



Community Wildfire Defense Grant Risk Dataset: Methods and Intended Uses

August 16, 2022

Purpose

The *Wildfire Risk to Communities* project team developed a nationally consistent risk dataset to support the Community Wildfire Defense Grant (CWDG) program. The dataset supports the goals of the program described in the Infrastructure Investment and Jobs Act and can be used to help:

- identify eligible “*at-risk communities*;”
- prioritize places that:
 - are “*low income*”
 - have “*been impacted by a severe disaster*”
 - have “*high or very high wildfire hazard potential*”
- identify places that qualify as “*underserved*” and that can request a waiver of match.

The dataset can make it easier for communities to complete grant applications, inform review teams that score grant applications, and guide outreach at state levels. It is not intended to be the only source of information to prioritize communities, but it can help fill data gaps and support applicants that do not have the capacity to generate localized data. Communities that wish to use their own wildfire risk or severe disaster data may do so. The dataset is currently provided in the following two spreadsheets:

Eligibility: https://wildfirerisk.org/wp-content/uploads/2022/08/CWDG_Eligibility.xlsx

Scoring priority: https://wildfirerisk.org/wp-content/uploads/2022/08/CWDG_Scoring-Priority.xlsx

This document summarizes the methods used to generate the dataset and how each variable can be used in support of the CWDG program.

Wildfire Variables to Demonstrate Eligibility & Scoring Prioritization

There are two variables included in the dataset to measure “at-risk” communities and “wildfire hazard potential;” these are Risk to Homes and Wildfire Hazard Potential. Both variables are derived from *Wildfire Risk to Communities*, a national risk assessment created by the U.S. Forest Service. Both variables have utility for CWDG grants, depending on the goals of the proposed activities.

Since risk is a relative measure, a community’s risk may be different when compared to its parent state versus the entire nation. For both variables, state and national ranks are provided. Applicants and others should use the variable and rank that best tells the story for the community. Both Risk to Homes and Wildfire Hazard Potential are described in more detail in Table 1 below.

To prioritize *community* wildfire risks (as opposed to landscape risks), the data are summarized for (a) only those portions of communities, tribal areas, or counties that are within 1.5 kilometers (approximately 1 mile) of existing housing; and (b) areas identified as burnable, excluding community core areas that are identified as unburnable.

In lieu of using this dataset, communities can also use state or local risk assessments. Many state and local risk assessments can be accessed via the Wildfire Hazard Explorer: <https://hazexplorer.com>.

