Fire and its fundamental effects influence the plant community, as well as the structure and composition of plants and animals in the environment. Many plant species have adapted to depend on periodic fire to sustain their productivity and population. Prescribed fire serves as a necessary process, rejuvenating native perennial grasses and enhancing soil fertility and stimulating soil organisms in short-term pulses that can reduce competition for resources from woody species. Additionally, prescribed fire reduces accumulated fuel loads that build up over time, especially in wildland urban interface areas where wildfire mitigation is crucial.

Deciding to implement a prescribed fire is a serious undertaking, and a burn plan is key to determining the safest and easiest way to accomplish a prescribed burn before, during, and after the burn. Most importantly, a burn plan enables one to thoroughly consider each action before implementing the prescribed burn. The burn plan will help determine the location of the burn, the type of management required before burning, how to conduct the burn, when to burn, the environmental conditions under which the burn will be conducted. what should be done after the burn, and how to best meet burn goals. However, leading up to the day of the prescribed fire, a checklist should be thoroughly reviewed and assessed to determine critical elements, such as the weather conditions during which the burn will be conducted, the number of personnel and their duties, and the type, amount, and placement of equipment needed to safely conduct the burn. A checklist allows the burn boss to determine potential problems within or around the burn unit and how to reduce or eliminate them. Example: Brush piles are present along firebreaks and will be pushed a minimum of 300 feet inside the burn unit.

*Texas A&M AgriLife Extension Rangeland Wildlife and Fisheries Management Department Below are some general recommendations to review prior to implementing a prescribed fire. These are example items needed and tasks to be done prior to conducting the burn. The burn boss should review this list prior to conducting the burn to make sure everything is in order. This checklist is only a suggested starting place, and landowners should develop specific ranch guidelines and information for prescribed burn crews based on these guidelines. This information will be instrumental in building operations, tactics, and general ignition/suppression techniques of a prescribed fire, as well as any contingency operations, should they be required. All of these preparations will enhance communications and build healthy relationships that contribute to a successful prescribed fire culture. With each fire comes the responsibility for all continued prescribed fire use in the state, and every fire's first and most important goal should be safety.

Weather

- ► Are all required current and projected fire weather forecasts obtained, and are they favorable?
- Does the weather forecast 48 hours before and following ignitions align with the desired weather specified in the burn plan?
- Has a crew member been designated to document observed on-site weather conditions during the prescribed fire?

Equipment

- Are all personnel and equipment on-site available and operational?
- Are all suppression crew members familiar with operating the required equipment, and can they successfully start spray units, ATVs/UTVs, leaf blowers, saws, and engines?



- Has all fuel and oil been checked and topped off in all units and machines?
- ► Are all specific tools required to operate and/or make minor repairs for this equipment readily available, and do personnel know how to use them?
- Is there adequate personal protective equipment (PPE) available for all personnel who will be in immediate contact with either ignition or suppression efforts?
- Is there an adequate and readily obtainable supply of water onsite or nearby?

Crew Members

- ► Are there specific assigned roles for different crew members and a collective group awareness of potential contingency plans?
- ▶ Is one clearly identified burn boss established?
- How many crew members will execute the prescribed fire?
- Do crew members know each other's names and resources available?
- Have all personnel been briefed on their assignment, project objectives, safety hazards, escape routes, and safety zones?
- ► How will the crew communicate during the prescribed fire?
- Does every crew person have a legible map of the unit, utilizing unified location markers depicting corners, intersections, escape routes, and resources?
- Have any potential health risks or assets/resources from crew members been made aware?
- Are first aid supplies and sufficient hydration for all crew members readily available?
- Who is responsible for monitoring health and wellness for crew members?
- Are all crew members aware of the staging locations of equipment?
- ▶ Who is responsible for monitoring the fire until it is safely out or well contained within the prescribed area?

Ignition Plan

- ► Has the ignition sequence been appropriately conveyed to the burn crew?
- What sequence will the burn crew utilize to move/ shuttle around the burn unit igniting the fire, and what potential problems or hazardous areas exist that should be addressed?

Smoke Management

- ▶ Are all smoke management specifications met?
- Have sensitive smoke areas been identified and notified?
- Has a smoke dispersion map been built and evaluated?
- Is the weather forecast favorable for smoke dispersion following the prescribed fire?

Notifications

- ► Have all required notifications to county, state, and federal resources, neighbors, and smoke-sensitive areas been made?
- Are all permits and clearances obtained?
- Does the burn boss have neighbors' contact information or adjoining gate keys/combination lock codes?
- Are there absentee landowner neighbors? If so, has the burn boss had previous contact with them and exchanged information so that they can be notified and/or asked about access during an emergency?

Incident within an Incident

- What contingency fire plans are in place if a spot or escape fire occurs?
- What contingency plans are in place if there is a crew member emergency?
- What crew member is designated as a first responder?
- Are there adequate first aid supplies readily available (including re-hydration/cooling capacity)?
- Have all contingency resources been checked and confirmed as available?

Following the Prescribed Fire

- Post-fire assessments regarding what was planned, what happened, and what could have been done differently can be great learning opportunities.
- ▶ While patrolling for spots or potential problems along the firebreak, continue to also monitor the health and wellness of the crew.

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