**Plan For Safe and Inclusive Working Environments**

**1. Description of the field setting and challenges for the research team.**

The research team will be collecting needles, seeds, root and soil samples from pinyon pines at numerous study sites across four states. The field sites occur in California, Nevada, Arizona and New Mexico and have all been visited previously and they are typical of semi-arid woodlands with hot, dry conditions during the summer and the possibility of heavy rain and lightning during the monsoon season that characterizes some of the sites. The terrain can be rocky with extensive open areas with high UV exposure. Most of the study areas are not frequently visited by the general public so encounters are unlikely.

Before starting field work, the team will discuss the potential risks in the field and how to avoid them. For personnel, a field research safety plan form will be filled out and submitted to the Environmental Health and Safety Office. A similar form will be completed by personnel through the Field Safety section of Environmental Health and Safety Office. Planning in advance will help the project leaders think through the potential risks of a trip and to share that information with the entire team before departing to avoid any surprises. Team members also will complete lab safety protocols and training online and adhere to best practices to prevent accidents in the laboratories. These trainings are targeted specifically to the types of research the labs conduct and include chemical and biological safety modules. All laboratory personnel are required to complete the on-line courses upon joining the PI’s laboratory.

**2. Steps taken to nurture an inclusive off-campus or off-site working environment**. The California and Arizona research teams will collect samples from the study sites closest to their home institutions. All collections will be made by two to three person teams including paid project personnel (PI, post-doc, graduate student) plus undergraduate students recruited through programs at the home institutions. Teams will be led by the PI or post-doc with training on sample collection and storage occurring in advance of field excursions using local trees on the campuses. The more experienced field researchers will provide a list of required gear and supplies for the less experienced field researchers to ensure that all are well-prepared for expected conditions at the study sites (e.g. safety vest, gaiters, satellite phone, long sleeves, pants, boots, hat, sunscreen, water, medication, insect repellent, IDs, permits, first aid kits, list of closest emergency services, etc.). Team members will work together at all times. Teams will prepare a detailed travel plan with maps prior to departure including when each site is expected to be sampled and the lodging plans for each night. A copy of this plan will be left with the off-site lab team and with a departmental staff member as a backup. Teams will utilize well-maintained all-wheel drive vehicles equipped with GPS units, first aid kits, extra water (five gallons), sunscreen, blankets, jumper cables, basic tools and shovels. Teams will be equipped with a satellite phone and will check in with a designated member of the lab groups who remain at sunset every evening using this phone or personal cell phones if within signal range. The field research team will share their location, progress and plans for the following day during the phone call. All personnel driving vehicles will complete a defensive on-line driving training.

To help ensure a safe learning and working environment and to prevent workplace harassment and discrimination, all project personnel will be required to complete several on-line training modules including: 1) Preventing Harassment & Discrimination), 2) Building Supportive Communities: Clery Act and Title IX, and 3) Accommodating Disabilities. The training modules inform project personnel about their rights and responsibilities under the law and university policies while also providing information on best practices for communicating and maintaining healthy relationships with colleagues. The training modules provide information on reporting, responding to and resolving issues of harassment if they arise. A list of these contacts and links to reporting forms will be posted in the labs and attached to the clipboard on the vehicle mileage log so personnel have easy access to the necessary information while traveling. In addition to the required on-line training, the PIs will meet with team members prior to off-site work to discuss the training modules, to answer questions posed by team members and to show them where reporting information is found in the laboratory and in the field vehicles. Copies of the guidelines for a safe working and learning environment will be provided in a notebook in the laboratory and on a shared drive for easy access by all personnel.