the "up-or-out" policy, if a candidate for promotion to Scientist/Research Engineer III is unsuccessful in the ARG, that individual should not be considered for future appointments or promotions on the Scientist/Research Engineer ladders.

- Ladder-track positions have a special nature (person-based and greater risk), so entering that ladder should require an open process for advertising and filling the position. Thus, an individual in a job category outside the Scientist or Research Engineer Ladder must first successfully be selected in an open competition[4] for an appointment before moving to the Ladder (or seeking ARG approval for positions at the III and IV levels.) If unsuccessful in the selection process, the individual can then continue in his or her current position, provided that position is retained. (An exception to this requirement for an open competition should be made for someone in a management job category who seeks a scientist appointment while retaining the management position.)

4.3 Defining the clock, and stopping or slowing the clock

Policy: http://www.fin.ucar.edu/polpro/section6/6-5.html

The NCAR Scientific Appointments Policy currently recognizes two mechanisms (italicized below) for extending the length of appointments: (1) in "certain cases the NCAR Associate Director may request a single *extension* of up to three years"; and (2) in "certain circumstances, it may be appropriate to '*stop or slow the clock*' in the appointments sequence. The length of the interruption is determined by individual circumstances, and NCAR agrees to extend the time allowed before evaluation for promotion during that period."

Although not specified in the Policy, practice has been that the first mechanism is used in cases where the nature of the work is lengthy (e.g., large model or instrument development) and the 3-year extension could make a major difference in the application, dissemination, and publications of the work. The second mechanism is used in situations

[4] Exceptions are possible by obtaining a waiver as described in current UCAR Policy 6-3.6).

not directly related to the nature of the work at NCAR, but rather to family or other reasons (e.g., parenthood, illness, etc.) Hereafter, for convenience and consistency with historical usage, we refer to the first mechanism as an *extension* and to the second mechanism as *stopping/slowing the clock.*

Issues:

- The definition of the promotion clock is not clear. In particular, how the timing for promotions is currently determined (e.g. whether it depends on hire date, ARG submission date, etc.) is not clear and may vary across the institution.
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- While the flexibility implicit in the extension and the stopping/slowing the clock mechanisms is useful and should be retained, the policy is too vague. There are no specific guidelines or clear definition of the circumstances that warrant either an extension or stopping/slowing of the clock, and for the latter the policy does not specify who is authorized to grant this extension. Some staff members are also concerned that a stigma may exist in cases where an extension or stopping/slowing of the clock is requested or given.

- The policy does not address how the clock is to be applied to candidates for Scientist or Research Engineer II or III who are entering the track from another position within or outside NCAR.

Recommendations:

- Revise the current policy statement to clarify:

  - How the promotion clock timing is determined and applied. Specifically, for example, to be relative to the hire date, with promotion review conducted at the division level before expiration of the term, but with ARG review possibly extending to after expiration in cases of a positive recommendation.

  - How and if the clock and its associated metrics should be interpreted when considering external applicants to the Scientist and Research Engineer II and III positions. For example, nominations of external applicants and internal applicants should discuss the issue and justify cases where the time in scientific positions has been long compared to norms for NCAR ladder-track appointments.

  - Valid reasons that warrant extensions (while still allowing flexibility for individual circumstances). For example, for Scientists and Research Engineers whose goal is to develop new models, technologies, and state-of-the-art instrumentation with associated new infrastructure, the time needed to produce common ARG metrics can be significantly longer than the current clock schedules may permit. We suggest that these

circumstances can be valid reasons for extension of time if they interfere with establishment of an acceptable record for promotion.

- Valid reasons for granting a slowing or stopping of the clock.

- Procedures and decision-making responsibilities for granting extensions and for stopping/slowing of the clock, as these responsibilities are currently not defined. For example, the division director should make the recommendation, to be reviewed and approved at the laboratory level.

- Provide explicit instructions to the ARG on how to evaluate extensions and stopping/slowing of the clock. In the case of extensions, the ARG may evaluate why the extension was granted and whether the merits of the case have changed significantly because of it. For stopping/slowing of the clock, it should be made clear that the ARG will not consider this a factor and that the case should be judged, like others, only on how well the record matches the appointment criteria.

- Clearly communicate these policies to the scientific staff.

4.4 Post-ARG review

Current Policy: http://www.ncar.ucar.edu/central/postarg/

Issues:

- The justification for the PAR is contingent upon Scientist III/IV appointments having tenure protections similar to tenured academic faculty positions.

- Scientist sentiment regarding the current PAR process is predominantly ambivalent or negative. There is a pervasive perception that it adds significant burden and stress but does not achieve the objective of a critical review. Scientists III/IV already undergo an annual review, which is basically the same as that for every other job category at NCAR (and identical to that for Scientists I and II) that is intended to address performance issues.

