

## Faculty Development Plan

Associate Professor, Plant and Wildlife Sciences

*Timeframe: 2021-2024*

### Self-assessment of strengths, skills, and competencies: Teaching

*Strengths:* I am open to feedback and have a strong desire to improve my teaching skills and student success. For example, in addition to the university rating system, I implemented a mid-term survey to evaluate students learning and class structure for my winter 2022 course. Based on feedback, I implemented a zero-point plant quiz on Mondays that provided students an opportunity to evaluate their current knowledge on new plant mounts and better prepare for the Wednesdays graded quiz. I then spent 5-10 minutes reviewing the plants and discussing the key characteristics they should have noticed to correctly identify the plants. Quiz scores increased after this practice was implemented. Based on feedback from my mentor, I took the first 10-15 minutes of each lab to review the weekly quiz and have the student's self-grade their work. This practice not only gave the students timely feedback but provided opportunities to dive into plant characteristics and compare plant features as a class. This again, improved the class quiz scores overall. Lastly, I think one of my main strengths is being a woman in the natural resources field. When I first came to BYU, I wanted to blend in with the other faculty but strongly felt that I should embrace my talents of being a compassionate, caring, and encouraging person. I really believe that all my students can succeed, and I will continually strive to help them realize their talents while maintaining very structured, demanding courses.

*Areas for Development:* I need to improve on spiritually strengthening students in my courses and research lab. We periodically pray in class (primarily before field trips and exams) and prior to lab meetings, however, I want to do more. After discussing strategies with other faculty members, I felt like I should share with students that I am continually prayerful for them as they embark on this learning journey, and prayerful I can deliver the course materials so they are understandable and relevant for their career trajectories. I would also like to implement gratitude moments throughout the semester. We often talk about the creation and how magnificent and complex our natural environment is; however, I have never asked the students why they are grateful to be learning about these things. I think this practice will create an environment where students are genuinely spiritually strengthened and intellectually enlarged.

### *Goals:*

- Stay current on literature and technical documents relevant to course work.
- Invite the Center of Teaching and Learning (CTL) to review my syllabi.
- Invite a Students Consulting on Teaching (SCOT) to visit my class (PWS 355) and provide feedback.
- Work with the CTL to develop a hybrid learning environment for PWS 330.
- Share and discuss my teaching strategies and materials with my focal group to assure I am meeting the program, department, college, and universities learning objectives.
- Work effectively with teaching assistants.
- Survey state and federal agency employees to determine skills needed to be marketable in the natural resources field (winter 2023).
- Develop a graduate level "Natural Resources Communication Skills" course.

- Update PWS 330 PowerPoint slides with plant distribution information, an interesting fact about each of the plants we are learning, and relevant ecological information (e.g., noxious weed, forage quality, nitrogen fixer).

### **Self-assessment of strengths, skills, and competencies: Scholarship**

*Strengths:* I am actively building a research program at BYU with graduate and undergraduate students, as well as collaborating with BYU faculty and professionals throughout the western US. Since arriving to BYU, I have had two publications with graduate students, one publication under review with a graduate student, and one collaborative synthesis paper that is under review. The three graduate student publications have taken a significant amount of time as I mentored students through the publication process. Additionally, I am a Co-PI for a Western SARE Research and Education grant that was successfully funded. This project started in July 2022 and will continue through June 2025 and is evaluating targeted grazing by sheep to control invasive species and reduce wildfire risk on western rangelands. I am a Co-PI on a research agreement with the Kennecott Utah Copper LLC (January 2023-December 2025) where I will be working on planting techniques to overcome limiting factors to seeding success including osmotic priming, plant materials development, and characterizing site suitability and reclamation potentials. I currently am the PI on a USFS grant evaluating cattle grazing practices on forests lands in Idaho (August 2020-August 2024).

