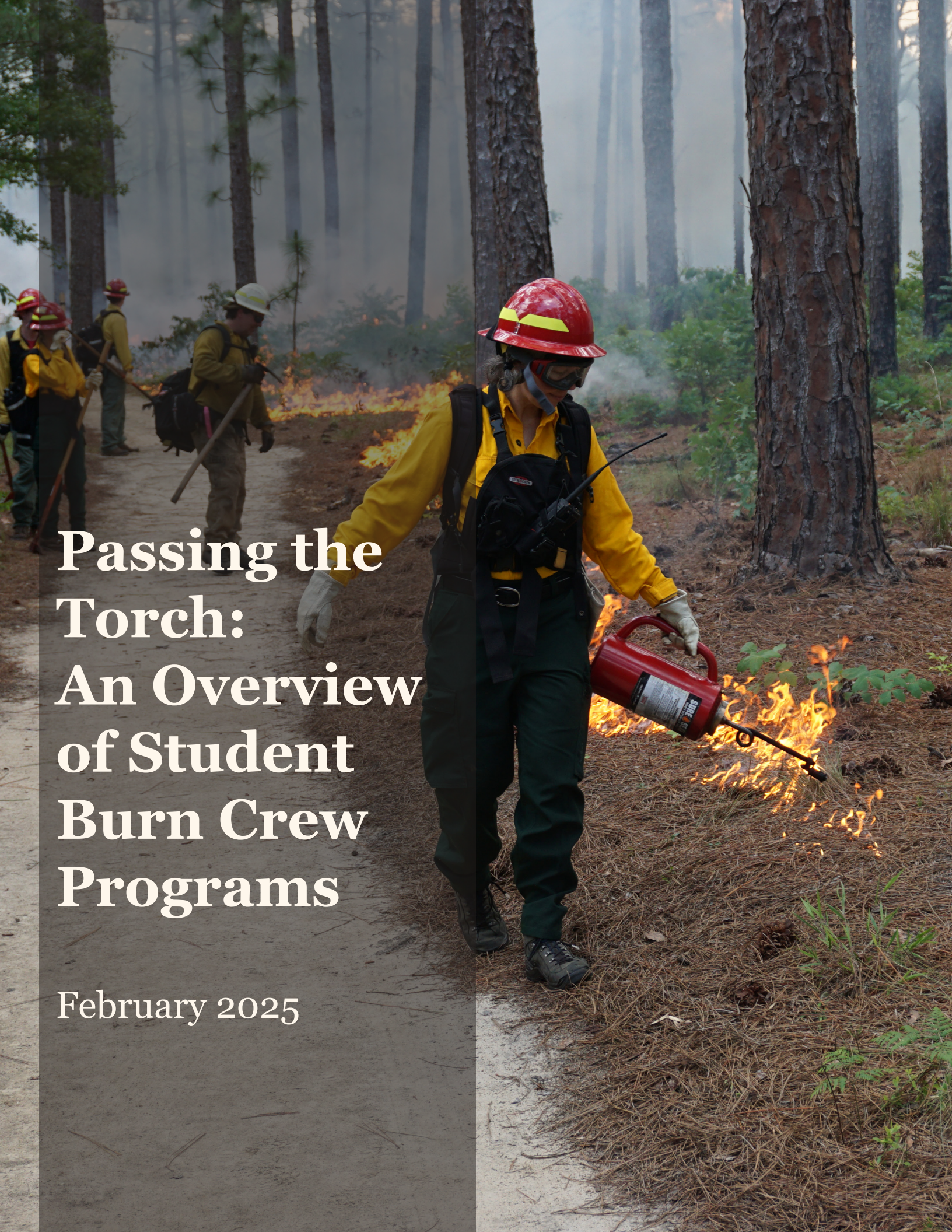

Passing the Torch: An Overview of Student Burn Crew Programs

February 2025

Photo by Dakota Wagner

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Table of Contents

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Foreword

As an undergraduate student at Warren Wilson College in North Carolina, I worked 15 hours a week operating chainsaws, milling lumber, and processing firewood on the campus Forestry Crew. During this time I was exposed to a number of different forestry occupations, including those in wildland fire management. We trained alongside agency firefighters from the local fire department, and conducted prescribed burns on campus. This experience inspired me to join a wildland firefighting engine crew in Oregon during the summer between my freshman and sophomore years. Without the opportunity to complete the required wildland firefighter training as part of my education, I likely wouldn't have pursued the job.