- The current PAR process requires "considerable effort, particularly on the part of upper management" (NCAR PAR Policy statement). It is estimated up to 38 hours of senior staff and administrative time are required for each case (including **no** estimate for the reviewee's time), and that 20-25 reviews will be conducted each year.

Recommendations:

- If the draft tenure policy in the Appendix is adopted, a strengthened post-ARG review process is needed to guard against abuse of the added job security.

- To improve the effectiveness of the review and reduce its administrative burden, we recommend transfer of the process to the division or laboratory level, where the unit Director would have responsibility for the review. The Director would use the unit's senior scientists, plus some additional senior scientists from outside of that unit, as the expertise needed to assess the case. These are the scientists in the best position to assess the quality and significance of the individual's work. We further recommend making the specific process less rigid and using the current process as a guideline that can be adapted as appropriate to specific needs within the laboratories or divisions. Results would be conveyed to the NCAR Director, and if there are concerns there should be a follow-up instituted (perhaps under the terms of the proposed tenure policy).

4.5 Mentoring

Issues:

- There is a strong desire among many members of NCAR staff to establish an organized mentoring program. Such a program should be encouraged across the organization.

Recommendations:

- Each laboratory should establish a program for mentoring that will enhance interactions among Scientists and Research Engineers, especially those early in their career. Participation should be voluntary.

- In these programs, it should be emphasized that mentoring is primarily the responsibility of the person receiving mentoring and that it is his/her obligation to seek advice and take advantage of resources that are available (or to decide that they are not needed). The primary purpose of the mentoring programs will be to identify appropriate mechanisms for interactions and to emphasize that it is part of the responsibility of scientists to serve as scientific mentors to others when they request/welcome the interactions. Mechanisms should be available to seek and receive such advice outside the supervisory structure in the division/program/unit.

APPENDIX

Academic Freedom, Responsibilities, and Tenure at NCAR

The following statement is intended to record NCAR's policy and procedures with respect to academic freedom, responsibilities, and tenure for individuals on the Scientist and Research Engineer appointment ladders (collectively referred to as scientists herein). It is modeled after the academic policies of UCAR member universities for the purpose of attracting and retaining a high-quality research staff, ensuring and protecting the academic freedom of the staff, and promoting mobility between NCAR-scientist and academic-faculty positions. Tenure refers to the conditions and guarantees that apply to a scientist's rights and responsibilities in the organization, and in particular to protection from discriminatory reduction of salary or termination of employment, and from imposition of serious sanctions, except upon grounds and in accordance with procedures set forth in this policy.

1. Academic Freedom

Excellence in research depends upon an uninhibited search for truth and its open expression. Hence, it is essential that each scientist be free to pursue scholarly inquiry, and to voice and publish individual conclusions concerning the significance of evidence that the researcher considers relevant. Each scientist must be free from the corrosive fear that others, inside or outside the organization, because of biases, differing opinions or other inappropriate factors, may threaten that individual's job security or professional career. When speaking, writing or acting as a member of the broader community, a scientist must be free from institutional censorship or discipline, subject to academic responsibility. In such instances, the scientist should clearly state that he or she is not speaking for the institution.

A scientist's comments are protected even though they may be highly critical in tone or content, or erroneous, but such statements are not protected free speech if they either substantially impede the individual's performance of daily duties or materially and substantially interfere with the regular operation of the institution. False statements made with knowledge of their falsity or in reckless disregard of the truth are not protected, nor are public statements without foundation that call into question the fitness of the scientist to perform his or her professional duties.

2. Academic Responsibility

The concept of academic freedom for scientists must be accompanied by an equally demanding concept of academic responsibility. Scientists have a responsibility to the institution, their profession, and society at large. The rights and privileges of scientists through written policies and procedures on academic freedom and tenure, require the assumption of certain reciprocal responsibilities. Fundamental is the responsibility of scientists to maintain scientific excellence as described in the ARG criteria (see Section 4.1), including the exhibition of professional leadership and productivity through

publications, lectures, contributions to NCAR programs as well as national and international programs, participation in professional organizations and meetings, and community service.

3. Tenured Scientist and Research Engineer Appointments

The policies for appointment of scientific staff in the positions Scientist I-IV and Research Engineer I-IV are described in the NCAR Scientific and Research Engineering Appointments Policy 6-5. Individuals in Scientist III-IV and Research Engineer III-IV positions are considered tenured Scientists and Research Engineers. The promotion from level II to level III is an "up or out" decision, and is subject to time constraints as outlined in NCAR Policy 6-5. Appointment to level III and level IV positions are conferred by the NCAR Director with authorization[3] of the UCAR Board of Trustees after review and recommendation of the Appointments Review Group.

