

Dear Dr. Ducey and the faculty and staff of the UNH Department of Natural Resources and the Environment,

Before addressing the concerns in this letter, it is important to acknowledge the land we occupy, using guidance of [local indigenous leaders](#). As scholars and researchers of the natural world, it is of particular importance to honor the lands and waters on which we learn and conduct research. UNH is located on N'dakinna (homeland), the ancestral and current homeland of the Abenaki, Pennacook, and Wabanaki [peoples](#) (People of the Dawnland). UNH is located within the Peskategwa [watershed](#) (branched river with fast-flowing waters). We acknowledge and honor with gratitude the land, waterways and the alnobak (people) who have stewarded N'dakinna throughout the generations. These peoples currently lack federal recognition or rights to this continually unceded land which was stolen centuries ago and is perpetually denied return.

The recent killings of George Floyd, Breonna Taylor, Ahmaud Arbery, and countless others have reignited a conversation about systemic racism and the injustices faced by Black people in the United States. This has been accompanied by the renewed awareness of the ways that Black, Indigenous, and People of Color (BIPOC) face [discrimination and racism in Academia](#). This results in lower representation and retention of BIPOC in STEM fields. Our intent in writing this letter is to increase the frequency and urgency of conversations surrounding diversity, equity, and inclusion (DEI) within our department and at UNH.

Across 17 environmental disciplines, a [recent national survey](#) of US faculty showed only 11% representation of racial minorities, with the majority of departments reporting having one or zero faculty of color. Similarly, STEM employment statistics [from the US Census Bureau](#) list environmental scientists, geoscientists, and conservation scientists and foresters among the bottom three occupational groupings in terms of non-white representation, [each having less than 15% minority representation](#). This lack of representation of BIPOC in STEM fields and academic departments is not surprising given that traditional environmental science curricula are often white-focused, [ignoring topics such as environmental justice or environmental issues relevant to communities of color](#). Lastly, [research](#) has shown that diverse teams are more innovative and effective than homogenous teams, underscoring the importance of prioritizing structural inclusion and support for BIPOC faculty, staff, and students, as well as those from other marginalized groups.

As a department that is largely white, we have a lot of listening, learning, and acting to do. We acknowledge that developing appropriate and effective short and long term goals and action items will take time and will evolve as we continue to learn. For this reason, one of our top priorities is to assist with the formation of an NREN DEI Committee that involves representation from students, faculty, and staff who will continue this important work and hold our department, college, and university accountable.

Many members of the NREN department have already shown their commitment to working towards becoming more inclusive through existing efforts and new conversations involving ideas for the future. We look forward to collaborating with faculty to motivate and organize change within our department.

While this letter is focused specifically on racial diversity, many of the actions will inherently benefit other Under-Represented Minorities (URMs) such as international, immigrant, low-income, first-generation, and LGBTQ+ students, staff, postdoctoral scholars, and faculty.

Below, we outline recommendations for change under two main categories: training and department culture, and teaching.

TEACHING

- **Diversify curriculum:** Experiences described by students of color highlight important issues in environmental science programs that need to be addressed. [A recent study](#) found that both whites and non-whites generally associate the term “environmentalist” with a white face, and underestimate environmental concerns held by racial minorities. However, all minority groups surveyed (African Americans, Latinxs, Asians, and Native Americans) self-reported higher concern for environmental issues than white people, despite being perceived as least concerned ([Pearson et al. 2018](#)). So, if there is so much interest, why is our field still so white? [One student argues](#) that Black students, specifically, don’t pursue environmental science due to a lack of acknowledgement within the curriculum of environmental issues that are pertinent to communities of color ([see more](#)).

Diversifying our curriculum is a crucial first step in making natural resources and environmental sciences welcoming to students of diverse backgrounds and perspectives. While improving syllabi to restructure curriculum in a way that successfully encompasses and encourages diverse perspectives may take time, there are easy places to start with any class:

- Include literature from diverse voices. Shift conversations from only talking about the science to including conversations about the author (e.g. what are their research interests more broadly? Who are they and how did they get to where they are?). By including conversations about the scientist, students who share identities with that scientist may be able to see themselves in that role.
- Have conversations about land history and [land acknowledgement](#).
- Include conversations around environmental justice and intersectionality (see [Nussbaum 2013](#)).