Nearly a decade later, I've been fortunate to build part of my professional career in fire ecology and management. I have a greater understanding of the wildfire crisis in our country, and the ongoing challenges of sustaining a workforce to address it. Like my experience at Warren Wilson College, we must continue to engage younger generations and make entry into these careers more accessible and enticing. It's encouraging to see the growing involvement of students in wildland fire through fire ecology clubs and hands-on student burn crews. And let's be honest—what's more exciting to a college student than the chance to set something on fire?

Dakota Wagner

NC Prescribed Fire Council President 2024-2025

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Executive Summary

Wildfire activity and the use of prescribed fire are increasing across the United States, yet the wildland firefighting workforce is struggling to keep pace. Many national, regional, state and local initiatives have been established to address these challenges. For example, the National Cohesive Wildland Fire Management Strategy, the SERPPAS Prescribed Fire Initiative, and the national Wildland Fire Mitigation and Management Commission's 2023 report recommend increasing training and educational opportunities to build capacity and expand the prescribed fire workforce, including for students, landowners, and underrepresented communities.

Colleges and universities are uniquely positioned to contribute to these regional and national-level efforts. By integrating hands-on fire management experiences into forestry and natural resources programs, institutions help meet workforce demands and prepare students to excel in technical fire management roles while developing critical soft skills such as communication, conflict management, and public engagement. This report discusses key considerations for establishing student burn crew programs and highlights existing programs, offering real-world examples to inspire readers to establish similar programs at their own institutions.

Key Considerations for Establishing a Student Burn Crew Program

- ***Funding***: Programs need tools, personal protective equipment, and possibly additional staff for training and burn operations. Grants, partnerships, and donations can offset costs.
- ***Liability***: Institutions must navigate legal considerations, particularly insurance and liability coverage for students participating in live fire activities. Operating under the supervision of a qualified burn boss, and/or classifying students as volunteers can mitigate risks.
- ***Training***: Students often need to obtain Firefighter Type 2 (FFT2) certification, requiring lectures, field training, and a physical fitness test. Training beyond the basics can bolster their skills. Partnering with local agencies can provide cost-effective training options.
- ***Scheduling***: Prescribed burns rely on narrow weather windows, creating potential conflicts with academic schedules. Flexible policies and innovative approaches—such as weekend burns or shared calendars —can address these challenges.

The Fire Pack. Photo by NCSU Extension Forestry.

Introduction

College is a place to deepen knowledge and learn new skills, both in the classroom and through experiential learning. Research consistently highlights the value of "active learning," where students engage in hands-on activities outside traditional lectures (Aupperlee 2021, Yannier et al 2021). This approach not only improves information retention but also keeps students more engaged in their education. For forestry and natural resources (FRNR) programs, hands-on experience is particularly meaningful, as being able to work outside is a significant motivator for many students pursuing FRNR degrees (Rouleau et al 2017). One of the most impactful ways to provide this experience can be through student burn crew programs, which offer students real-world training in wildland fire management. North Carolina State University (NCSU) began developing its student burn crew program in 2013. NCSU's efforts to improve and expand its student burn crew program prompted the question: are there similar initiatives across the country, and what are they doing to be successful? Recognizing the value of learning from other institutions, this report synthesizes those findings from existing and emerging programs and serves as a resource for other colleges and universities interested in establishing their own student burn crew programs.

Student burn crew programs have several benefits. Primarily, they equip students with valuable technical skills, preparing them to excel in the workforce. Employers generally view FRNR graduates as well-prepared in technical forestry competencies but lacking critical soft skills such as conflict management, workplace communication, and public engagement (Sample et al. 2015, Sharik et al 2015). These skills are important for success in high-stakes, real-world situations. By incorporating hands-on experiences like prescribed fire management into university programs, colleges can better prepare students to meet these challenges. In addition to improving workforce readiness, wildland firefighters with some college education earn approximately $10,000 more annually than those with only a high school diploma, according to crowd-sourced employment data (Zippia 2025).

