

# Wisconsin Prescribed Fire Council

## Recommended Qualifications for Prescribed Fire Personnel

November 2020

### PURPOSE

The purpose of this guideline is to provide recommendations for knowledge, training and experience that personnel working on prescribed burns, including crew members, line bosses, and burn bosses, should have.

This guideline is intended to help meet the need for an alternative to the National Wildland Fire Coordinating Group (NWCG) qualification system, which is impractical for, or unavailable to, some prescribed fire practitioners in Wisconsin. The guideline is **not** intended to supplant or preempt the NWCG qualification standards, but to provide a parallel track for those for whom it is appropriate.

Adherence to this guideline is voluntary. It represents best practice for prescribed burns in Wisconsin based on input from a diverse group of experienced prescribed fire practitioners including representatives of government agencies, non-profit organizations, private contracting firms, and private landowners.

This guideline does not currently provide for certification of prescribed burn personnel.

This guideline includes recommendations for four participation levels:

- Crew Member Trainee
- Crew Member
- Line Boss
- Burn Boss

### APPLICATION

This guideline provides the minimum recommended standard for training and experience. Nothing in the guideline prevents any user from applying more stringent requirements as they see fit.

Users of the guideline should provide their own means of assessing compliance with the recommendations, as appropriate to their organizations.

The experience and qualifications of burn personnel should be assessed relative to the complexity and fuel types of the burns they will participate in. For example, a Burn Boss who is experienced leading burns of simple 5-acre prairies would need additional appropriate experience before leading a large burn with mixed fuel types and complex topography.

Ultimately, the entity responsible for a given prescribed burn determines who is qualified to participate in the burn. The Burn Boss has the final authority on what role an individual will perform on a burn, based on that person's training, experience, demonstrated capabilities, and other factors.

The guideline uses the term "Apprentice" to refer to an individual who is working toward qualification at the next higher participation level. An Apprentice operates at the participation level they are working to attain, and is guided and advised by a mentor who is qualified at that level.

## **CREW MEMBER TRAINEE**

**Description:** An individual with insufficient prescribed burning training or experience to qualify for the Crew Member classification may participate as a Crew Member Trainee. A Crew Member Trainee must be directly supervised at all times when participating in a burn by an experienced individual qualified as a Crew Member or higher. It is the burn boss's responsibility to assure that the pairing of mentor and trainee is safe and effective.

**Training Requirements:** A Crew Member Trainee must be given instructions on-site the day of the burn including the regular crew briefing, and at least the following specific instructions:

1. Chain of command
2. Communication protocols
3. Use of personal protective equipment
4. Use of assigned tools or equipment
5. Basic fire behavior and potential dangers
6. Lookouts, anchor points, communication, escape routes and safety zones (LACES)

A briefing sheet, that will provide recommended minimum basic information to should be shared with Crew Member Trainees prior to participation in a burn, is under development.

## **CREW MEMBER**

**Description:** This individual has the basic knowledge, gained from formal training and experience, to participate in prescribed burns and follow directions from more experienced personnel. Duties include ignition, holding, mop-up, suppression, monitoring, etc. under the direction of a Line Boss.

**Training and Experience Requirements.** To be qualified as a Crew Member, an individual must:

1. Have attended at least a one-day training course covering the learning objectives listed in Attachment A.
2. Have participated in at least three prescribed burns under the supervision of a qualified Crew Member or Line Boss.

OR

1. Have successfully completed the NWCG training requirements for Firefighter Type 2, consisting of the courses Firefighter Training (S-130), Introduction to Wildland Fire Behavior (S-190), Human Factors in the Wildland Fire Service (L-180), Introduction to Incident Command System (ICS-100), and National Incident Management System, An Introduction (IS-700).

## **LINE BOSS**

**Description:** A Line Boss (sometimes referred to as Squad Boss or Crew Boss) leads a squad of up to five Crew Members dedicated to a particular task such as igniting and holding one line of a prescribed burn, internal ignition, mop-up, suppression, etc. A Line Boss directs the work of, and ensures the safety of, their assigned personnel, coordinates operations with other Line Bosses and the Burn Boss, and takes appropriate action if fire escapes their portion of the line. The Line Boss should be knowledgeable and competent in ignition, holding operations, and suppression techniques. The Line Boss should possess leadership qualities to effectively lead other crew members.

