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## Community Wildfire Defense Grant (CWDG) Dashboard: Methods & Data Sources [wildfirerisk.org/cwdg-tool](https://wildfirerisk.org/cwdg-tool) June 2023

### Purpose

The *Wildfire Risk to Communities* project team developed a nationally consistent data dashboard to support the [Community Wildfire Defense Grant](#) (CWDG) program. The CWDG Dashboard is provided on an interactive webpage located at <https://wildfirerisk.org/cwdg-tool>.

The CWDG Dashboard 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 cost-share waiver.

The CWDG Dashboard can help communities 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.

This document summarizes the methods and data sources used to generate the CWDG Dashboard.

### Geographic Boundaries: Communities, Counties, & Tribal Areas

The CWDG Dashboard opens with a search window. Users can type the name of any community, county, or tribal area and select from the drop-down list. Available locations are those identified by the U.S. Census Bureau’s TIGER/Line files. *Communities* are areas of concentrated population and include incorporated and unincorporated communities. *Tribal areas* are from the U.S. Census Bureau’s American Indian/Alaska Native/Native Hawaiian Areas (AIANNH) dataset, which includes the following legal entities: federally recognized American Indian reservations and off-reservation trust land areas, state-recognized American Indian reservations, and Hawaiian homelands (HHLs). Tribal areas that cross state boundaries are divided by state and listed separately for each state they overlap.

### Data Source:

U.S. Census Bureau. (2020). TIGER Cartographic Boundaries. Washington, DC. <https://www.census.gov/programs-surveys/geography/technical-documentation/complete-technical-documentation/tiger-geodatabase-file.html>

## Eligibility: “At-Risk Communities”

To be considered “at risk” and eligible for Community Wildfire Defense Grants, a location must have moderate or higher wildfire risk. There are two ways to qualify:

- 1) **National data.** A location must have  $\geq 40$ th percentile *Wildfire Risk to Homes* as compared to the state or nation, or  $\geq 67$ th percentile *Wildfire Hazard Potential* as compared to the state or nation. Appendix A provides more detail about these variables. The CWDG Dashboard provides national data. Or,
- 2) **Local data.** A location can use local, state, or regional wildfire risk data to demonstrate eligibility. The CWDG Dashboard does not include state and local data, but many state and local risk assessments can be accessed via the Wildfire Hazard Explorer: <https://hazexplorer.com>. The Climate and Economic Justice Screening Tool (<https://screeningtool.geoplatform.gov>) also includes wildfire risk data.

The CWDG Dashboard will provide results for the national data option (#1 above) based on the *Wildfire Risk to Communities* dataset. It returns the variable with the highest percentile rank that meets the criteria. The national data provided in the CWDG Dashboard 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.

### Data Source:

Wildfire Risk to Communities. Scott JH, Gilbertson-Day JW, Moran C, Dillon GK, Short KC, & Vogler KC. (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>

## Location

The CWDG Dashboard provides the latitude and longitude for the center point of the searched location.

## Scoring

The CWDG Dashboard provides data and information to answer three CWDG application questions: low-income, impacted by a severe disaster, and wildfire hazard potential.

### Low-Income Community

The CWDG application allocates 10 points to projects that benefit a low-income community. “Low income” is defined as having a median household income less than 80% of the state’s median household income or less than 80% of the nation’s median household income. If a community is listed as “low income” in this CWDG Dashboard, its application will earn 10 points.

The CWDG Dashboard uses the most recent household income data available from the U.S. Census Bureau. For most locations, this is 2021 data. Some locations were missing 2021 median household income data, so 2020 data were used. A small number of communities were missing both 2021 and 2020 data and were assigned the 2021 median household income value for their parent counties.

There are 32 states with a median household income below the national median household income. For locations in these states, they must have a median household income below \$55,217, which is 80% of the national median household income. For the 18 states with a median household income above the national median household income, locations must have a median household income less than 80% of the state’s median household income.

**Data Source:**

U.S. Census Bureau. (2021 and 2020). American Community Survey. Washington DC. <https://www.census.gov/programs-surveys/acs>

**Severe Disaster Impacts**

The CWDG application allocates 10 points to communities that have been impacted by a severe disaster in the previous 10 years. The application must demonstrate how the disaster increased wildfire risk and was of a scale and scope to have had landscape impacts.

The CWDG Dashboard provides a list of federal disaster declarations by the Federal Emergency Management Agency (FEMA) in the county of the searched location over the previous 10 years (2013 through May 2023). Users of the CWDG Dashboard will need to confirm whether any of the listed disasters affect wildfire risk and whether they impacted the project area, since some projects are sub-county in scope. Each FEMA disaster included in the CWDG Dashboard includes a link to the disaster's page on FEMA's website. This can be used to find more specific information to support a CWDG application.

Some disasters are not matched to a county because they are state level or at a different geographic scale. These are available in a downloadable spreadsheet from the CWDG Dashboard. Users can search the spreadsheet for relevant disasters.

CWDG applicants can also use local information about disasters to demonstrate impact by a severe disaster.