Additionally, exposing students to career options in wildland firefighting may help address the wildland firefighter workforce challenge facing the United States today. As wildfire activity and the use of prescribed fire increases across the U.S., the demand for skilled practitioners continues to grow (Wildland Fire Leadership Council 2021, U.S. Department of the Interior). However, the current workforce faces a critical shortage, with employees leaving the field faster than they can be replaced (Zippia 2025). This gap threatens both wildfire suppression efforts and prescribed fire initiatives, as institutional knowledge and expertise are lost. To address this challenge, a number of multi-stakeholder partnerships (such as the National Cohesive Wildland Fire Management Strategy and SERPPAS Prescribed Fire Work Group) calls for comprehensive recruitment strategies to keep pace with workforce needs (Burke 2012, Wildland Fire Leadership Council 2023). The Prescribed Fire Management Strategy within America's Longleaf 2025-2029 Strategic Priorities and Actions document specifically recommends increasing capacity by engaging with students, and others outside the traditional

professional sphere, in training and development (report publication forthcoming).

In December 2021, the federal government established the Wildland Fire Mitigation and Management Commission to develop policy recommendations and strategies for preventing, managing, suppressing, and recovering from wildfires. Their 2023 report, The Report of the Wildland Fire Mitigation and Management Commission, highlights the need for a larger, well-trained workforce to advance wildfire mitigation and promote the use of prescribed fire (Commission 2023). Chapter 5, "Building a Comprehensive Workforce," emphasizes the importance of accessible training, increased funding, and clear career pathways to strengthen the non-federal workforce and support the next generation of fire practitioners. These recommendations, shaped in part by insights from young adults, underline the critical role colleges and universities can play in establishing student burn crew programs to meet this growing demand.

NCSU's efforts to develop its student burn crew program align with national priorities to address workforce shortages in wildland fire management. By incorporating hands-on training into their programs, colleges and universities can prepare students for careers in fire management while helping to meet the growing demand for skilled practitioners. This report explores the feasibility of establishing student burn crew programs, addressing key considerations such as training requirements, liability concerns, funding opportunities, and scheduling challenges.

AAMU FireDawgs student. Photo by Jeremy Whigham.

Student Burn Crew Programs in the United States

For the purpose of this report, a student burn crew program is defined as a school-based or school-sponsored initiative that provides students with the opportunity to actively participate in wildland fire management. While many fire management and fire ecology clubs exist, such as the national Student Association of Fire Ecology, this report focuses on programs that offer direct experience in prescribed fire operations or wildfire response outside of basic training.

Several colleges and universities across the U.S. operate active student burn crew programs, each tailored to their unique resources and partnerships. Some institutions manage prescribed burns on their own land, while others collaborate with state and local agencies through partnerships or Memorandums of Understanding (MOUs). These agreements often enable student crews to work under the supervision of agency personnel on both prescribed burns and wildfire incidents. Additionally, research for this report found there are many programs in early stages of development. For example, faculty at Oregon State University are actively building a partnership with the U.S. Forest Service (USFS) and anticipate establishing a student burn crew as early as spring 2025 in addition to their SAFE Club. Table 1 summarizes several student burn crew programs active in the continental U.S., with many new initiatives being launched or expanding as of the report's publication.

Student Association of Fire Ecology

The Student Association for Fire Ecology (SAFE) is the student affiliation of the Association for Fire Ecology. Established in 2000 by graduate students from the University of California, Berkeley, and the University of California, Davis, SAFE was founded by individuals from a variety of academic disciplines who shared a common passion for fire ecology. SAFE's mission is to provide an inclusive forum for students from diverse backgrounds to engage with fire ecology through research, networking, and access to funding and informational resources. SAFE operates through a network of university-based chapters, each guided by a faculty advisor. These chapters foster opportunities for hands-on training, field experiences, and leadership development.

Each SAFE chapter is unique. Some focus on active participation in prescribed burns and wildfire response, while others emphasize outreach, education, and professional networking. The national parent organization of SAFE also provides grants to support the activities of its local chapters, further empowering students to explore and contribute to the field of fire ecology. In 2024, there were 22 colleges and universities with active SAFE chapters.

