



Environment and Natural Resources Trust Fund

2021 Request for Proposal

General Information

Proposal ID: 2021-389

Proposal Title: Firewise in the Classroom

Project Manager Information

Name: Casey McCoy

Organization: MN DNR - Forestry Division

Office Telephone: (651) 259-5288

Email: casey.mccoy@state.mn.us

Project Basic Information

Project Summary: This project provides a free, hands-on opportunity for high school students to learn or become more familiar with Geographic Information Systems (GIS) while gathering real wildfire risk data for communities.

Funds Requested: \$155,000

Proposed Project Completion: 2024-06-30

LCCMR Funding Category: Small Projects (H)

Secondary Category: Environmental Education (C)

Project Location

What is the best scale for describing where your work will take place?

Statewide

What is the best scale to describe the area impacted by your work?

Statewide

When will the work impact occur?

During the Project and In the Future

Narrative

Describe the opportunity or problem your proposal seeks to address. Include any relevant background information.

This proposal addresses two issues: communicating wildfire risk information to current and future homeowners, and maintaining two successful programs experiencing diminishing federal grant funding.

Public education is a critical piece of Firewise communities work. Since 1985, Minnesota has experienced an average of 1,350 wildfires annually, burning approximately 35,000 acres and damaging or destroying more than 50 homes and outbuildings. When homes are built in the woods or at the edge of an urban area, these properties become vulnerable to damage or destruction by wildfire.

Firewise in the Classroom has been operating for more than 15 years. Its goal is to coordinate and implement a formal Firewise Community Assessment curriculum with Minnesota high school educators. Since 2013, this program has produced almost 42,000 level 1 wildfire risk assessments, served more than 200 communities and interacted with 3,200 high school students and 85 fire departments.

The program is offered at no charge to all Minnesota schools. It has been funded through US Forest Service Wildfire Risk Reduction grants that have decreased more than 60% over the last 6-7 years, resulting in competition between this project and others that assist cities and counties in reducing hazardous fuels near homes.

What is your proposed solution to the problem or opportunity discussed above? i.e. What are you seeking funding to do? You will be asked to expand on this in Activities and Milestones.

This project will support delivery of the Firewise in the Classroom curriculum for 3-4 years (\$35,000-\$50,000 annual expenses). Expenses vary based on school/educator interest. Firewise in the Classroom provides a unique, hands-on opportunity for high school students to learn or become more familiar with Geographic Information Systems (GIS) while gathering real wildfire risk data for communities. Guided by a contracted project coordinator (available for distance learning or in-classroom as needed), the students will complete Level 1 wildfire risk assessments in selected areas or on selected homes. Their efforts will then be shared with and utilized by organizations such as DNR firefighters, fire departments, emergency managers and county Firewise coordinators, reducing planning time for communities and identifying areas of concern that should be addressed within a Community Wildfire Protection Plan (CWPP development will take place via alternate funding sources). The students (future homeowners themselves) will gain content knowledge (wildfire, GIS), learn and apply new skills and be exposed to potential career paths while providing valuable wildfire risk data to communities, emergency managers and fire departments.

What are the specific project outcomes as they relate to the public purpose of protection, conservation, preservation, and enhancement of the state's natural resources?

The project will be accomplished through specific outcomes in support of the overall goal of wildfire risk reduction. Reducing the wildfire risk to homes enables firefighters to focus on fire suppression, which in turn reduces wildfire size and the cost of suppression.

Specific annual outcomes will include program promotion to teachers/educators to generate interest including developing or delivering materials, supplies and informational brochures; scheduling, coordinating and conduct classroom sessions using lessons customized for each project/classroom; reviewing classroom generated data to ensure accuracy; coordinating with DNR and fire department staff; maintaining a website to provide information.

Activities and Milestones

Activity 1: School promotion, coordination and delivery

Activity Budget: \$107,990

Activity Description:

Promote the program to teachers/educators to generate interest in classroom sessions; including conferences, events and social media to identify teachers interested in having the curriculum become part of their class. Develop and deliver/ship/provide materials, supplies and informational brochures for project promotion. All documents provided in an accessible format. Schedule, coordinate and conduct GIS classroom sessions. Each school/classroom will involve the development of a custom lesson based on the current curriculum. The following topics will be included: introduction to wildfire (the physics of wildfire), introduction to Firewise principles, making sense of the public land survey system, conducting home wildfire risk assessments and GIS use, creating and presenting a community report (as appropriate). Live in-classroom delivery is preferred, however coordination will also include options for distance learning as needed by each school.

Activity Milestones:

Description	Completion Date
Interact (direct or distance) with 200 or more students (annual milestone)	2024-06-30
Deliver 8 or more GIS classroom or distance learning sessions (annual milestone)	2024-06-30
Promote program at 4 or more educator conferences (annual milestone)	2024-06-30

Activity 2: Coordination and communication with DNR staff, local fire department and other emergency response/planning agencies.

Activity Budget: \$47,010

Activity Description:

Coordinate with MNDNR Firewise Specialists to ensure quality of data collection. Review and approve classroom-generated data for format and accuracy. Coordinate with local fire department staff. Inform fire department staff about Firewise projects within their district. Explain the data and density surface mapping use in wildfire planning efforts. Develop and maintain a website to provide information on the project. The website will meet federal and state accessibility requirements so that people with cognitive, hearing, physical and visual disabilities can participate in the program.

Activity Milestones:

Description	Completion Date
Update online presence with current information on the project (quarterly or more)	2024-06-30
Inform and meet with fire department staff as appropriate/needed (annual milestone)	2024-06-30
Monthly coordination information with MNDNR Firewise Specialists (annual milestone)	2024-06-30

Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
MN Fire Departments	TBD	Fire department personnel are provided with the products of the program and utilize it to determine further need for risk reduction work within their fire districts. No funding is provided but they are an important partner in overall efforts.	No
MN Schools and Educators	TBD	Interact and work with MNDNR staff and/or contractor to perform level 1 risk assessments. Schools and teachers are the key partners in this project.	No

Long-Term Implementation and Funding

Describe how the results will be implemented and how any ongoing effort will be funded. If not already addressed as part of the project, how will findings, results, and products developed be implemented after project completion? If additional work is needed, how will this be funded?

This proposal will enable continuation of a long-term project. We are currently developing an upgraded web portal to share results and information with emergency response professionals as well as homeowners and the public. The intent is to continue this project as long as interest remains within Minnesota schools, so we are also identifying potential long-term funding solutions that do not currently exist. Current options are a return to federal WRR grants or development of a source of generated funding to support Firewise efforts.

Project Manager and Organization Qualifications

Project Manager Name: Casey McCoy

Job Title: Fire Prevention Supervisor

Provide description of the project manager's qualifications to manage the proposed project.

