**Wildland Fuels Scientist Certification**

**Template for Core Competency Section of Application**

The table below lists the required set of core competencies for the Wildland Fuels Scientist Certification. In the right column of the table, please provide a narrative that explains how you meet the competency listed in that row. Make sure to include specific examples and details so the evaluator can properly assess your proficiency in each competency. You will be given 1 point for each competency you meet and a 0 for each competency you do not meet. You must score at least 14 points to receive a passing evaluation on this section of the application.

Applicant Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

| Core Competencies | Applicant Narrative |
| --- | --- |
| 1.1 | **Measure fuel loading**: Use of common fuel loading methodologies including Planar Intercept, Photoload, occular estimation and comparison to fuel loading photoguides.  |  |
| 1.2 | **Measure canopy fuels**: Ability to determine canopy bulk densities, canopy height, as well as other attributes leading to third dimension fire conditions.  |  |
| 1.3 | **Species identification:** Correct identification of locally relevant and common species  |  |
| 1.4 | **Dendrochronology**: Understand use of tree growth patterns and meaning for management. Using an increment borer; Interpreting fire return intervals, growth patterns and stand age determination; Stump interpretation. |  |
| 1.6 | **Fire Behavior Fuel Models**: Understanding of the standard 13 and 40 fuel models, as well as locally derived fuel models. |  |
| 1.8 | **Implementing Sampling Protocols**: Field-level vegetation/project objective monitoring; fuel moisture data collection; fuel model inputs; transects/intercept protocols; canopy loading protocols.  |  |
| 1.9 | **Design & Manage Sampling Protocols**: Work with specialists' to determine monitoring needs; design sampling protocols grounded in scientific literature; design implementable sampling designs.  |  |
| 1.10 | **Interpret and Report Collected Data**: Demonstrate understanding of collected data and it's meaning for operational considerations. Report the information in databases and internal/external communication routes.  |  |
| 2.1 | **Fuel manipulation techniques**: Demonstrated knowledge of standard fuels manipulation techniques such as thinning, chipping, piling, prescribed fire, etc.  |  |
| 2.6 | **Evaluate the success/failure of objectives**: Ability to identify objectives before and after fuels treatments and compare them to planning document standards. |  |
| 3.1 | **Application of Fire Ecology**: Demonstrate practical experience with incorporating fire ecology principles into project planning, implementation, and monitoring. Project consistency with known fire regimes, fire attributes, and ecosystem processes.  |  |
| 3.2 | **Fire Effects**: Demonstrate understanding of first and second order fire effects and it's application within fuels management.  |  |
| 3.3 | **Applied Fire Regime Management**: Demonstrate managing for a fire regime within current and projected-climate fire regime constraints.  |  |
| 3.5 | **Fire ecology/fuels research:** Design and implement scientifically rigorous studies or monitoring that address research questions related to fire ecology or fuels management. Demonstrate a publication history of related research. |  |
| 3.6 | **Analyze and interpret data**: Perform scientifically rigorous analysis of qualitative or quantitative data related to fire ecology or fuels management. Interpret results in the context of fuels management. |  |
| 4.1 | **Wildfire & Fuels Mgmt Policies**: Proficient understanding of local/state/territory/federal policies that affect the applicant's sphere of fuels management operations.  |  |
| 4.4 | **Communicate clearly orally**: Ability to verbally translate intent into action |  |
| 4.5 | **Communicate clearly in writing**: Ability to translate intent into action through writing |  |
| 4.6 | **Leadership Principles**: Demonstrate leadership principles by modeling professionalism in fire & fuels management through actions rooted in operational and scientific integrity.  |  |
| 4.8 | **Cross-Discipline Coordination**: Demonstrate an integrated process for conducting fuels management work, showing sensitivity and awareness of other ecosystem resources such as habitat, water, air quality, etc.  |  |
| Total Number of Competencies | 20 |
| 80% Threshold (Passing Score) | 16 |