https://fireecology.org/studentssafe

Table 1: Student Burn Crew Programs

University	Program Name	Start Year	Are burns conducted on university-owned land or off-campus?	Is FFT2 required?
Alabama A&M	FireDawgs	2009	Off-campus	It depends*
Auburn University	Wildland Fire Club	2020	Off-campus	Yes
Clemson University	Fire Tigers	2016	Both	Yes
NC State University	NCSU Fire Pack	2013	Both	Yes
Northern Arizona University	NAU SAFE Fire Lumberjacks	2000s	Off-campus	It depends
Southern Illinois University	Saluki FireDawgs	2001	Both	Yes
Stephen F. Austin State University	Student Fire Fighting Crew	2003	Off-campus	Yes
Texas Tech University	SAFE Chapter	2019	Off-campus	No
University of Idaho	Safe Club U-Iadho	1970s	Both	It depends
University of Kentucky	Fire Cats	2014	Off-campus	Yes
University of Missouri Columbia	SAFE Chapter	2009	Off-campus	It depends
University of the South	Sewanee Prescribed Fire Team	2016	On university owned-land	Yes
University of Wisconsin - Stephen's Point	UWSP Fire Crew	1986	Both	Yes
Utah State University	USU Fire Club	2018	Off-campus	It depends

*Training requirements vary for some schools depending on where students are conducting burns (e.g., on private versus public land). See *Feasibility: Training* for more details.

NCSU Fire Pack. Photo by NCSU Extension Forestry.

Feasibility

Establishing a student burn crew at a college or university comes with practical challenges. The most common barriers to implementing a university fire program are funding, liability, training, and scheduling, each of which is expanded on below.

Funding

Starting a student burn crew is an investment. While the initial costs may seem substantial, the long-term benefits outweigh the upfront expenses. The most significant expense, if not paying students as employees, involves the acquisition of tools and personal protective equipment (PPE). Essential items include drip torches, radios, fire shelters, and protective gear such as Nomex clothing, helmets, gloves, and boots. These items are critical for ensuring safety and compliance with fire management standards. Additionally, universities may need to hire extra staff to manage the burn crew, oversee training, or conduct burn operations.

To address these expenses, institutions can explore various funding sources, such as external grants, partnerships with fire management agencies, or donations from alumni and conservation organizations. Creative funding strategies and collaborations can significantly reduce financial barriers, making the program more feasible and sustainable. For example, Clemson University received a federal diversity grant to purchase tools, equipment, and PPE to start their Fire Tigers student burn crew program.

Determining the funding requirements for establishing a student burn crew program depends on the desired number of students to be trained and actively involved in burn operations. Research indicates no consistent standard for the size of burn crews, nor a direct correlation between the size of a university's student body and the number of participants in student burn crew programs. These programs typically train anywhere from 10 to 100 students annually, with participation at individual burns ranging from as few as one to as many as 20 students.

Liability

Disclaimer: This document is provided for general information and educational purposes only. This paper should not be used as a substitute for legal advice from a licensed attorney. Readers should seek guidance from their insurance providers.

Working with fire inherently involves risk, and most higher education institutions carry general liability insurance that covers a broad range of potential claims, including injuries and property damage (Hoye 2023). In some cases, this coverage may already extend to wildland fire activities. The general liability coverage required for a university's fire program often depends on four key factors: the location of fire activities, the classification of students as volunteers or employees, the qualifications of the supervising burn boss, and whether students are involved in prescribed fire or wildfire response.

For universities that own land, management activities, such as prescribed burns, may already fall under existing general liability policies. Also, if students are participating as volunteers rather than paid employees, additional coverage may not be needed. In many cases, student

volunteers must be supervised by a qualified burn boss or burn manager, adding an extra layer of safety oversight. This supervision often eliminates the need for additional liability coverage. For example, at the University of the South, prescribed fire is a routine land management practice on its 10,000 acres of forestland. The university's student burn crew consists of volunteers who operate under the supervision of the Domain Manager, a university employee, meaning no additional liability coverage is necessary.

However, some situations may require additional coverage, particularly when student burn crews participate in wildfire incidents. Unlike prescribed fire, wildfire operations often carry a higher level of risk due to unpredictable fire behavior. As a result, it typically requires different liability coverage. For example, Alabama A&M University previously participated in wildfire response with the Alabama Forestry Commission but has temporarily paused as they assess the need for additional liability requirements.

Sewanee Prescribed Fire Team student conducting a prescribed burn. Photo by Nathan Wilson.

Prescribed fire liability differs from general liability in that it refers to the legal responsibility and potential consequences associated with conducting prescribed burns. For example, if a prescribed fire causes damage, either from escaping or due to smoke, the landowner or the burner may be held accountable. In most states, prescribed fire liability falls on the person in charge of the burn (i.e. burn manager or burn boss) and/or the landowner. Some states have statutes that address prescribed fire use and provide limitations on liability. This form of liability is particularly relevant for universities conducting burns on their own property or employing a burn manager/burn boss.