- **Revamp NR903:** NR903 is the foundational course for incoming NREN graduate students. The structure and content of the course has undergone many changes and improvements, yet there remain inconsistencies in the curriculum preventing NR903 from fully meeting its [course description](#) and providing students with knowledge and skills necessary to succeed in academia. We propose the following additions be made to help the course better meet its description and provide students with a more comprehensive education. This should include:
 - A history of the foundation and evolution of academia and research practices, with a focus on environmental fields. We need to acknowledge that academia was built by and for white men, and that this structure impacts academics today (see [here](#) and [here](#)).
 - Ethics of research in outside communities, including history of [colonial research](#) and [helicopter science](#). This unit will cover [community-based participatory research plans](#), including considerations for international locations and indigenous communities.
 - Current issues faced by environmental fields in academia (DEI initiatives, funding, outreach/collaboration) and public policy.
- **Syllabus statements**
 - Syllabus sections which present student resources (mental health, learning accommodation, etc.) are often skipped over when verbally introducing the syllabus. To express full support for these aspects of the student's success, we ask that instructors verbally explain these sections, and accompany their expressed support with due research on the processes, barriers, and additional resources for students.
 - Include sections within the course syllabus which explicitly state that discrimination and microaggression [are not tolerated](#), and provide resources for reporting such incidences. Within the statement, include [link](#) and [contact information](#) for reporting.

TRAINING & CULTURE

- **Formation of NREN DEI Committee:** We are aware that there have been conversations and work towards creation of a DEI committee within our department. We are excited to hear of these efforts and write to underscore the importance of getting this committee formed as soon as possible, with participation from pre- and post-tenure faculty, staff, graduate students, postdoctoral scholars, and undergraduate students. This committee should be responsible for helping execute our recommendations, holding the department accountable for short- and long-term change, and for continuing to improve DEI efforts as the committee and department continue to learn. The committee shall report updates at each faculty meeting, and we expect significant collaboration with efforts on the COLSA

DEI committee. An effective committee will prioritize enacting structural change to support department efforts at the college and university levels. We believe the NREN DEI committee will centralize and accelerate ongoing DEI efforts while bringing in perspectives from members of the department at all levels.

- **Facilitated discussion on race and racism for department members:** When leading DEI initiatives, there is often a disproportionate amount of labor expected of People of Color to [advise and lead their white colleagues](#). This labor is typically [uncompensated](#). Facilitated discussions, like those led by the [Beauregard Center](#) and [NH Listens](#) throughout Summer 2020, serve as a place to help offset some of that labor by providing a space for white colleagues to “do their own work” on interrogating their privilege and biases, and understanding how they benefit from the inequities of systemic racism. We ask for a series of compensated and intentionally facilitated discussions for the DEI committee and all department members, which will be scheduled within the first active month of the committee, to be completed by the end of the semester. These processing sessions would provide a basis of understanding and openness from which the DEI committee and other members of the department can work.
- **Training:** In addition to facilitated discussions, we ask that our department require annual implicit bias training for all members of the department (faculty, staff, and graduate students). We recommend that the department promote multiple types of bias training including [UNH Powerplay](#), [UNH Professional Development](#) and other similar [online](#) or [webinar-based](#) training designed to initiate discussion on the way unconscious bias pervades workplace culture and provide strategies for developing more inclusive policies, language, and approaches. Providing multiple training opportunities has been shown to be more [effective](#) at making lasting changes with respect to issues of bias, enables members of the department to select the type of training they are most interested in, and allows training to occur annually.

The NREN DEI committee should be responsible for determining the appropriate bias and related trainings and monitor their success. These trainings could fit into the structure of annual faculty meetings, graduate student trainings through the Graduate School or the NREN Graduate Program, and the mission of the [UNH Postdoctoral Association](#).