Casey currently manages 5-7 USDA Forest Service Wildfire Risk Reduction grants simultaneously (2-3 new grants annually). Each grant has a life span of 3-5 years. Funding is utilized for pass-through "sub-grants" to cities and counties to implement local wildfire risk reduction activities. Casey also supervises and works with three MNDNR Regional Firewise Communities Specialists to coordinate approximately 4-6 sub-grants, request for proposals or service level agreements processed through this funding annually.

Organization: MN DNR - Forestry Division

Organization Description:

The Division of Forestry protects and manages the trees, woodlands, and forests entrusted to us for the benefit of the people of Minnesota. In support of the DNR's mission, as forest stewards we strive to: provide our shared expertise to understand, sustain, and manage Minnesota's trees, woodlands, and forests; provide a sustainable supply of multiple forest resources and opportunities; protect lives and property from wildfires; fulfill responsibilities to the permanent school trust. Through the Prevention Program, the Division partners with agencies, municipalities, organizations, and homeowners to identify, plan for and reduce wildfire risk. Additionally, we manage grant funding intended to empower and support local groups to prepare Community Wildfire Protection Plans, reduce the amount of burnable materials around homes and in communities, and evaluate subdivisions and individual homes to help homeowners reduce their wildfire risk. More than 300 communities identified as at risk for wildfire in the Federal Register now operate under a Community Wildfire Protection Plan—a success we credit to the strong partnerships we've built.

Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
Personnel								
							Sub Total	-
Contracts and Services								
TBD	Professional or Technical Service Contract	All program delivery including coordination (school, agency, fire department), classroom instruction, verification of data, maintenance of online presence.				3		\$150,709
							Sub Total	\$150,709
Equipment, Tools, and Supplies								
							Sub Total	-
Capital Expenditures								
							Sub Total	-
Acquisitions and Stewardship								
							Sub Total	-
Travel In Minnesota								
							Sub Total	-
Travel Outside Minnesota								
							Sub Total	-
Printing and Publication								

							Sub Total	-
Other Expenses								
		DNR Direct & Necessary	DNR's direct and necessary costs pay for activities that are directly related to and necessary for accomplishing appropriated projects. HR Support (~\$0), Safety Support (~\$0), Financial Support (~\$1,818), Communication Support (~\$1,324), IT Support (~\$0), and Planning Support (~\$1,149).					\$4,291
							Sub Total	\$4,291
							Grand Total	\$155,000

Classified Staff or Generally Ineligible Expenses

Category/Name	Subcategory or Type	Description	Justification Ineligible Expense or Classified Staff Request
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Non ENRTF Funds

Category	Specific Source	Use	Status	Amount
State				
			State Sub Total	-
Non-State				
			Non State Sub Total	-
			Funds Total	-

Attachments

Required Attachments

Visual Component

File: [a6f35946-c99.pdf](#)

Alternate Text for Visual Component

Attached is a sample of the end product of this program showing the results of student efforts to assess wildfire risk, which is then shared with local emergency responders to inform decision making.

Administrative Use

Does your project include restoration or acquisition of land rights?

No

Does your project have patent, royalties, or revenue potential?

No

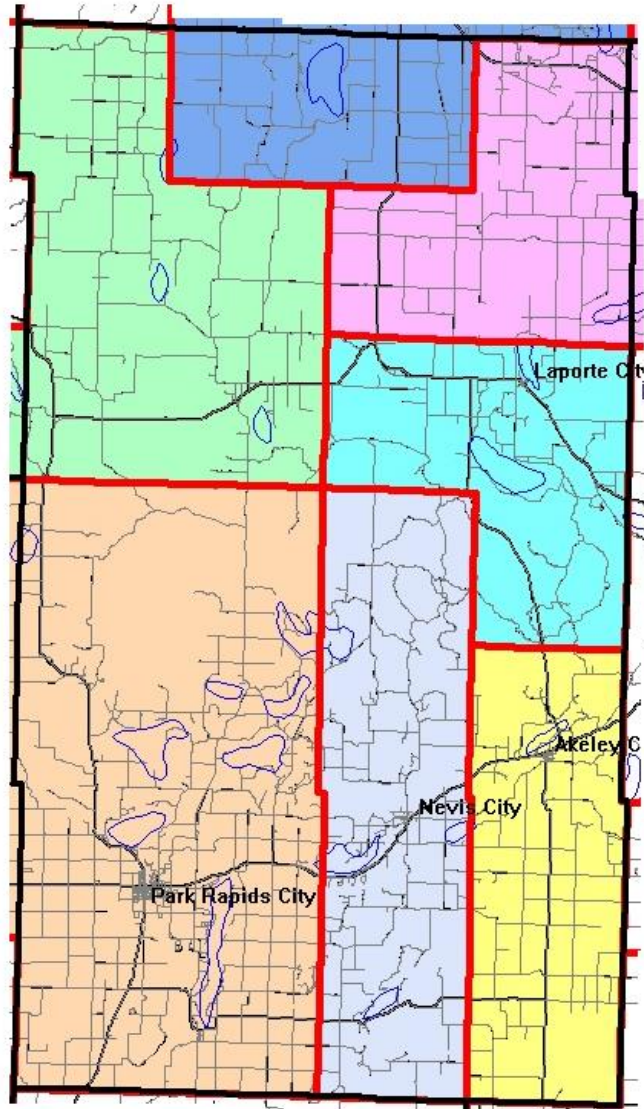
Does your project include research?

No

Does the organization have a fiscal agent for this project?

No

Hubbard County Fire Districts



Scale: 0 5 10 mi

MN DNR Firewise

Map Legend

- Bemidji
- Cass Lake
- Lake George
- Lakeport
- Nevis
- Park Rapids
- Eastern Hubbard County Fire Protection (Akley)

RFD/Forestry:

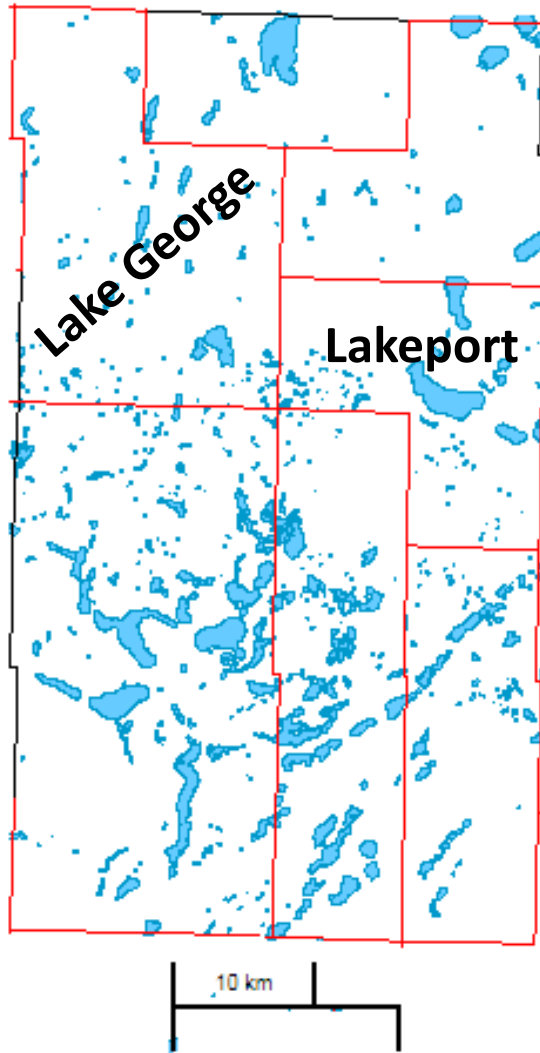
- RFD Boundaries
- Steams
- Lakes and Rivers
- Public Land Survey
- MNDOT County Highway Map