Training

Providing proper training for student burn crew members is critical. Professionally, to participate in wildfire management operations with most agencies, fire practitioners need to be certified as a National Wildfire Coordinating Group (NWCG) Firefighter Type 2 (FFT2). FFT2 training involves lecture-style instruction, a hands-on field day, and a physical fitness test. To become FFT2-certified, individuals must complete courses and training on fire behavior, the standardized incident command system, and situational awareness, decision-making, and teamwork in high-stress environments. Annual refreshers are required to maintain certification. An FFT2-certified firefighter can perform basic fireline duties, such as constructing firelines, igniting backfires, and extinguishing hotspots under supervision.

Many universities also require students to maintain this certification. For certification to be official, NWCG-certified instructors must teach the courses and lead the field day. Often, schools partner with local or regional fire agencies or non-government organizations to deliver the classroom training and instruct the field day. For example, NCSU partners with The Nature Conservancy (TNC), the NC Forest Service, and NC State Parks to conduct training, and incorporates it into their summer courses for sophomore FRNR students. Each student

that takes their "forestry summer camp" will come out with their FFT2 qualifications met. However, some student burn crew programs do not require full FFT2 certification or the fitness test, particularly when burns are conducted on private land or when students are paired with "burn mentors" that possess full qualifications.

Clemson Fire Tigers student. Photo by Helen Mohr.

Scheduling

The dynamic nature of fire poses a possible scheduling challenge. Conducting a prescribed burn is dependent on weather conditions, where burn windows can arise on short notice. Often, burn managers may not be able to identify a burn window until several days before the burn. This can conflict with the well-planned schedules of academic semesters. For a student burn crew program to be feasible, it must be flexible with organized coordination and communication.

Additionally, setting realistic expectations of how many burns can happen during a season is important. Both burn crew members and managers must understand that participation may be sporadic and that creating a culture of adaptability will be a key to success.

To address scheduling challenges, some universities offer course credit for participating in burn activities, integrating live fire experiences into semester-long classes as an introduction to wildland fire. Some schools focus on scheduling burn opportunities during school breaks or weekends, while others use shared calendars to coordinate student availability. For example, the University of Kentucky partners with the Kentucky Division of Forestry, where student crew members only assist in wildfire response on weekends to avoid conflicts with class schedules.