- **Mentorship:** We can make mentoring a key mission of the department by shifting from ad hoc mentorship toward a [culture of intentional, inclusive, and effective mentorship](#) for undergraduate and graduate students, postdocs and junior faculty. Mentors provide guidance, feedback, and support and are effective advocates for the career of their mentee at all levels of academia. We recommend that faculty mentors complete mentorship training through the [National Research Mentorship Network](#) which provides customizable training for the mentors of undergraduate and graduate students, postdocs,

and junior faculty. Intentional mentorship and support through collective group mentoring or mentoring networks will help students, postdocs, and faculty navigate invalidating experiences in academia and verify their belonging in STEM. [Mentoring networks](#) should include senior faculty-to-junior faculty, faculty-to-graduate-student, peer mentoring (e.g. PhD candidates mentor 1st year students), and near-peer mentoring (e.g. postdoctoral scholars mentor PhD and M.S. students). Moving beyond the hierarchy of the lab not only provides the opportunity for meeting the needs of the mentee but can help remove the power differentials associated with the PI to graduate student relationship. Equitable and effective mentorship for BIPOC and students from underrepresented groups enhances their [recruitment into and retention in STEM-related career paths](#) and [supports their movement into higher leadership roles](#). We request the establishment of formal faculty, postdoc, graduate student, and undergraduate student mentoring programs that employ multi-mentor networks.

- **Revamp graduate student expectations and lab practices:** Starting graduate school can be daunting. New students may be joining a research group for the first time, and faced with more independence than ever before. As a department, we can use clear language to communicate our expectations and values with those who are joining us, and thinking of joining us. The creation of the NREN Graduate Student Mentoring Compact is clear progress in this realm. We suggest that each lab reflect on and discuss its mission and practices, both explicit and implicit. [10 simple rules for building an anti-racist lab](#) would be a great article for all lab members to read.
- **Recruitment and retention of BIPOC students and faculty:** The enthusiasm and willingness of our department to make progress on DEI is necessary to effectuate change. We acknowledge that achieving equal representation of BIPOC in academia, specifically environmental fields, will take many years. We propose the following actions be taken to improve representation in the following year(s) to decades:
 - **Clarify steps for NREN M.S. application:** While the application process for undergraduate programs is quite standard, the application process for graduate programs is not as clear-cut. Towards the end of our Graduate Application Requirements page on the NREN website, the Important Notes section suggests that prospective students reach out to potential advisors before applying. This suggestion is standard practice, and should be one of the first pieces of information that a prospective student sees on our application page. We suggest providing clear instructions for applicants on the NREN website to become more accessible to prospective students who may be unfamiliar with the process of applying to graduate school.
 - **Eliminate the GRE requirement:** We recommend that the department eliminate the GRE requirement for new graduate students. Multiple studies show that the GRE is not a sound predictor of student success, and that the test consistently

underpredicts success of minority students ([Sternberg and Williams 1997](#), [see more](#)). UNH has moved to a [test-optional admissions policy](#) for undergraduate students, acknowledging that testing can be a barrier for a diverse applicant pool. As of August 2020, the GRE is 4 times more expensive than the SAT, the most popular undergraduate test. We ask for an admissions policy which eliminates the GRE requirement, to be put in place for the NREN master's program immediately. We encourage our department to work with the NRESS program coordinators and the UNH Graduate School to eliminate the GRE requirement for the NRESS PhD program and all UNH Graduate programs.

