

Thank you for clicking the link and deciding to take the survey!

### **What is this all about?**

Fire refugia are areas with lower fire effects than the surrounding area, where organisms (plants, animals, etc.) or other resources (cultural resources, infrastructure, etc.) can survive or expand from during and after a fire event. This survey is made for natural resource management professionals and/or ecologists in the Northwestern US in order to increase the understanding of existing fire refugia, potential future fire refugia, and management implications that alter their formation.

### **What are we trying to do?**

The objectives of this study are:

1. to inform a model that will be used to **rank the importance of unburned islands** within fire perimeters in the Pacific Northwest
2. to create an expert driven **dataset of fire refugia** that can be used as a validation dataset
3. to learn what **management strategies** managers would use in the protection of important unburned islands.

### **Who are we?**

This study was developed by Anthony Martinez, a M.S. student at the University of Idaho, under the supervision of Dr. Arjan Meddens and Dr. Crystal Kolden. We, along with Drs. Andy Hudak (USFS - RMRS) and Jim Lutz (Utah State University), are studying the causes, characteristics, and management strategies associated with unburned islands.

### **Introduction**

#### **What are you getting yourself into?**

The following questions are divided into 3 sections: (1) a section about **management action** you have taken (or could take) to create or protect fire refugia or unburned islands (5 minutes); (2) a section about how to **rank the importance of unburned islands** (< 5 minutes); and (3) a participatory GIS survey where we ask you to **draw some boxes around fire refugia** within fire perimeters that you are personally familiar with (10 minutes). There is a tutorial to walk you through how to do it and it is all online, so there is no need to have access or any familiarity with GIS software.

**This survey should take about 20 minutes to complete.** Your responses are completely voluntary and will be kept confidential. You may choose not to answer any question or stop filling out the survey at any time.

By taking a moment to provide your thoughts about fire refugia, you will be helping us and the natural resource management community a great deal. Your answers will aid us in creating tools that allow land managers to make even better informed land management decisions, specifically in regards to promoting fire refugia.

**MGMT**

Thinking of how you would prioritize fire refugia for conservation, how important is each of the following characteristics?

	Not at all important	Slightly important	Moderately important	Very important	Extremely important	Not applicable
High quality habitat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unique habitat type	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Presence of high infrastructure (e.g. buildings)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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**Q2**

Thinking of how you would prioritize fire refugia for conservation, how important is each of the following habitat characteristics?

	Not at all important	Slightly important	Moderately important	Very important	Extremely important	Not applicable
Habitat for a critical or listed species	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Low proportion of invasive plant species cover	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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**Q3**

Thinking of how you would prioritize fire refugia for conservation, how important is each of the following "uniqueness"

characteristics?

	Not at all important	Slightly important	Moderately important	Very important	Extremely important	Not applicable
The degree of isolation (i.e. how far is the unburned island from other unburned islands or the forest edge)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The stand is old growth (or late successional)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unique land cover type among remaining unburned islands	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q4

Thinking of how you would prioritize fire refugia for conservation, how important is each of the following social characteristics?

	Not at all important	Slightly important	Moderately important	Very important	Extremely important	Not applicable
There are buildings or communication towers within the unburned island	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are cultural resources (archaeological, historic, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Wrap-up**

In this final portion you will be asked a few demographic questions and your final thoughts.

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F1 Who are you employed by or affiliated with?

- Federal government
  - State or local government
  - Nonprofit or NGO
  - University or educational institution
  - Other (please specify) \_\_\_\_\_
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F2 Which occupational category describes you best?

- Land manager
  - Researcher
  - Fire or fuels manager
  - Ecologist or biologist
  - Other (please specify) \_\_\_\_\_
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F4 Keeping in mind that our goal is to identify fire refugia in order to promote and preserve them, is there any additional information you feel we should know?

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F3  
Final (1/2)

F5 Please provide your email address if you would like to receive products of this project or are willing to allow us to follow-up with you to clarify your survey responses.

Email \_\_\_\_\_

F6

Please send me project products

You may contact me to follow-up on my survey responses

Q34 Lastly, if you know of anyone else who might be interested in helping improve our understanding of wildfire refugia by taking this survey, please include their information below.

	Name	Email

F7  
**Final (2/2)**

End of Block: Demographics

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