Table 1. Comparison of wildfire risk variables

	Risk to Homes	Wildfire Hazard Potential																																																
Definition	A measure of wildfire hazard potential in the context of communities. Risk to Homes integrates wildfire likelihood and intensity with generalized consequences to a hypothetical home everywhere on the landscape.	A measure of wildfire hazard potential in the context of landscapes. Wildfire Hazard Potential quantifies the relative potential for wildfires that may be difficult to control.																																																
Best uses	Prioritizing community-level activities to reduce wildfire risk to structures, including: creation of defensible space; home hardening; development of ingress/egress; supporting infrastructure; and land use planning strategies.	Prioritizing landscape activities to reduce wildfire spread into communities, including fuel treatments.																																																
CWDG criteria	<p>Communities with $\geq 40^{\text{th}}$ percentile Risk to Homes, as compared to either the state or the nation, could be considered “at-risk” and eligible for CWDG grants.</p> <p>Communities with $\geq 70^{\text{th}}$ percentile Risk to Homes, as compared to either the state or the nation, could be considered having “high or very high wildfire hazard potential” and prioritized in the CWDG program.</p> <p>Categories for Risk to Homes are as follows:</p> <table border="1"> <thead> <tr> <th>Class</th> <th>Percentile Range</th> <th>Eligible (“at-risk”)</th> <th>Scoring Priority (“high or very high wildfire hazard potential”)</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>0 – 40th</td> <td>No</td> <td>No</td> </tr> <tr> <td>Moderate</td> <td>40th – 70th</td> <td>Yes</td> <td>No</td> </tr> <tr> <td>High</td> <td>70th – 90th</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>Very High</td> <td>90th – 95th</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>Extreme</td> <td>95th – 100th</td> <td>Yes</td> <td>Yes</td> </tr> </tbody> </table>	Class	Percentile Range	Eligible (“at-risk”)	Scoring Priority (“high or very high wildfire hazard potential”)	Low	0 – 40 th	No	No	Moderate	40 th – 70 th	Yes	No	High	70 th – 90 th	Yes	Yes	Very High	90 th – 95 th	Yes	Yes	Extreme	95 th – 100 th	Yes	Yes	<p>Communities with $\geq 67^{\text{th}}$ percentile Wildfire Hazard Potential, as compared to either the state or the nation, could be considered “at-risk” and eligible for CWDG grants.</p> <p>Communities with $\geq 84^{\text{th}}$ percentile Wildfire Hazard Potential, as compared to either the state or the nation, could be considered having “high or very high wildfire hazard potential” and prioritized in the CWDG program.</p> <p>Categories for Wildfire Hazard Potential are as follows:</p> <table border="1"> <thead> <tr> <th>Class</th> <th>Percentile Range</th> <th>Eligible (“at-risk”)</th> <th>Scoring Priority (“high or very high wildfire hazard potential”)</th> </tr> </thead> <tbody> <tr> <td>Very Low</td> <td>0 – 44th</td> <td>No</td> <td>No</td> </tr> <tr> <td>Low</td> <td>44th – 67th</td> <td>No</td> <td>No</td> </tr> <tr> <td>Moderate</td> <td>67th – 84th</td> <td>Yes</td> <td>No</td> </tr> <tr> <td>High</td> <td>84th – 95th</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>Very High</td> <td>95th – 100th</td> <td>Yes</td> <td>Yes</td> </tr> </tbody> </table>	Class	Percentile Range	Eligible (“at-risk”)	Scoring Priority (“high or very high wildfire hazard potential”)	Very Low	0 – 44 th	No	No	Low	44 th – 67 th	No	No	Moderate	67 th – 84 th	Yes	No	High	84 th – 95 th	Yes	Yes	Very High	95 th – 100 th	Yes	Yes
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Data Source	Wildfire Risk to Communities. Scott, Joe H.; Gilbertson-Day, Julie W.; Moran, Christopher; Dillon, Gregory K.; Short, Karen C.; Vogler, Kevin C. 2020. Wildfire Risk to Communities: Spatial datasets of landscape-wide wildfire risk components for the United States. Fort Collins, CO: Forest Service Research Data Archive. Updated 25 November 2020. https://doi.org/10.2737/RDS-2020-0016																																																	

“Low Income” to Request a Match Waiver & Demonstrate Scoring Prioritization

The dataset includes a measure of “low income” derived from the latest (2020) U.S. Census Bureau American Community Survey data, which can be used to demonstrate that a community is (a) “underserved” and eligible to request a match waiver, and (b) “low-income” and eligible for scoring prioritization in the CWDG program.

“Underserved” for match waiver. If a community is listed as “low-income” in the dataset, it can be considered “underserved” and can request a match waiver. In lieu of using this dataset to demonstrate a place is “underserved,” communities can use the Centers for Disease Control’s [Social Vulnerability Index](#). Communities that have a score of 0.75 or higher can be considered “underserved.”

“Low Income” for scoring prioritization. If a community is listed as “low-income” in this dataset, it is eligible for scoring prioritization. This is the only method to demonstrate “low income” in the CWDG program.

	Low Income
Definition	Counties where the median household income is less than 80% of the median household income of its parent state.
Data Source	U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington D.C. https://www.census.gov/programs-surveys/acs

“Impacted by a Severe Disaster” to Demonstrate Scoring Priority

The dataset includes a listing of FEMA disaster declarations in the last ten years (2012 –2022). All types of disasters are listed, but the applicant will need to demonstrate how it meets the scoring prioritization requirement of: *“having caused damage, loss, or destruction to an extent and scale that an unusual or abnormal increase in wildfire risk or hazard potential to a community.”*

	Disaster Declaration
Definition	All federally declared disasters from 2012 through August 2022.
Data Source	Federal Emergency Management Agency. 2022. Disaster Declarations Summary. https://www.fema.gov/openfema-data-page/disaster-declarations-summaries-v2

Contact

Greg Dillon, Director, Fire Modeling Institute, USDA Forest Service
gregory.dillon@usda.gov | 406-241-9442

Kelly Pohl, Associate Director, Headwaters Economics
kelly@headwaterseconomics.org | 406-599-7841