I have involved undergraduate students in my field and lab research. Since starting at BYU, I have one undergraduate student that will submit a publication as a first author early 2023 evaluating various monitoring methods (including remote sensing) of sagebrush. I have recruited two undergraduate students to begin MS research projects summer 2023. One of these students collected vegetation data during the summer of 2022 (year 3 of the study) evaluating targeted cattle grazing strategies and will repeat the measurements during the summer of 2023. He has successfully completed his graduate prospectus, formed a committee, and is well on his way to completing his thesis. The other student is working on a fire ecology project evaluating heat loads on perennial bunchgrass mortality. In addition to these three students, I have several students working to create a dichotomous key that will be used in PWS 330 Rangeland Plant Identification and Ecology and PWS 419 Forest Management and Ecology. I have had an additional four undergraduate students working in the lab conducting seed priming research, collecting herbarium specimens, and measuring vegetation and fuels in rangelands throughout Utah and Idaho.

*Areas for Development:* I have a backlog of publications that I need to spend time publishing while maintaining an active research lab at BYU. I currently have two PhD students at the University of Idaho, am serving on five graduate committees at BYU, two graduate committees at the University of Idaho, one graduate committee at Oregon State University, and two graduate committees at Boise State University. I want to be careful what I commit to do and recognize that a “yes” to something is a “no” to something else. I want to better recognize time limitations and make sure I cross the finish line for all commitments to myself and colleagues. I want to further develop my mentoring capabilities and continue to involve undergraduate students. I would like to explore various project management software applications and implement one in the lab to serve as a model to students and a way to better communicate our progress, keep each other accountable, and work together to succeed on research projects. I want to develop a writing group for undergraduate students in the rangeland restoration labs that follow principles from “Publish and Flourish.” I attempted a writing group during the fall and winter semesters but feel like it was unsuccessful for most students. Based on feedback, I need to establish better mechanisms for accountability and better assess students’ preparedness to join a writing group.

*Goals:*

- Over the next two years, publish four publications as the primary author; set aside daily blocks of time to write (at least 30 minutes each day).
- Apply for the Annalee Naegle Redd Research Assistantship to potentially support a MS student evaluating the spatial patterns of heat characteristics during a fire event in Wyoming big sagebrush plant communities.
- Encourage students to apply for CURA scholarship grants.
- Learn to use the Center for Statistical Consultation and Collaborative Research
- Foster an environment where undergraduate students will want to present their research at scientific meetings.
- Serve on Graduate Student Committees.

**Self-assessment of strengths, skills, and competencies: Citizenship**

*Strengths:* I enjoy working with students, faculty at BYU, and natural resource professionals. I coached the BYU SRM Plant Identification Team. I spent about 4 hours/week preparing materials and holding practice sessions with the 2021-2022 team. The time commitment for future years should decrease to about 2 hours/week. The BYU team placed first at the Utah SRM state competition (Nov 2021) and fourth at the International SRM annual meeting competition (Feb 2022). I will continue to coach the team for the foreseeable future. [REDACTED] and I organized students to attend the SRM annual meeting in 2022 held in Albuquerque, NM. While at the meeting, I worked with three BYU students who competed in extemporaneous speaking (one of which placed second) and was a judge for graduate student posters and the undergraduate rangeland cup posters. The BYU team won the 2022 SRM Trail Boss Award (the highest award presented to student teams at SRM). I worked with BYU faculty to plan our annual field trip to Lytle Ranch where we had over one hundred students join us to learn about plants and animals in the area. I reviewed journal articles for Western North American Naturalist, Rangeland Ecology and Management, USGS technical materials, and Native Plants Journal. Additionally, I was appointed to serve on the Society for Range Management nomination committee (term ending 2025).

*Areas for Development:* Although I have been active within my focal area and range society, I would like to become more familiar with the organization of the department, college, and university. I would like to learn more about the BYUs Office of Belonging. Starting Fall 2022, I incorporated the Statement of Belonging into a lab activity and would like to regularly discuss this important topic with students.

*Goals:*

- Actively participate in department and college meetings.
- Be involved in department and college committees as requested by my chair.
- Create more challenging plant identification exams for individual students who want to compete with top-tier universities at the Society for Range Management national meetings.
- Build a rapport with students and invite students to utilize office hours.
- Complete the Suicide Prevention training course (taught through the Instagram account @LiveOnUtah).