**Classification:** Natural Resources Research Scientist - Advanced  
**Working Title:** Fire/Landscape Disturbance Researcher  
**Location:** Madison or Rhinelander

**POSITION SUMMARY:** The Fire/Landscape Disturbance Researcher conducts and directs applied research and studies on complex fire, disturbance, forest management, climate change, and ecology interactions, overseeing all phases of investigations and projects. This position requires an advanced level of technical knowledge and experience in the field of fire science, forest disturbance, and forest ecology, with a strategic focus on silviculture, forested ecosystems, and forest management issues in Wisconsin. The Fire/Landscape Disturbance Researcher works independently to provide an interface between fire science and disturbance and its application to forest management, planning, policy and administration. Specific focus areas will change over time depending on priority needs of the Department. Current priorities include analysis of: the efficacy of prescribed fire as a management tool including evaluation of seasonality and intensity of fire use and resulting impacts; prioritization of statewide prescribed fire use; the use of landscape-scale modeling of fire regimes and current wildfire risk/hazards; historic patterns of fire and disturbance in forested ecosystems and the relationship to current management tools and goals; the study of forest growth and development (dendroecology); and, the effects of invasive plants/insects/pests/pathogens on forest composition and use of management tools.

The Fire/Landscape Disturbance Researcher is the technical expert for the Division on fire and disturbance ecology issues, setting the pace for the Division through leadership, innovation, adaptation, best practices, and transfer of knowledge. The Fire/Landscape Disturbance Researcher addresses emerging management priorities in forestry and identifies future research and information needs. This position is a key internal and external consultant for staff, leadership, inter-divisional teams, and partner groups. This position maintains cutting-edge knowledge and expertise by staying abreast of current research and maintaining an effective professional network. The customer base for this position is 450-500 Division staff, including three central office bureaus and four districts, as well as colleagues throughout the Department, other agencies, and key partner groups, including Wisconsin Council on Forestry.

**LOCATION, GEOGRAPHIC SCOPE, & TRAVEL REQUIREMENTS:** This position is located in Madison at the Science Operations Center, in Madison at GEF2, or in Rhinelander at the Forestry Headquarters with responsibilities statewide. Travel may be frequent to study areas to manage research projects and collaborate with partners and the public. Travel locations will vary depending on the projects. Occasional travel to other locations within the state will be necessary for meetings, conferences, and collaboration with colleagues.

**SCOPE OF AUTHORITY:** This position works under the general supervision of the Forest Economics & Ecology Section Chief within the Bureau of Applied Forestry. The Fire/Landscape Disturbance Researcher may direct the work of LTEs, student interns and other personnel.

**GOALS & ACTIVITIES:**

**40% A. Conduct and Coordinate Research Activities**  
A1. Act as primary expert on fire, forest disturbance, dendroecology, forest management, and ecology issues.  
A2. Provide research and information, analysis and evaluation of prescribed fire, historic forest disturbance regimes, wildfire risk/hazards, and ecology issues to inform decision making processes regarding forest-related activities in Wisconsin.
A3. Work in close collaboration with natural resource managers, Researchers, planners and administrators to evaluate research and information needs, design projects and convey results from internal and external applied studies focused on fire, disturbance, and forestry-related management and ecological issues.

A4. Coordinate statewide and Lake States efforts to research and study factors impacting prescribed fire use and prioritization, wildfire risk/hazards, forest disturbance, forest management, climate change and ecosystems. Use information to inform national-level strategic planning around fire.

A5. Organize and direct multidisciplinary and multi-agency teams related to fire, forest management and ecology for planning, policy and administration of programs.

A6. Coordinate and write proposals for outside funding for studies and research projects, and administer grants and contracts.

35% B. Provide Technical Assistance, Coordination and Consultation

B1. Synthesize existing and new research information and share this information with the Division of Forestry, the Department, other agencies, and key partner groups, including Wisconsin Council on Forestry, through personal appearances, field workshops, symposia, management publications, and peer-reviewed scientific journals.

