APPENDIX A: DEMONSTRABLE CORE COMPETENCIES REQUIRED FOR WILDLAND FUELS CERTIFICATIONS

The table below lists the core competencies for the wildland fuels certifications, with the required competencies for each certification indicated by a "1" in the competency row.

There are 14 competencies required for the Fuels Technician, 28 for the Fuels Manager and the Senior Fuels Manager, 18 for the Fuels Scientist, and 19 for the Senior Fuels Scientist. Applicants will be evaluated based on the narrative they provide to describe how they meet each competency. Evaluators will give applicants a score of 1 for each met competency, and a 0 for unmet competencies. To receive a passing score, applicants must demonstrate knowledge, skills, and experience in at least 80% of the required competency areas for their chosen certification level. The certification committee sets the 80% threshold to be 11, 22, 14, and 15 competencies, respectively.

Core Competencies		Wildland Fuels Technician	Wildland Fuels Manager	Senior Wildland Fuels Manager	Wildland Fuels Scientist	Senior Wildland Fuels Scientist
1. Sampling and Monitoring						
1.1	**Measure fuel loading**: Use of common fuel loading methodologies including Planar Intercept, Photoload, occular estimation and comparison to fuel loading photoguides.	1	1	1	1	1
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	1	1	1	1
1.3	**Species identification:** Correct identification of locally relevant and common species	1	1	1	1	1
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	1	1	1
1.5	**Local-Unit Specific Measurements**: Local thresholds of concern; measurements relevant to the local ecology; custom fuel models; locally significant factors affecting fuel management projects.		1	1		

Core Competencies		Wildland Fuels Technician	Wildland Fuels Manager	Senior Wildland Fuels Manager	Wildland Fuels Scientist	Senior Wildland Fuels Scientist
1.6	**Fire Behavior Fuel Models**: Understanding of the standard 13 and 40 fuel models, as well as locally derived fuel models.	1	1	1	1	1
1.7	**Fuel moisture sampling**: Ability to implement and report fuel moisture sampling through oven-weight or other methodologies.	1	1	1		
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	1	1	1	1
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	1	1	1
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.		1	1	1	1
2. Fuels Management Fundamentals						
2.1	**Fuel manipulation techniques**: Demonstrated knowledge of standard fuels manipulation techniques such as thinning, chipping, piling, prescribed fire, etc.	1	1	1	1	1
2.2	**Implement the Fuels Project Plan:** Follow the implementation document to ensure consistency with project objectives, design features, mitigation measures. Be able to communicate that to contractors, staff, and/or cooperators.	1	1	1		

Core Competencies		Wildland Fuels Technician	Wildland Fuels Manager	Senior Wildland Fuels Manager	Wildland Fuels Scientist	Senior Wildland Fuels Scientist
2.3	**Design and Implement a Fuels Project:** Participate in the planning and analysis phases of project design. Demonstrate ability to migrate intent from planning/analysis documents into implementable actions.		1	1		
2.4	**Participate in Prescribed Burning:** Show participation in prescribed fire activities in an operational, monitoring, or command capacity.	1	1	1		
2.5	**Manage a Prescribed Fire Program**: Demonstrate oversight function for a prescribed fire program including planning, implementing, monitoring, and participation.		1	1		
2.6	**Evaluate the success/failure of objectives**: Ability to identify objectives before and after fuels treatments and compare them to planning document standards.	1	1	1	1	1
3. Fire Ecology						
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.	1	1	1	1	1
3.2	**Fire Effects**: Demonstrate understanding of first and second order fire effects and it's application within fuels management.	1	1	1	1	1
3.3	**Applied Fire Regime Management**: Demonstrate managing for a fire regime within current and projected-climate fire regime constraints.		1	1	1	1

Core Competencies		Wildland Fuels Technician	Wildland Fuels Manager	Senior Wildland Fuels Manager	Wildland Fuels Scientist	Senior Wildland Fuels Scientist
3.4	**Local Fire Ecology**: Incorporate locally-significant fire ecology drivers into the fuels management program. Incorporate known plant responses to fire and mechanical manipulation into project design.		1	1		
4. Fuels Program 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.		1	1	1	1
4.2	**Land Management Planning**: Provide input to and/or participate in the interdisciplinary process of land management planning for fire and fuels management purposes.	1	1	1		
4.3	**Involvement with Environmental Analysis**: Direct involvement in the analyzation of proposed land management actions through writing a specialist report or other contributory technical documents.		1	1		1
4.4	**Communicate clearly orally**: Ability to verbally translate intent into action		1	1	1	1
4.5	**Communicate clearly in writing**: Ability to translate intent into action through writing		1	1	1	1
4.6	**Leadership Principles**: Demonstrate leadership principles by modeling professionalism in fire & fuels management through actions rooted in operational and scientific integrity.	1	1	1	1	1

Core Competencies		Wildland Fuels Technician	Wildland Fuels Manager	Senior Wildland Fuels Manager	Wildland Fuels Scientist	Senior Wildland Fuels Scientist
4.7	**Fuels Program Budget**: Oversee expenditures associated with project planning and/or implementation. Ensure that available funding is leveraged efficiently and appropriately to reduce waste and maximize the public benefit.		1	1		
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.		1	1	1	1
Total Number of Competencies		14	28	28	18	19
80% Threshold (required minimum score to pass competency section of application)		11	22	22	14	15