Residential Structures:

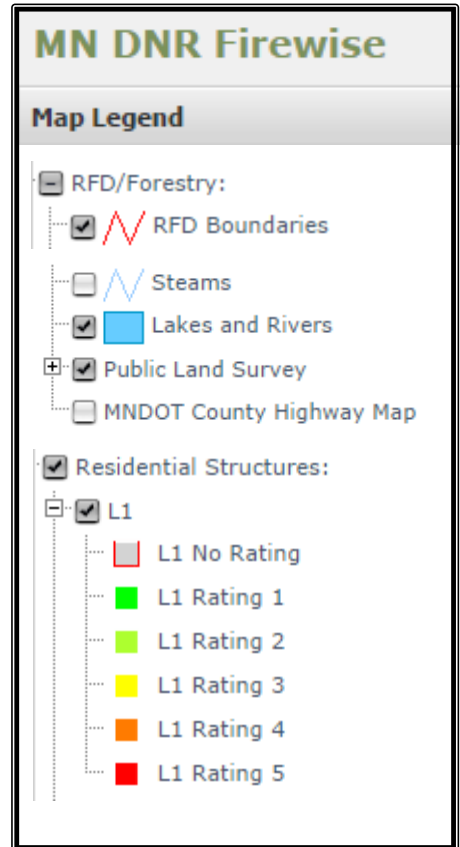
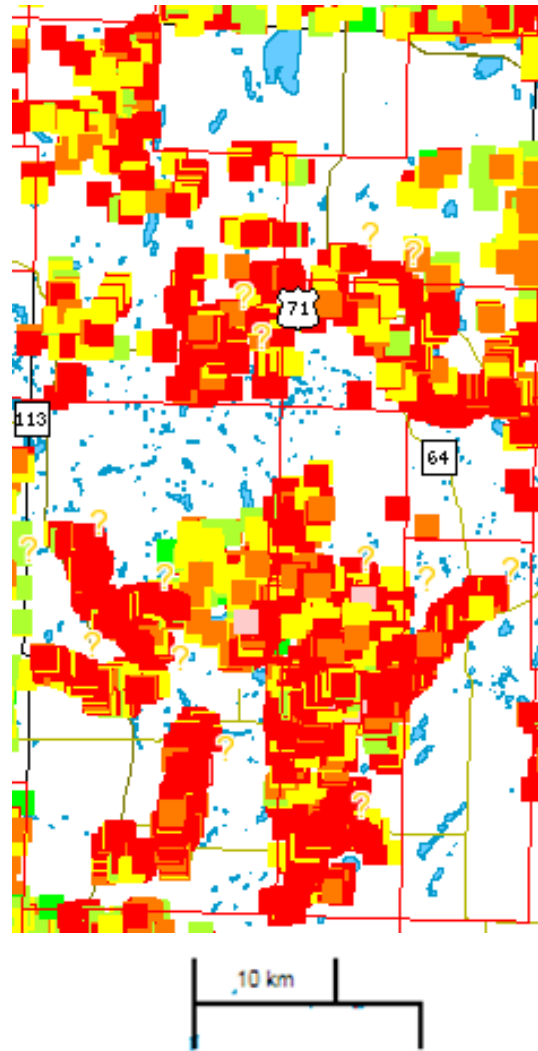
- L1
 - L1 No Rating
 - L1 Rating 1
 - L1 Rating 2
 - L1 Rating 3
 - L1 Rating 4
 - L1 Rating 5

Hubbard County Fire Districts

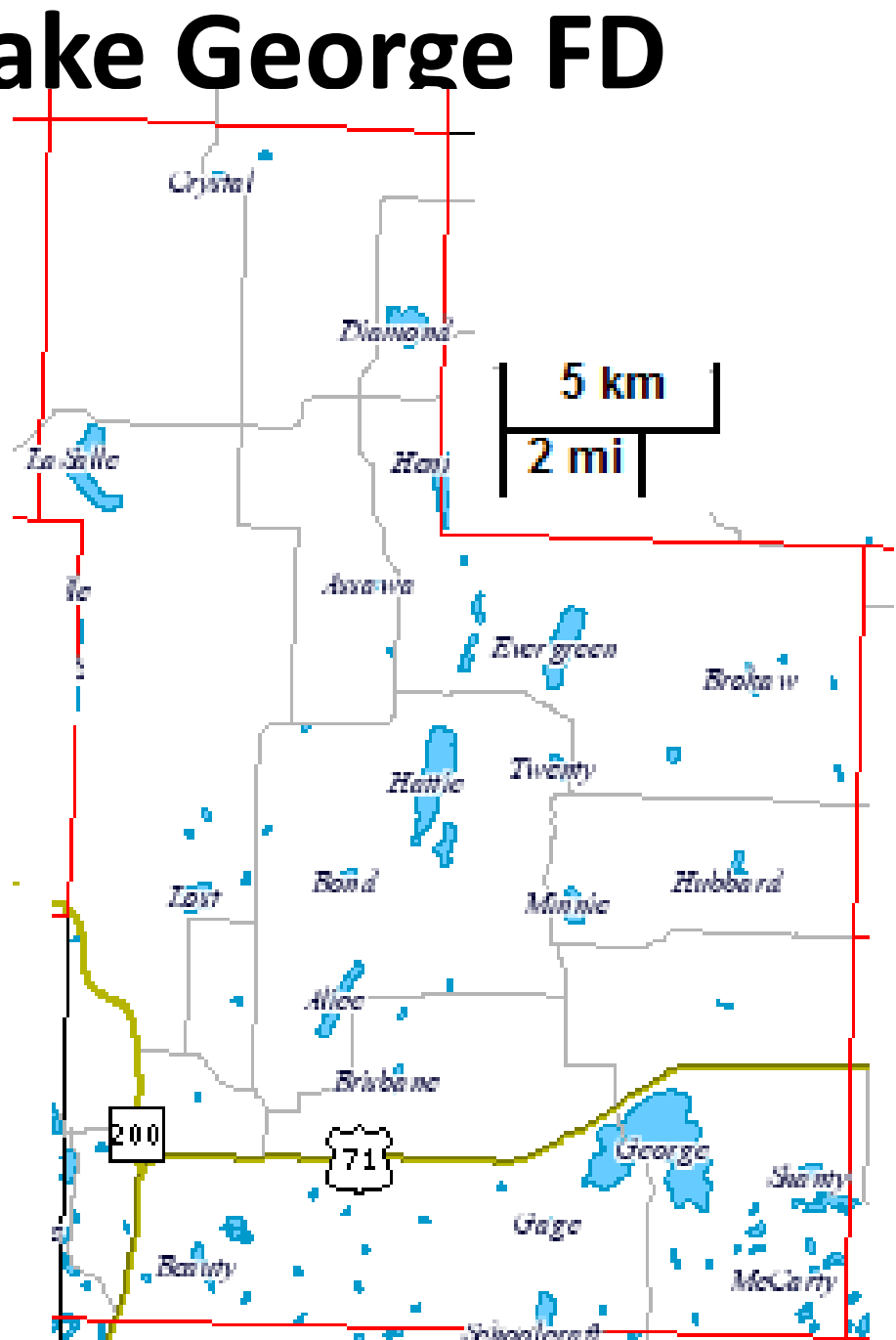
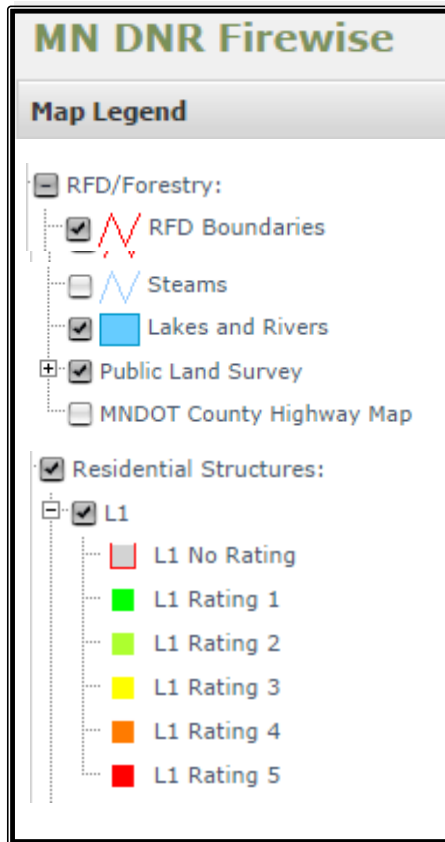
Fire Districts