**Experience Requirements.** To be qualified as a Line Boss, an individual must:

1. Be qualified as a Crew Member
2. Have participated in at least ten prescribed burns within the past three years as a trained Crew Member.
3. Have participated in at least three additional prescribed burns within the past three years as an Apprentice Line Boss, under the supervision of a qualified Line Boss. The Apprentice should demonstrate the knowledge, aptitude and skills described above for a Line Boss.

OR

1. Have successfully completed the NWCG requirement for Firefighter Type 1.

**Training Recommendations.** Prescribed burn experience is the most important qualification for a Line Boss. However, additional training is highly recommended, particularly in the topics of fire behavior, ignition operations, and leadership skills. The most effective Line Bosses will have completed some or all the following NWCG training courses, or their equivalents, in addition to their experience:

- Firefighter Type 1 (S131)
- Intermediate Wildland Fire Behavior (S-290)
- Firing Operations (S-219)
- Followership to Leadership (L-280)
- Portable Pumps and Water Use (S-211)

## **BURN BOSS**

**Description:** The Burn Boss leads the planning, implementation and full extinguishing of a burn, including all phases of permitting, planning, preparation, operations, safety, mop-up, post-burn monitoring and evaluation. The Burn Boss is the final authority on a burn. A Burn Boss should be:

- knowledgeable about fire ecology, burn objectives and fire effects
- familiar with applicable fire regulations and approval requirements,
- experienced at observing, reading, and predicting fire behavior,
- familiar with specific local conditions where they will be burning, including fuel types, weather patterns, topography, the ecology of habitat types, smoke management issues
- proficient in evaluating risk on the fireline,
- effective at communicating with and providing instructions to burn personnel
- skilled at leading and mentoring less-experienced crew members,
- effective at coordinating resources and thinking ahead
- knowledgeable about the vehicles and equipment used under their leadership,
- able to make important or critical decisions with limited or incomplete information.

**Complexity:** Burn Boss capabilities and experience should be assessed relative to the complexity and fuel types of the burns they will lead. For burn units in Wisconsin, relevant complexity and fuel type factors include, at a minimum:

- Topography: Hills, bluffs, flat
- Fuels: Wetland, Grassland, Deciduous Woodland, Coniferous Woodland, etc.
- Size: Small (<6 ac.), Medium (6-100 ac.), Large (100 – 300 ac.), Landscape (> 300 ac.)
- Equipment: Hand tools only or mechanized tools. Are ATVs, UTVs or trucks available? Is the unit accessible to them?

Other factors may also be relevant, especially on more complex burns. The TNC Fire Complexity Rating Worksheet (TNC 2007) includes the following 12 elements that influence the complexity of a burn:

1. Safety
2. Difficulty of Containment
3. Fuels and Fire Behavior
4. Wildland / Urban Interface
5. Objectives
6. Management Organization
7. Contingency Planning and Resources
8. Natural, Cultural, Social Values
9. Air Quality Values
10. Logistics
11. Tactical Operations
12. Cooperator Coordination

**Experience Requirements:** To be qualified as a Burn Boss in a given combination of complexity and fuel type factors (listed above), an individual must have the minimum following experience:

1. At least three years prescribed burn experience
2. Participated in at least 25 prescribed burns
3. Of these, at least five prescribed burns serving as a qualified Line Boss under the supervision of a qualified Burn Boss, and at least five prescribed burns serving as an Apprentice Burn Boss under the supervision of a qualified Burn Boss in units of appropriate complexity. The Apprentice should demonstrate the knowledge, aptitude and skills described above for a Burn Boss for the combination of burn unit factors desired.

**Training Recommendations.** A Burn Boss should have completed formal classroom training including the following courses:

- Training listed above for Crew Members and Line Bosses
- Introduction to Wildland Fire Behavior Calculations (S-390)
- Fireline Leadership (L-380)
- Prescribed Fire Implementation (RX-301)
- Prescribed Fire Plan Preparation (RX-341)

## REFERENCE

TNC, 2007. Fire Complexity Rating Worksheet.

[http://www.tncfiremanual.org/TNC\\_Complexity\\_Rating\\_Sept07.doc](http://www.tncfiremanual.org/TNC_Complexity_Rating_Sept07.doc), accessed 19 November 2020.