B2. Interpret research results through thorough review of scientific literature, personal communication with other state, national and international professionals, and personal expertise in the subject matter.

B3. Publish timely technical papers in journals and non-technical reports that objectively convey research findings to field managers, administrators, the scientific community and the general public.

B4. Maintain and expand knowledge of fire and forest disturbance issues, especially fire science, disturbance ecology including impacts of invasive pest/diseases, silviculture and harvesting practices, habitat associations, and land classifications; scientific procedures and tools, including multi-scale modelling, advanced statistical design and sampling, data analysis, GIS, and remote sensing; and land management policies, programs, and practices.

B5. Give presentations, conduct workshops, and communicate with program managers to ensure the results of research are known and applied in future management strategies, where appropriate.

B6. Work with field foresters on silvicultural trials and demonstration projects. Evaluate the feasibility of proposed research projects and assist program administrators with priority assessments.

B7. Advise program managers on the collection of data and the development and management of databases.

10% C. Develop and Evaluate Policy

C1. Develop management policies and procedures for forest ecosystems at landscape- and site-level scales, considering maintenance of sustainable and diverse forests, forest commodity production, and wildlife habitat management.

C2. Evaluate the forest management and ecological implications of proposed and new legislation and regulations (local, state and, federal) that impact Division programs, forest industry, woodland owners, and forest resources.

C3. Assist with the development of legislation, rules, issue briefs, budget initiatives, or guidelines. Provide responses to legislative inquiries and letters to the Secretary.
C4. Prepare and present reports and issue briefs that provide counsel to Division Leadership for program direction and assist with problem solving. Assist in answering questions related to fire, forest disturbance, forest management and ecology that arise during the development of plans, policies, services, and regulations.

10%  D. **Develop and Maintain Internal and External Partnerships**

D1. Represent the Division of Forestry on internal and external teams, committees, and task forces as directed and provide expert consultation.

D2. Establish and maintain working relationships with staff from other government departments and agencies, academia, industry, and associations to assess current and potential information regarding fire science and disturbance ecology, forest management, silviculture, and other forestry-related concerns.

D3. Develop and maintain effective working partnerships with regional partners.

5%  E. **Provide Organizational Responsiveness**

E1. Review and keep abreast of changes in knowledge and practices of position-related activities in responsibilities.

E2. Participate in job-related training and organizational meetings as assigned by supervisor.

E3. Follow all general and position-related safety requirements.

E4. Perform other position-related duties as assigned.

**SPECIAL REQUIREMENTS:**

- Must meet the requirements for traveling and operating a State vehicle, including the ability to obtain and maintain a valid Wisconsin driver's license.

**KNOWLEDGE, SKILLS AND ABILITIES:**

*Upon Appointment*

1. Knowledge and skill in fire science, dendrochronology, forest management, silviculture, forest ecology, landscape ecology, conservation biology, climate change, and ecosystem management principles, theories, and practices.

2. Knowledge and skill related to scientific communication techniques, both verbal and written.

3. Skills in advanced statistical analysis, experimental design, data collection and interpretation of data and research results.

4. Knowledge of adaptive management principles to test management options.

5. Knowledge of and skill in project management, including consistent methodology, collection of quality data, budgeting, project personnel management, monitoring progress to assure achievement of objectives with prescribed work schedules, and administering grants and contracts to complete projects.

*Full Performance*

1. Knowledge and skills for effective team management, conflict resolution, group motivational techniques, and collaborative procedures

2. Knowledge of Department, university and other agency organization and communication channels for advising officials and field personnel on forest management

3. Knowledge of Department functions, goals, policies, and objectives

4. Skills in citizen participation principles

5. Skills in strategic planning
6. Knowledge of Statue and rule promulgation procedures

**PHYSICAL REQUIREMENTS & ENVIRONMENTAL FACTORS**: Physical requirements include talking in front of groups, sitting for long periods of time, lifting and carrying 5 to 100 lb., carrying heavy field equipment into remote areas, and walking several miles over rough terrain in adverse weather conditions. Environmental factors include working indoors in an office setting, and working outdoors for several weeks or more (being exposed to cold temperature below 32 degrees for periods of several weeks or being exposed to possibly extreme heat above 100 degrees for periods of more than one hour), and independently traveling around the state.