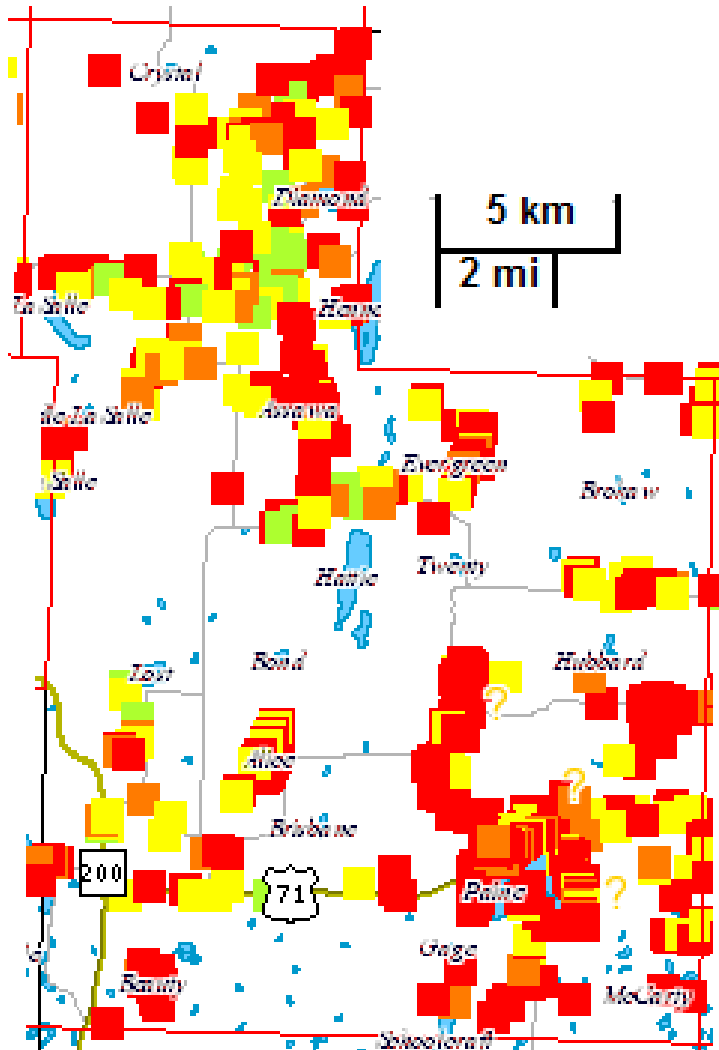
L1 Risk Assessments



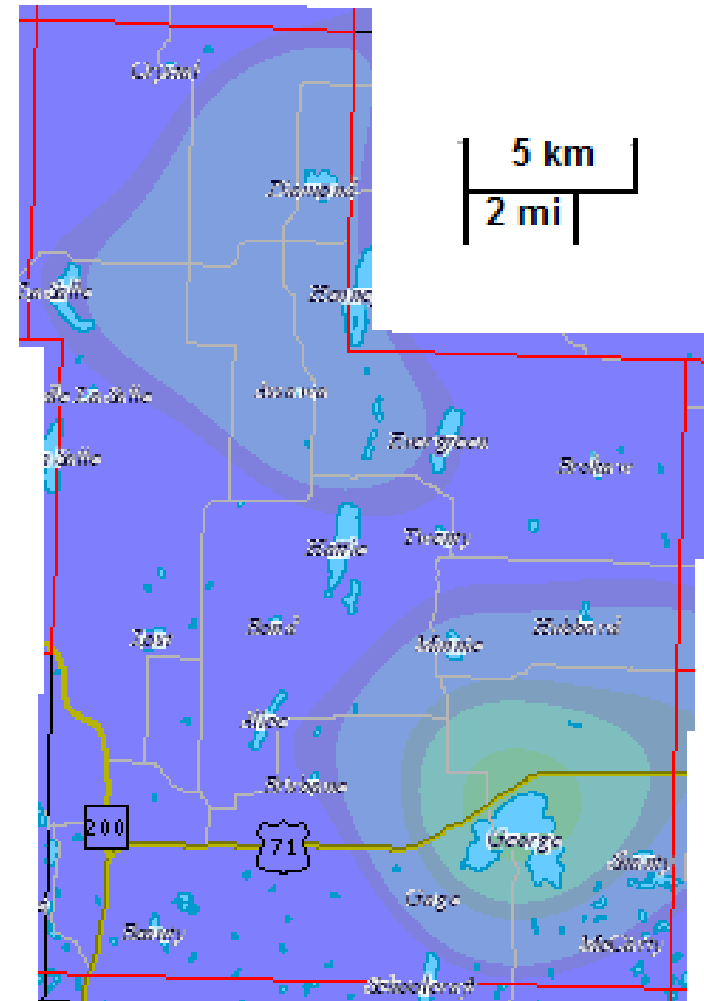
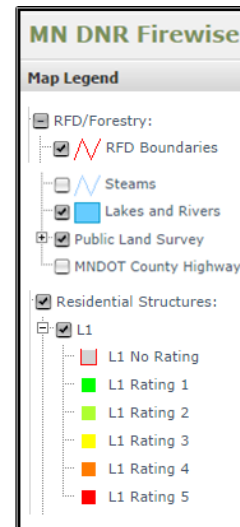
Lakes in Lake George FD