**Data Source:**

Federal Emergency Management Agency. (2023). Disaster Declarations Summary. <https://www.fema.gov/openfema-data-page/disaster-declarations-summaries-v2>

**Wildfire Hazard Potential**

The CWDG application allocates 20 points to locations with high or very high wildfire hazard potential. There are two ways to qualify as high or very high wildfire hazard potential:

- 1) National data. A location must have  $\geq 70$ th percentile *Wildfire Risk to Homes* as compared to the state or nation, or  $\geq 84$ th percentile *Wildfire Hazard Potential* as compared to the state or nation. Appendix A provides more detail about these variables. The CWDG Dashboard provides national data. Or,
- 2) Local data. A location can use local, state, or regional wildfire risk data to demonstrate eligibility. The CWDG Dashboard does not include state and local data, but many state and local risk assessments can be accessed via the Wildfire Hazard Explorer: <https://hazexplorer.com>. The Climate and Economic Justice Screening Tool (<https://screeningtool.geoplatform.gov>) also includes wildfire risk data.

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**Cost Share Waiver for Underserved Communities**

Applicants may apply to the Forest Service for a cost-share waiver for a CWDG application that serves an underserved community. “Underserved” is defined as either:

- A community, county, or tribal area that intersects at least one census tract that is identified as “disadvantaged” in the Climate and Economic Justice Screening Tool (CEJST). Census tracts are considered “disadvantaged” in CEJST if they (a) meet the thresholds for at least one of the tool’s environmental, climate, and socioeconomic categories of burden, or (b) are on land within the boundaries of Federally Recognized Tribes. Or,
- A community, county, or tribal area that meets the “low-income” criteria described above.

If a community is listed as underserved in the CWDG Dashboard, it is eligible to apply for a cost-share waiver. In addition, nationally recognized Tribes and Pacific Islands are eligible for a match waiver.

**Data Sources:**

- Council on Environmental Quality. (2022). Climate and Economic Justice Screening Tool, version 1.0. <https://screeningtool.geoplatform.gov/en/#3/33.47/-97.5>
- U.S. Census Bureau. (2021 and 2020). American Community Survey. Washington DC. <https://www.census.gov/programs-surveys/acs>

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*Updated 7/13/2023*

## Appendix A. Comparison of wildfire risk variables

	<b>Risk to Homes</b>	<b>Wildfire Hazard Potential</b>																																																
<b>Definition</b>	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.																																																
<b>Best uses</b>	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.																																																
<b>CWDG criteria</b>	<p>Communities with <math>\geq 40^{\text{th}}</math> percentile Risk to Homes, as compared to either the state or the nation, could be considered “at-risk” and <b>eligible</b> for CWDG grants.</p> <p>Communities with <math>\geq 70^{\text{th}}</math> 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 <b>prioritized</b> 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 – 40<sup>th</sup></td> <td>No</td> <td>No</td> </tr> <tr> <td>Moderate</td> <td>40<sup>th</sup> – 70<sup>th</sup></td> <td>Yes</td> <td>No</td> </tr> <tr> <td>High</td> <td>70<sup>th</sup> – 90<sup>th</sup></td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>Very High</td> <td>90<sup>th</sup> – 95<sup>th</sup></td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>Extreme</td> <td>95<sup>th</sup> – 100<sup>th</sup></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 <sup>th</sup>	No	No	Moderate	40 <sup>th</sup> – 70 <sup>th</sup>	Yes	No	High	70 <sup>th</sup> – 90 <sup>th</sup>	Yes	Yes	Very High	90 <sup>th</sup> – 95 <sup>th</sup>	Yes	Yes	Extreme	95 <sup>th</sup> – 100 <sup>th</sup>	Yes	Yes	<p>Communities with <math>\geq 67^{\text{th}}</math> percentile Wildfire Hazard Potential, as compared to either the state or the nation, could be considered “at-risk” and <b>eligible</b> for CWDG grants.</p> <p>Communities with <math>\geq 84^{\text{th}}</math> 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 <b>prioritized</b> 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 – 44<sup>th</sup></td> <td>No</td> <td>No</td> </tr> <tr> <td>Low</td> <td>44<sup>th</sup> – 67<sup>th</sup></td> <td>No</td> <td>No</td> </tr> <tr> <td>Moderate</td> <td>67<sup>th</sup> – 84<sup>th</sup></td> <td>Yes</td> <td>No</td> </tr> <tr> <td>High</td> <td>84<sup>th</sup> – 95<sup>th</sup></td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>Very High</td> <td>95<sup>th</sup> – 100<sup>th</sup></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 <sup>th</sup>	No	No	Low	44 <sup>th</sup> – 67 <sup>th</sup>	No	No	Moderate	67 <sup>th</sup> – 84 <sup>th</sup>	Yes	No	High	84 <sup>th</sup> – 95 <sup>th</sup>	Yes	Yes	Very High	95 <sup>th</sup> – 100 <sup>th</sup>	Yes	Yes
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