**EQUIPMENT USED**: Office equipment, hand tools, motorized equipment, ATV, GPS/navigational equipment, power tools including chain saws, electronic equipment, radios, monitoring and sampling devices, and specialized scientific equipment such as canopy cameras, telemetry receivers and lab equipment. Incumbent may be asked to fly in helicopters or low-flying fixed-wing aircraft to do aerial surveys or assessments.

**TELEWORK EVALUATION**: The duties and responsibilities of this position would be suitable for telecommuting occasionally from an alternative office location.
PD Addendum of WI DNR Competencies

**Service Excellence for Customers & Partners**
- Make excellent customer/partner service a top priority and actively seek to improve it.
- Work to identify and understand the needs of others and strive to create the most value for them, focusing on their satisfaction.
- Responsive to changes in customer/partner goals, deliver on promises, follow-up appropriately thus service delivery is marked by fairness, integrity, high ethical standards and the utmost respect for others in order to generate trust as an outcome.
- Actively seeks to achieve results that best strike the balance with the Division's service role and regulatory authority with the customer/partner goals.

**Effective & Fair Decision Making**
- Analyze situations fully and accurately to reach productive, and where appropriate, uniform decisions. Consult appropriate parties/stakeholders as necessary and identify the key concerns and/or issues that need to be addressed in order to make the best decision possible.
- Discern the pertinent facts and develop clearly based objective criteria.
- Make timely, well-reasoned decisions by integrating information and perspectives appropriately.
- Evaluate the immediate and longer-term consequences of decisions.
- Use sound professional judgment in their analyses and decisions.

**Effective Communication**
- Express ideas in a clear, concise, and effective manner, both orally and in writing.
- Ability to present, facilitate and instruct as part of staff meetings and partner activities.
- Use correct grammar and sentence structure in communications.
- Strong listening skills, particularly when different viewpoints are expressed.
- Openly share information, transparent and keep all concerned parties informed.

**Interpersonal Relationships & Partnership Building**
- Build and effectively utilize relationships and influence networks to achieve goals.
- Share knowledge and build trust with colleagues, managers and external partners.
- Tactful when dealing with sensitive issues and personalities.
- Exercise social intelligence: have a high level of self-awareness, are aware of impact on others.
- Work through complex situations effectively, diplomatically and with sensitivity without losing credibility or trust.
- Recognize sensitive information and exercise discretion.
- Approach professional conflicts in a constructive manner. Refrain from personal attacks and excessive emotions.
- Demonstrate sound judgment under pressure and retain focus on desired business outcomes in difficult conditions.
- Proactive in addressing problems.
- Exemplify the commitment to the DNR's core value of respect- to work with people, to understand each other's views and to carry out the public will; maintain integrity and treat everyone with fairness, compassion, and dignity.
**Demonstrates Leadership**

- Establish vision, set direction and initiate strategy by analyzing forces and trends that impact the program. Anticipates future needs, challenges and identifies potential options and constraints; critically evaluates information to promote the most effective position.
- Identify the implications of decisions and actions on people, other parts of the organization, external partners and customers. Understand the abstract and think in terms of whole systems and complex interrelationships. Synthesize large, disparate bodies of information.
- Mobilize staff to face and tackle tough challenges. Facilitate staff through the change process by helping them to navigate loss and work through discomfort so that they can adapt to emerging conditions and see the potential within broader organizational strategies and priorities.
- Establish formal and informal relationships with others to provide feedback, information, support and resources to help them develop new or higher levels of skill and ability.
- Empower others to reach higher levels of performance through trust, delegation, participation and coaching.
- Provide direction, support and encouragement amongst their team colleagues and partners.
- Hold up high standards of excellence towards the accomplishment of desired outcomes and objectives.
- Inspire confidence and respect which is motivating for others, builds positivity; keep the team cohesive and partners confidently engaged.