Lake George Fire District

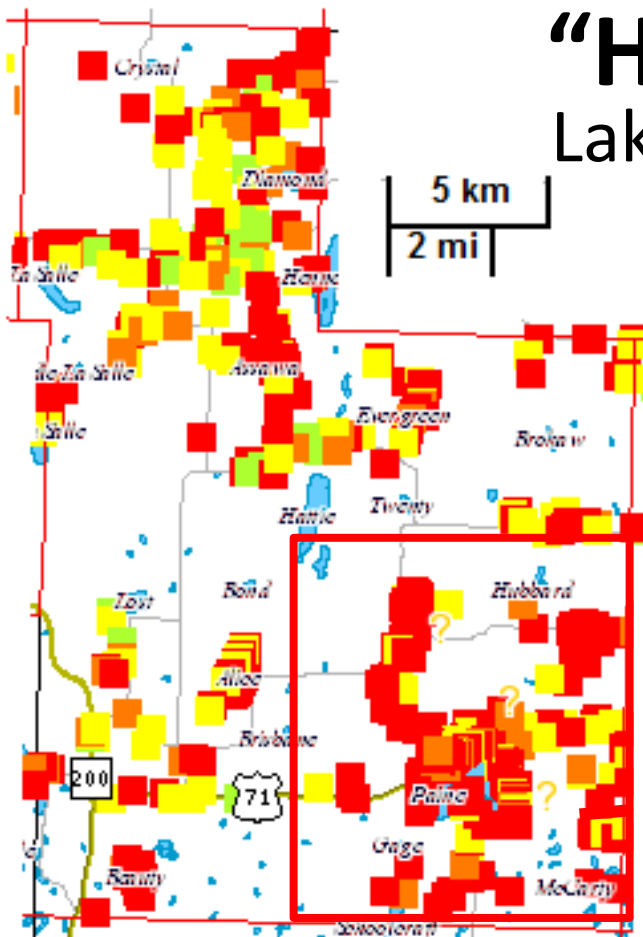


L1 Risk Assessment



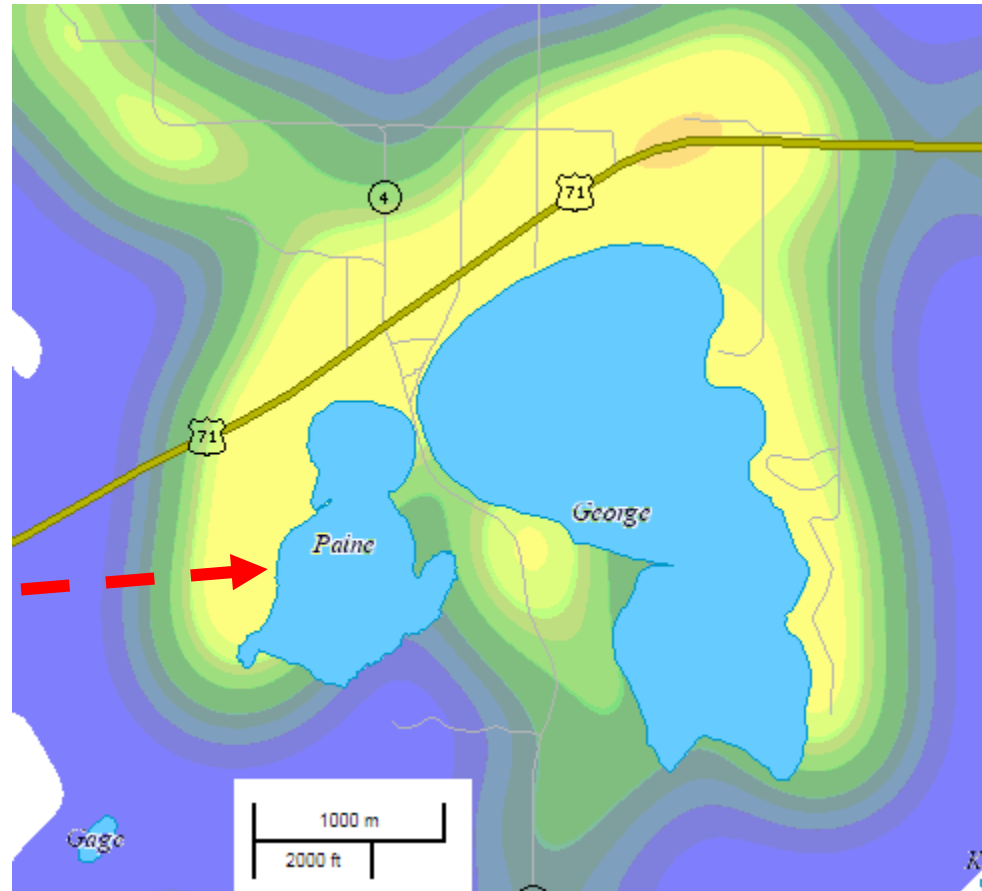
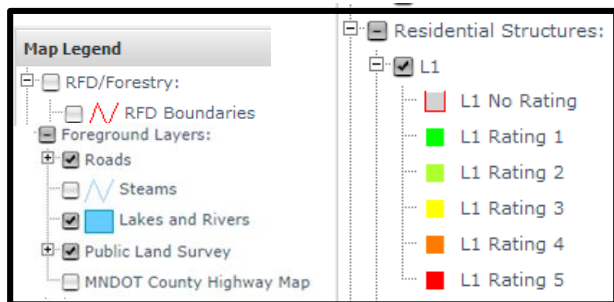
Density Surface Model