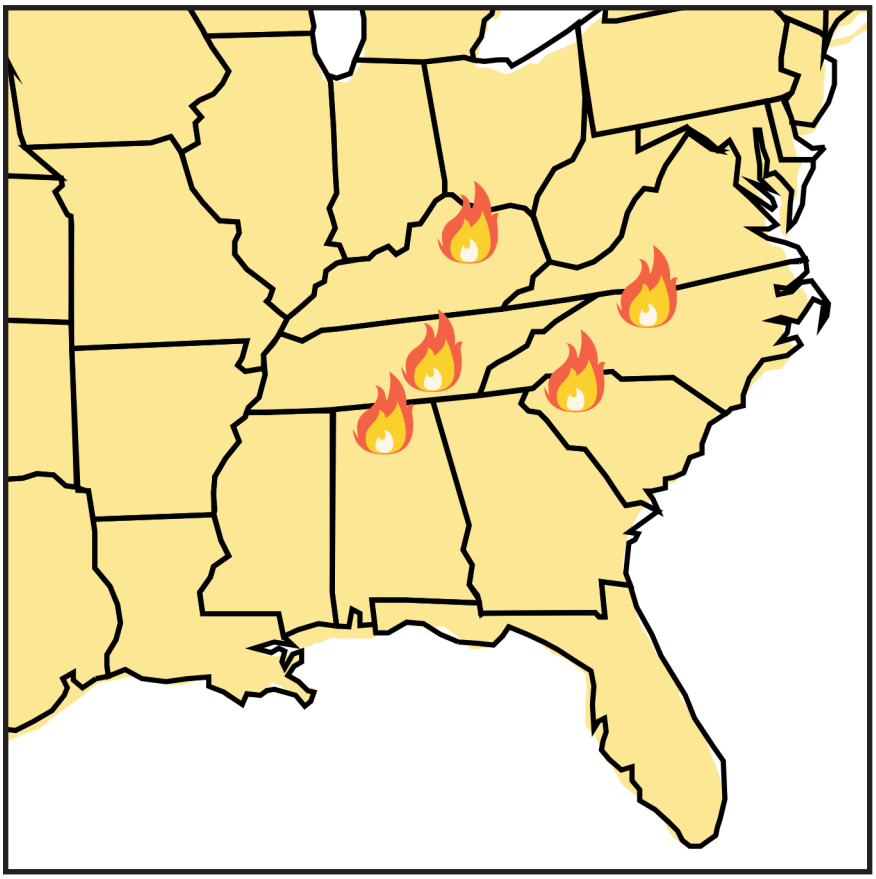
Conclusion

While there are several logistical considerations to starting a student burn crew program, many universities with existing programs have successfully developed creative solutions. This includes forming partnerships with local fire agencies, applying for grants, and adapting academic policies to support hands-on fire management experiences. With careful planning, these programs can provide great value to students, institutions, and the broader fire management community. The next section provides a deeper dive into five case study examples that have successful student burn crew programs.

Shortleaf savanna burn. Photo by Dakota Wagner.

Case Study Examples

While the format and functionality of student burn crews vary from one institution to the next, several programs from the Southeast are examples of how they can be successfully implemented.



University of Kentucky
Lexington, Kentucky

North Carolina State University
Raleigh, North Carolina

University of the South
Sewanee, Tennessee

Clemson University
Clemson, South Carolina

Alabama A&M University
Huntsville, Alabama

University of Kentucky

Fire Cats | *Lexington, KY*

Fire Cats on the job. Photo by University of Kentucky.

The UK Fire Cats program is a collaborative effort between the University of Kentucky's Department of Forestry and Natural Resources, the Kentucky Division of Forestry (KDF), and USFS. Its primary goal is to provide UK Forestry majors with hands-on wildland firefighting experience. Participation in the Fire Cats program is competitive. Each fall semester, students must apply for one of the 21 available positions. Eligibility requires full-time enrollment at the university and good academic standing, with a cumulative GPA of 2.0 or higher. The program focuses heavily on training, and preparing the students for careers in forestry and fire management. Even if there is not an active fire, the Fire Cats are involved in extra training such as chainsaw safety or equipment maintenance.

Funding. The program originated to address KDF's need to expand its wildfire response capacity. Recognizing the value of involving students, KDF invested in tools, equipment, and PPE for the Fire Cats to enhance their operational readiness. KDF provides all equipment and tools for the Fire Cats, as well as transportation.

Liability. Students are employed and paid as Emergency Fire Fighters by KDF, which assumes responsibility for liability, not the university.

Training. To join the crew, students must complete FFT2 training before the start of the fire season. This training is typically included in the credited course FOR 255 Forest Fire, often taken by freshmen and taught by the USFS.

Scheduling. As Emergency Firefighters, the crew provides relief to career firefighters and are on-call only on weekends during the fall and spring fire seasons, as this does not interfere with classes.

North Carolina State University

Fire Pack | *Raleigh, NC*

On the fireline at Goodwin Forest. Photo by NC State Extension Foresetry.

North Carolina State University has a SAFE Club and a student burn crew called the Fire Pack, with many students involved in both. While the SAFE Club is an official student organization led by student officers and advised by university staff, the Fire Pack functions as an extracurricular activity. NCSU owns two recreational forests and nine research forests, totaling nearly 94,000 acres within a three-hour radius of its main campus. The Fire Pack conducts prescribed burns primarily on G.W. Hill Forest and James Goodwin Forest, each about an hour from the main campus. Occasionally, partner agencies invite students to participate in their prescribed burns, further expanding their hands-on experience.

Funding. The costs of burning are primarily covered by NCSU's Forest Assets program, as it is a part of their general forest management operations. Additional support for student training and development comes from Extension Forestry and the Department of Forestry and Environmental Resources. Funding and direct donations of equipment, tools, and PPE come from a combination of private donations, grant funding, and other sources such as crowdfunding campaigns. They hope to receive a grant to bolster training opportunities and begin paying all student burn crew members in the future.

Liability. At the time of writing of this report, only students employed by NCSU's Forest Assets program are paid and covered by workers' compensation. Other students, as volunteers participating in an extracurricular activity, are not covered by the college's general liability insurance. However, all students are required to have health insurance which provides coverage for any potential injuries. Regarding prescribed fire liability, all operations are supervised by an NC Certified Burner, ensuring protections under the NC Prescribed Fire Act.