3.1 Termination for Unsatisfactory Performance or Misconduct

Other than for financial exigencies as described below, a scientist having a tenured appointment may be suspended or discharged from employment only for reasons of incompetence, neglect of duty, or misconduct of such a nature as to indicate that the individual is unfit to continue as a member of the scientific and engineering staff. These reasons include significant, sustained unsatisfactory performance after the individual has been given an opportunity to remedy such performance and fails to do so within a reasonable time; sustained failure to follow through on commitments to organized programs or to perform other significant scientist obligations; or violations of professional ethics, mistreatment of other employees, research misconduct, financial fraud, criminal, or other illegal or unethical conduct.

The post-ARG review is the process by which the NCAR Director obtains the advice and recommendations of peers regarding the performance of tenured staff. Therefore, the decision to terminate a tenured scientist due to unsatisfactory performance shall be made by the Director after considering the evaluations, recommendations and outcomes from the post-ARG review, which will be conducted every five years for a tenured scientist. The Director may also solicit an interim post-ARG review, triggered by unsatisfactory evaluations in a scientist's annual performance reviews. If termination due to unsatisfactory performance is deemed warranted, the NCAR Director must request and receive the approval of the UCAR President and Board of Trustees prior to taking any action. The Board of Trustees shall be provided with the full assessment of the post-ARG process as well as the recommendation of the NCAR Director. Following an approval by the Board, the NCAR Director shall inform the individual in writing of the decision to discharge the individual.

Cases involving termination based on misconduct present special circumstances, often demanding confidentiality or being bound by the rule of law. As such, these cases require a separate set of procedures. The NCAR Director and UCAR legal counsel shall inform the individual in writing of the intention to discharge the individual. The statement shall

include specification of the reasons for the intended discharge. A confidential opportunity to respond to the charges shall be provided to the individual. If the evidence of misconduct is not mitigated, then the NCAR Director must request and receive approval of the UCAR President and the Board of Trustees prior to discharging the individual. Depending on the nature of the misconduct, both UCAR and the individual can seek legal remedy.

In cases of research misconduct (e.g. plagiarism, fabrication or falsification of evidence), the individual shall be able to request a hearing from a panel of peers prior to the NCAR Director seeking approval for dismissal from the UCAR President and the Board of Trustees. If the individual makes no written request for a hearing, he/she may be discharged without recourse to any institutional grievance. If the individual requests a hearing, the NCAR Director shall appoint a hearing committee comprised of Senior Scientists to review the case. The hearing shall be on the written specification of the case for academic dishonesty. The hearing committee shall formulate explicit findings with respect to each of the grounds for removal presented and shall recommend whether or not, in its judgment, there are grounds for dismissal. The burden of proof is on the institution to establish, by a preponderance of the evidence, the existence of good cause for dismissal based on academic dishonesty. If the NCAR Director decides that termination is still warranted after receiving the committee's recommendations, the committee's report shall be provided to the UCAR President and Board of Trustees in requesting approval for dismissal.

3.2 Termination for Financial Exigency or Reduction Of Programs

The employment of a tenured Scientist or Research Engineer may be terminated because of: (1) a demonstrable, bona fide institutional financial exigency; or (2) the significant curtailment or elimination of a program within the institution. Financial exigency is defined as a change in the financial resources of the institution that compels a significant reduction in the institution's current operations budget. The determination of whether a bona fide condition of financial exigency exists or whether there shall be a significant curtailment or elimination of a major program shall be made by the NCAR Director after consulting with the UCAR President and senior NCAR management and staff, and with approval of the UCAR Board of Trustees. In this or any subsequent consultation process, a tenured scientist appointment may be terminated only after it is determined by the Director, following careful review of alternatives, that the condition of financial exigency cannot otherwise be alleviated without more serious damage to the institution.

If there must be termination of Scientist or Research Engineer appointments, the NCAR Director shall give consideration to tenure status, years of service at the institution, quality and productivity of research and relevance to the priorities of the institution, and other factors deemed relevant in determining whose employment is to be terminated. The primary consideration, however, shall be the maintenance of a sound and balanced research program that is consistent with the functions and priorities of the institution.

In the event of a financial exigency, the NCAR Director shall seek the specific

recommendations for solving financial exigencies or program reductions from Laboratory and Division Directors and other senior NCAR and UCAR management, including the President's Council, as appropriate. The NCAR Director shall assess all recommendations, including the interview of Laboratory and Division Directors, prior to submitting a documented recommendation for termination to the Board of Trustees. If the termination of a tenured Scientist or Research Engineer is approved by the Board of Trustees, the individual whose employment is terminated because of financial exigency or reduction of programs shall be notified of this fact in writing. This notice shall include a statement of the conditions requiring termination, including disclosure of the financial data upon which the termination decision was based, and a general description of the procedures followed in making the decision. For a period of two years after the effective date of termination, the institution shall not fill a new Scientist or Research Engineer position in a similar field of specialization without first offering the position to the person whose tenured employment was terminated.