“High Risk Areas” Lake George Fire District



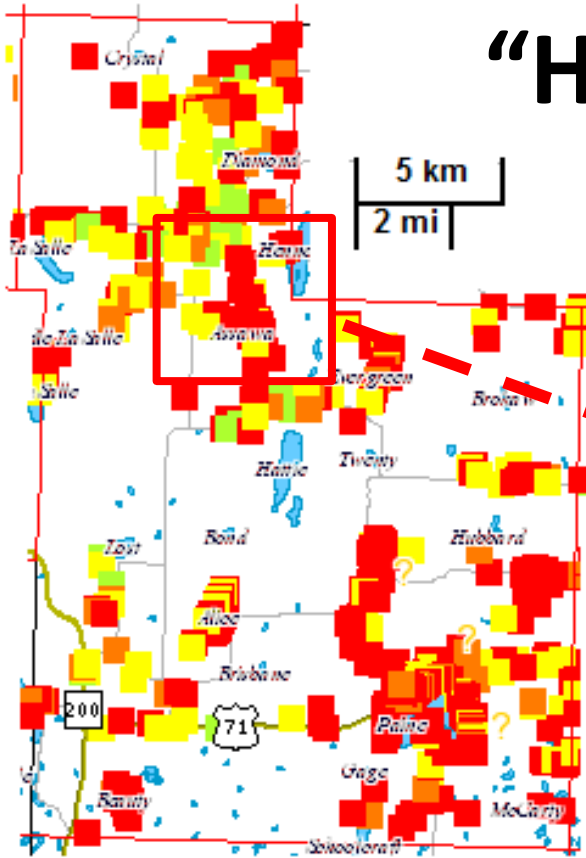
L1 Assessments

Legend



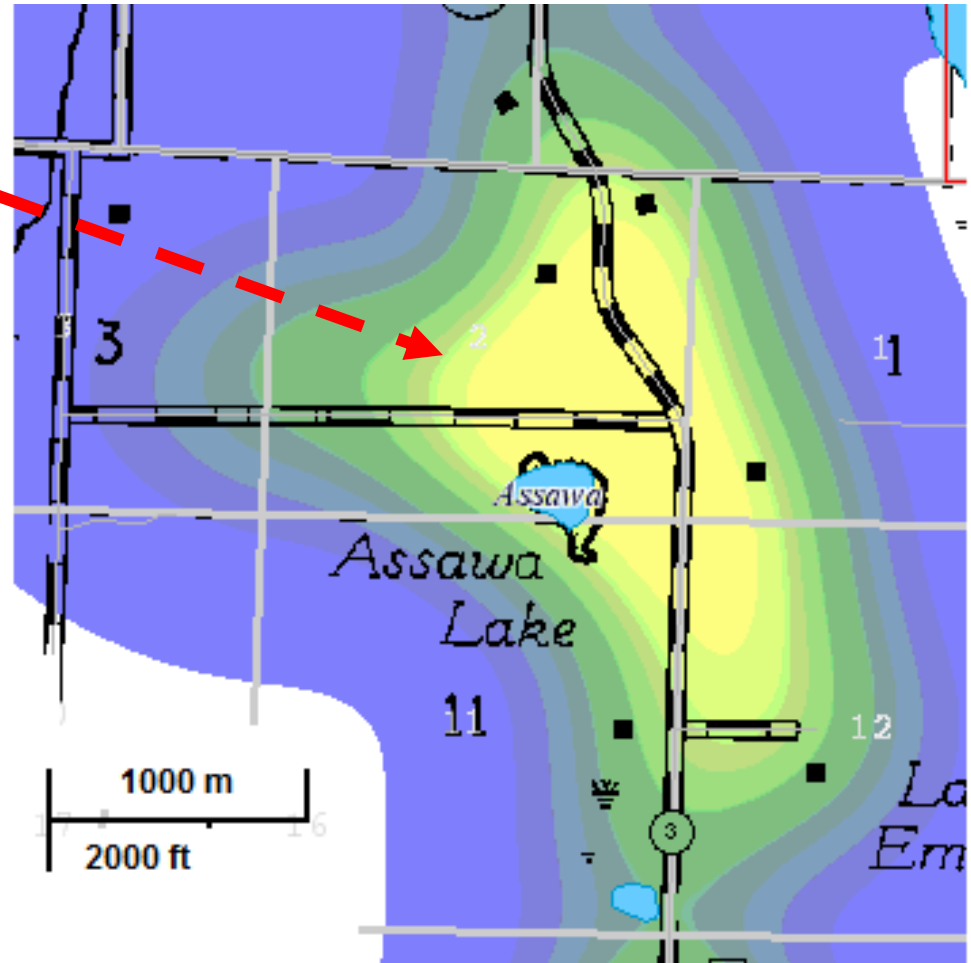
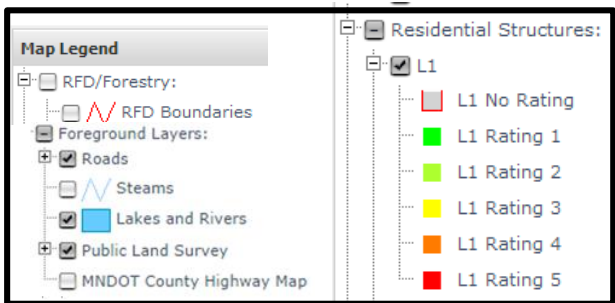
**Density Surface Model
Lake George and Lake Paine**