Training. All Fire Pack participants are required to have their FFT2 certification and pass the moderate or arduous pack test. Often, forestry students complete the required training during "summer camp," which counts as class credit. Most of the training is delivered asynchronously online via the NWCG Wildland Fire Learning Portal, followed by a hands-on field training day typically conducted in partnership with the North Carolina Forest Service, NC State Parks, or TNC. An MOU between NCSU and these organizations makes this possible.

Scheduling. The Fire Pack is coordinated by NCSU Extension Forestry staff. When burn opportunities arise, they touch base with the FFT2-qualified students to see who is available, usually with a few days advance notice, when possible. Burns occur during weekdays, and students are expected to be responsible for their own scheduling integrity, as well as checking out their own PPE from the equipment room. A burn typically proceeds regardless of the number of students in attendance as there are often enough resources available within Forest Assets and Extension Forestry.

University of the South

Sewanee Prescribed Fire Team | *Sewanee, TN*

The University of the South, commonly known as Sewanee, began using prescribed fire as a management tool on university-owned lands in 2010, with student involvement integral from the start. In 2015, the university expanded its program by offering wildland firefighter training and credentials to students interested in supporting prescribed burns. As of 2024, more than 500 students have earned their FFT2 certification and participated in prescribed fire activities on Sewanee's 10,000+ acres of forestland. Participants come from a wide range of academic disciplines—not only FRNR but also fields like history and philosophy.

Carrying the torch. Photo by Nathan Wilson.

Funding. The primary expense for the Prescribed Fire Team is purchasing and maintenance of PPE and fire tools. PPE is sourced from a combination of donations from local agencies and grant funding. The program is currently equipped to outfit 20 students in full PPE.

Liability. At Sewanee, Burn Crew members are classified as volunteers. Additionally, prescribed fire is considered a 'normal activity' under the university's general liability insurance, as it aligns with forest management goals to maintain a healthy landscape. This eliminates the need for additional liability coverage.

Training. All Burn Crew participants are required to have their FFT2 certification. Initially, FFT2 training for the students was conducted by the USFS and occurs outside of normal classroom hours. In recent years, national nonprofits such as Tall Timbers and The Ember Alliance, and other agencies, including the Tennessee Division of Forestry, have taken on this role. Partnerships with organizations like the local fire department and TNC further enhance training opportunities, allowing students to assist with state wildfire response and participate in burns on TNC-managed preserves.

Scheduling. Scheduling burns depends on student availability. At the start of each semester, students fill out a shared calendar indicating their free time. When a burn window opens, the student burn crew manager reviews the calendar to assess crew availability and emails the students who are free. If there aren't enough students available to staff the crew, the burn is postponed, even if conditions are ideal.

Clemson University

Fire Tigers | *Clemson, SC*

The Fire Tigers during S-130/190. Photo by Helen Mohr.

The Fire Tigers is a student burn crew composed primarily of FRNR students at Clemson University. Clemson University collaborates with the USFS to provide students with hands-on wildland fire experience and adhere to the same guidelines, certifications, and organizational systems used by professional fire fighters. Through this partnership, Fire Tigers assist the USFS with prescribed burns and wildfire response in the Andrew Pickens Ranger District of the Sumter National Forest in South Carolina. Note that the 17,500-acre Clemson Experimental Forest is managed with prescribed fire by the Forest Assets Crew. Fire Tigers may volunteer on prescribed burns, but the Forest Assets Crew is separate from the Fire Tigers program affiliated with the USFS.

Funding. The Fire Tigers program was established in response to concerns among local fire management professionals about the potential loss of institutional knowledge and progress in fire science as seasoned practitioners retire. A federal diversity grant awarded to Clemson University helped fund essential equipment for the program.

Liability. Students in the program are volunteers and are supervised by a USFS Crew Boss, which alleviates Clemson University of additional liability coverage.

Training. All Fire Tigers participants are required to have their FFT2 certification. Students complete basic wildland fire training through the partnership with the USFS.

Scheduling. Once students complete their training, participation is straightforward. The Fire Tigers coordinator messages students the day before they are dispatched, asking who wants to join the crew. Whoever is available and responds has a spot on the fire engine the next day.

Alabama A&M University

FireDawgs | *Huntsville, AL*

FireDawgs with their engine. Photo from Jeremy Whigham.