- **Local Outreach and Education:** To increase representation of BIPOC in environmental fields over the long-term, we ask our department to increase outreach and education to New Hampshire communities with a [higher proportion of BIPOC](#), such as Manchester and Nashua. Partnering with K-12 students in community-based participatory research and other forms of outreach could facilitate interest and recruitment in STEM fields, and [promote retention of URM](#)s. It could also increase enrollment of URM in undergraduate environmental fields (at UNH or another institution) and serve as a motivating factor for BIPOC to pursue graduate degrees ([Gibbs and Griffin 2013](#), [McGee et al 2016](#)) in the future. Increasing department participation at the [UNH Leitzel Center](#), [UNH CONNECT STEM](#), and other K-12 outreach programs will contribute to greater representation of BIPOC in environmental fields.
- **Increased financial support for BIPOC students:** The financial burden of an undergraduate degree program is a common [barrier](#) to BIPOC student success and retention. Financial assistance and the development of a scholarship program would ease access for these students. We ask for the allocation of funds for undergraduate scholarships designated for BIPOC, for education, research, and living expenses.
- **Intentionally broaden recruitment audience:** Posting job opportunities online is common practice, and clearly shares our openings far and wide. However, the location of these job postings may impact the audience that we reach. Websites like [BlackCareerNetwork](#), [Diversity.com](#), and [BlackJobs.com](#) have been created to reach more diverse audiences. We ask that all NREN job opportunities be posted on these or similar diversity-focused job boards. Additionally, the value of networking in recruitment cannot be underestimated. NREN faculty and staff must diversify their professional networks and share job opportunities within them.
- **Establish a culture of feedback:** To promote an inclusive community within NREN, we must as a department develop a culture of respect for differences, understanding, and increased openness. We suggest providing clear instructions on the procedures of reporting and the guidelines for investigating incidences of bias or discrimination on the

NREN webpage. Providing information on how the affected student(s) will navigate this process without derailing their progress in their respective program is also important. Clarifying these processes on the website establishes to all prospective students that this department takes these issues seriously and that discrimination will not be tolerated. A culture of feedback ensures that all members of the community are respected, heard, and valued.

These ideas and recommendations are not exhaustive, but rather a place for us to start. We are excited to help facilitate the formation of a DEI committee to push these ideas forward. We look forward to working with NREN faculty and staff to improve DEI and help make our department the best it can be.

Sincerely,

Allison Herreid
PhD Student
Earth and Environmental Sciences

Eliza Balch
MSc Student
Natural Resources and the Environment

Caroline Kanaskie
PhD Student
Earth and Environmental Sciences

Christina Lyons
MSc Student
Natural Resources and the Environment

Hannah M. Fazekas
Postdoctoral Research Associate

Amy Arsenault
MSc Student
Natural Resources and the Environment

Heather Grybas
PhD Candidate
Natural Resources and Environmental Studies

Emily Whalen
PhD Student
Earth and Environmental Sciences

Lukas Bernhardt
MSc Student
Natural Resources and the Environment

Andrew Wiegardt
PhD Student
Natural Resources and Environmental Studies

Michael Thompson
MSc Student
Wildlife and Conservation Biology

David Moore
PhD Student
Natural Resources and Environmental Studies

Isaac Ativor
PhD Student
Earth and Environmental Sciences

Mackenzie Kalp
MSc Student
Forestry

Anna Lowien
MSc Student
Ecosystem Science

Nick Anderson
MSc Student
Natural Resources and the Environment

Christopher Whitney
PhD Candidate
Earth and Environmental Sciences

Natalie Lounsbury
PhD Candidate
Earth and Environmental Sciences

Sam Zuckerman
PhD Student
Natural Resources and Environmental Studies

Catherine Wong
PhD Student
Natural Resources and Environmental Studies

Kenneth Windstein
MSc Student
Natural Resources and the Environment

Simone Chapman
MSc Student
Environmental Conservation and Sustainability

Lara Munro
PhD Student
Natural Resources and Environmental Studies

Todd D. Johnson
Postdoctoral Research Associate

Natallia Diessner
PhD Candidate
Natural Resources and Environmental Studies

Keegan Feero
MSc Student
Natural Resources and the Environment

Thomas Muratore
PhD Student
Earth and Environmental Sciences

Natalie Lord
MSc Student
Environmental Conservation and Sustainability

Sean Schaefer
PhD Student
Natural Resources and Environmental Studies

Eric Morrison
Postdoctoral Research Associate