“High Risk Area” – Assawa LK Lake George Fire District



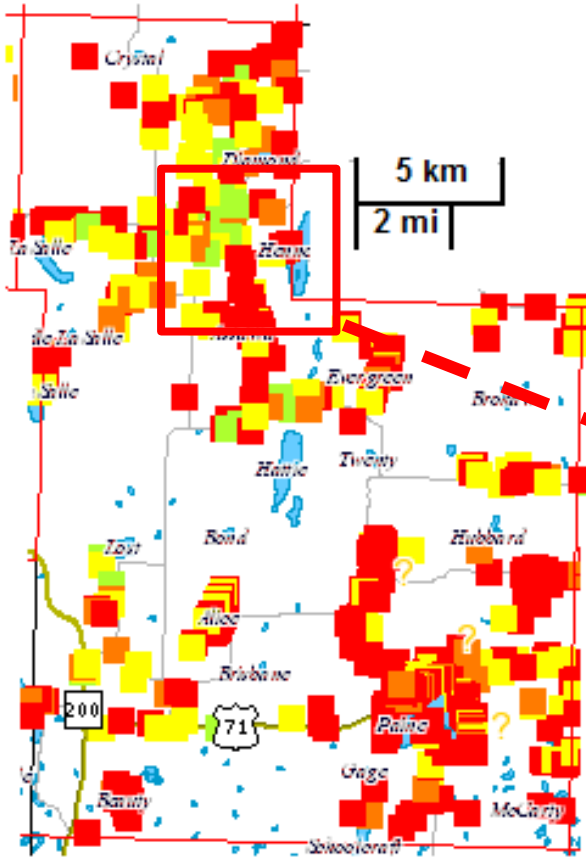
L1 Assessments

Legend



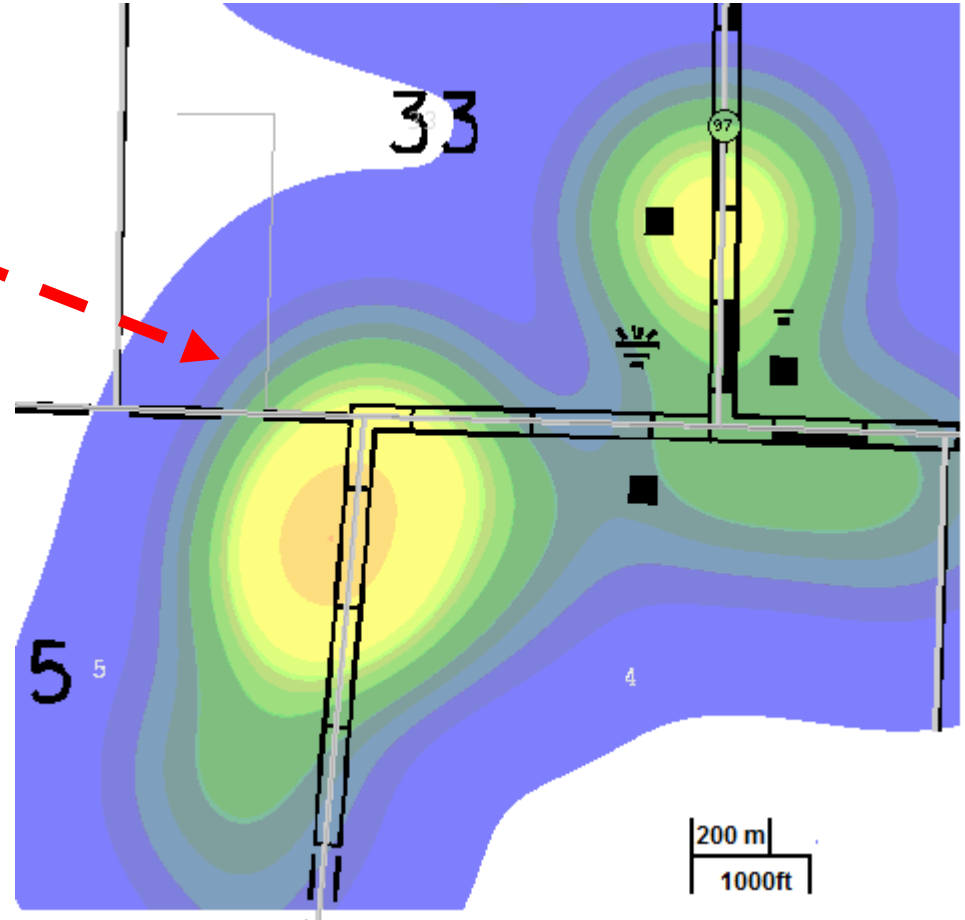
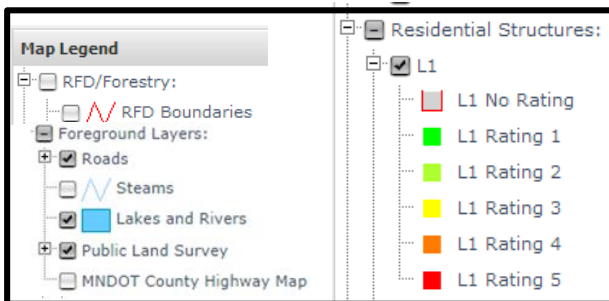
Density Surface Model

“High Risk Areas” Lake George Fire District



L1 Assessments

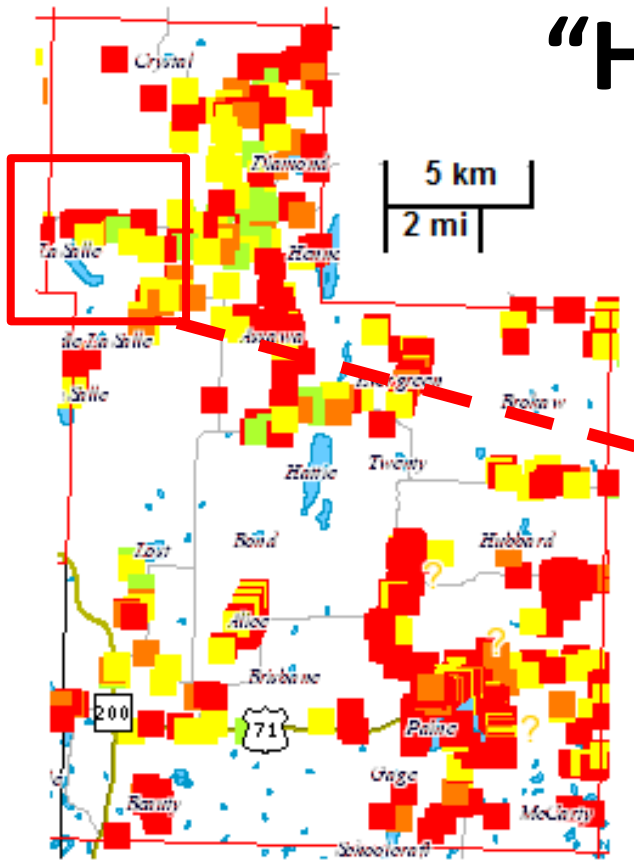
Legend



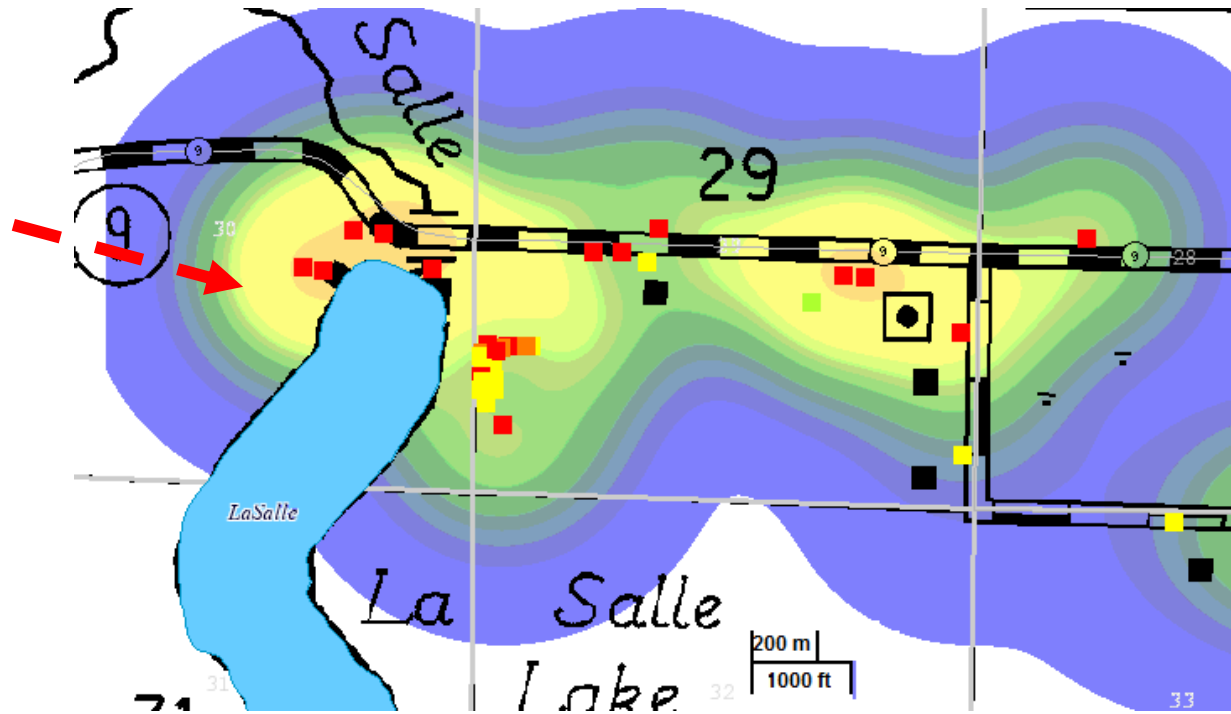
**Density Surface Model
Sections 5,6 & 31**