The Alabama A&M (AAMU) FireDawgs program was established in 2009 to prepare students for careers in wildfire management. Student burn crew members primarily consist of forestry majors. As the only historically Black college and university (HBCU) with an accredited forestry program, AAMU leads efforts to promote diversity in forestry and wildland fire careers. The FireDawgs primarily conduct prescribed burns for local private landowners, but have also historically supported the Alabama Forestry Commission in wildfire response. Additionally, prescribed burns are regularly conducted on AAMU's 972-acre Winfred Thomas Agricultural Research Station.

Funding. The program is partially funded by the USFS Southern Research Station, which covers the substantial training costs. Additional grants and partnerships, including agreements with Alabama State Parks and the Natural Resources Conservation Service (NRCS), support prescribed burns and educational outreach. The partnership with NRCS also provides stipends for a small number of exceptionally engaged students, allowing them to dedicate more time to the burn crew.

Liability. AAMU considers prescribed fire as part of its standard forestry career training, which is covered under the university's general liability policy. Even students receiving stipends are compensated under training agreements, rather than as payment for services rendered, maintaining the program's training-focused structure and eliminating the need for additional coverage.

Training. Through its partnership with the USFS, the FireDawgs program provides students with FFT2 training, which is required for full participation in fire operations. However, anyone interested in fire is invited to attend prescribed burns and may be on the fireline under the supervision of a qualified individual. This training pathway also creates opportunities for students to join established federal crews, furthering their career development in wildland fire management.

Scheduling. There are a variety of opportunities for students to be involved with the FireDawgs. A QR code posted on the program coordinator's door allows interested students to add their email to a notification list. When burns are scheduled, students receive email invitations and can confirm their interest in participating. To minimize disruptions to class schedules, most burns are conducted locally. When not conducting burns, the FireDawgs engage in career outreach, visiting local K-12 schools to promote careers in forestry and other natural resources. This flexibility ensures students gain practical experience without compromising academic commitments.

Ignition. Photo by NCSU Extension Forestry.

Conclusion

Implementing student burn crew programs offers colleges and universities a way to enhance FRNR education, create career pathways for students, and address wildland firefighting workforce needs. While challenges exist, they can be addressed with careful planning, collaboration, and innovative approaches. The investment in these programs leads to meaningful outcomes—several alumni of the four case studies highlighted in this report went on to work professionally with state and federal fire agencies or pursued advanced degrees in fire ecology (Parks 2019).

Further research is needed to assess the long-term impact of student burn crews, including how participation influences career trajectories in fire and forest management. Collecting stories and data from program participants will provide valuable insights into their professional development and inform best practices for expanding and sustaining these initiatives. The FireGen Collaborative is one initiative working to fill this gap, conducting research on barriers to youth involvement in fire stewardship and maintaining a growing list of hands-on fire programs nationwide.[1] Their work aligns with the goals of this report and will help expand knowledge on effective fire education and training strategies for students.

A key takeaway from the research conducted to complete this report is that all programs, including those that did not meet this report's definition of a student burn crew program, are making valuable contributions to student engagement in wildland fire. A variety of colleges and universities have clubs or interest groups that connect students with fire management. Some focus on introducing students to fire science and career pathways, while others also include hands-on training. For example, Fort Valley State University recently launched the FireCats Club, which educates students on prescribed fire in longleaf pine ecosystems (Diehl 2024). One of the club's first events will be a "learn and burn," where students can observe a live prescribed burn. Formed in partnership with the National Wildlife Federation, this initiative demonstrates that even small steps—such as starting a fire-focused student club—can provide meaningful exposure to fire stewardship. Institutions that may not yet be ready to establish a full student burn crew can start with initiatives like SAFE clubs or other fire-related student organizations, which can serve as stepping stones toward more hands-on training opportunities in the future. By investing in these programs, colleges and universities play a vital role in preparing the next generation of fire professionals and land stewards.

1 To add to their list of hands-on school fire programs, visit https://docs.google.com/forms/d/e/1FAIpQLScT-e0zO38jEV_Y9xkTlyvM-sBBtLLmEeANMZxYyB69ALIijg/viewform. To take the "Hands-On School Fire Program Survey" for leaders and coordinators in school-based fire programs, visit https://docs.google.com/forms/d/e/1FAIpQLSecceTSlIZm-vZmoQP6KXlmFIGksKpZj_HnNgbzRr-obtcU82w/viewform.

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