“High Risk Area” – LaSalle LK

Lake George Fire District

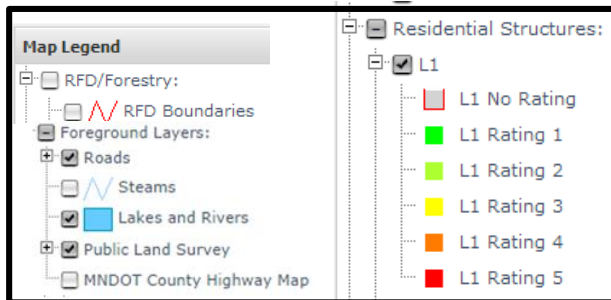


L1 Assessments

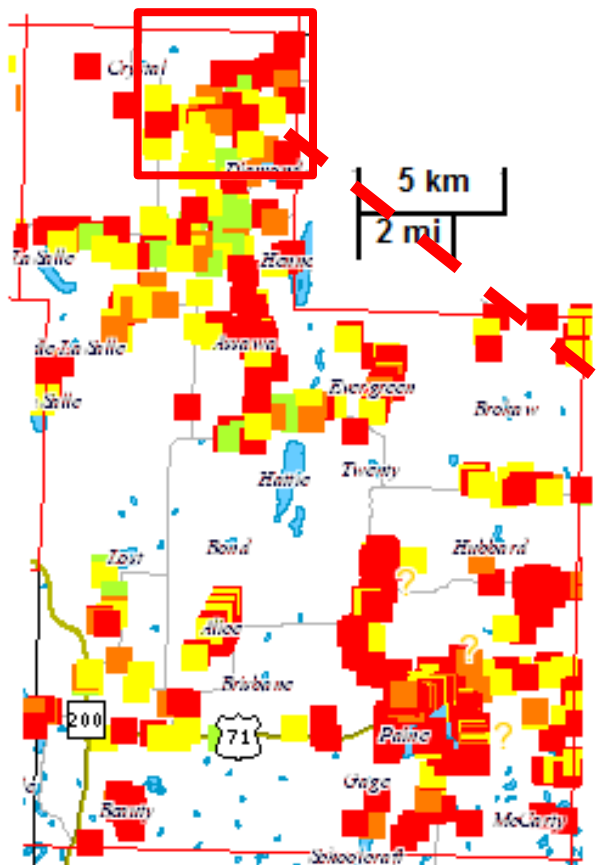


Density Surface Model

Legend

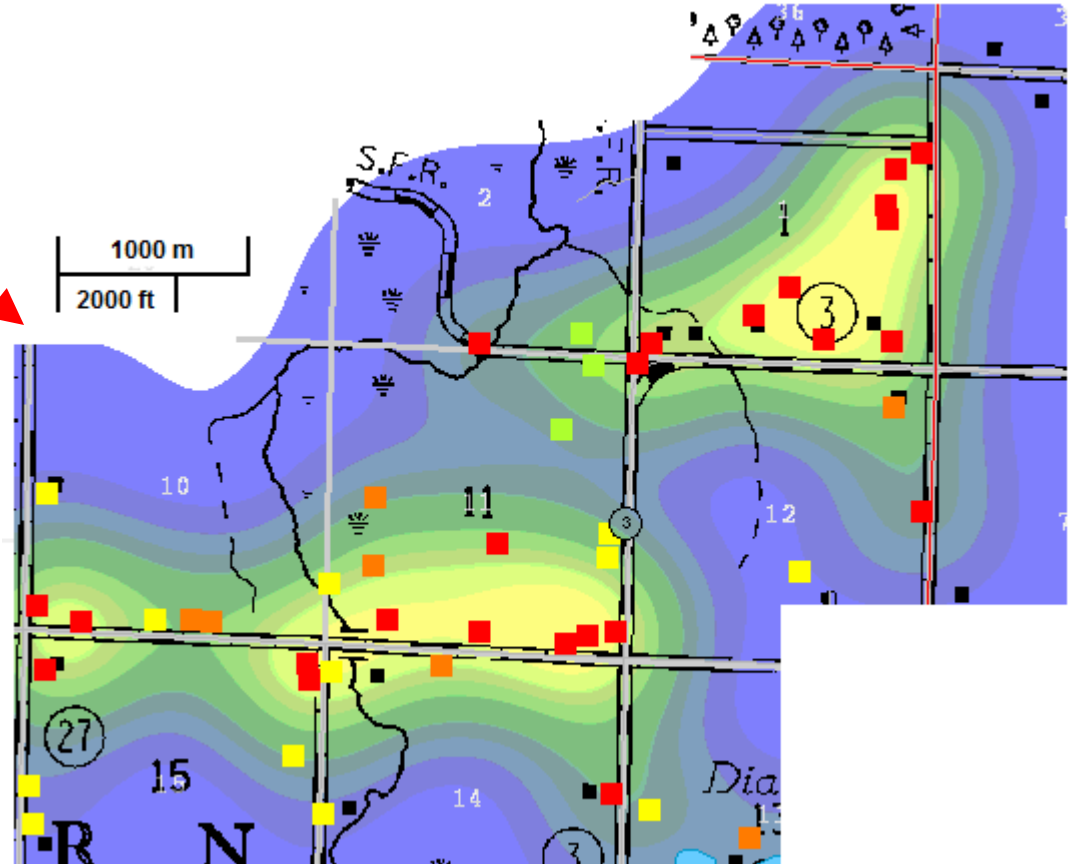
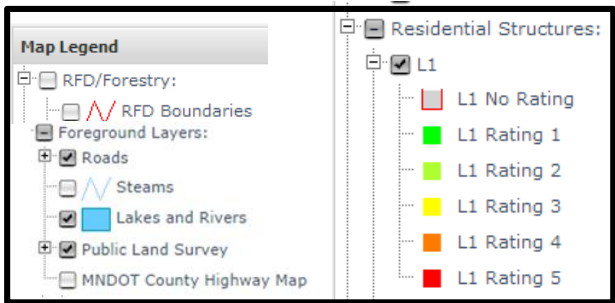


“High Risk Areas” Lake George Fire District



L1 Assessments

Legend



**Density Surface Model
Sections in NE corner of Lake
George FD**