The following document has been compiled by David Ludwig, Senior Climate Planner in the Maine Bureau of Resource Information and Land Use Planning.

Maine Fire Danger Report – View Here

Shows the daily fire danger rating in different regions of the state. Updated daily by the Maine Forest Service during wildfire season (typically early spring through late fall). Ratings are based on factors like daily weather and fuel (vegetation) moisture; the rating that you see on a given day is not a static assessment of the annual fire danger for different regions of the state.

Explanation of rating system:
https://www.maine.gov/dacf/mfs/wildfire_danger_report/fire_rating.html

Strengths:

- Updated daily during times of the year when wildfires are of greater concern, allowing residents and visitors to plan their activities accordingly and allowing fire departments and emergency managers to make operational plans if needed.
- Zones typically follow town boundaries, major bodies of water, or other features that are relatively easy to distinguish on a map.
- Data on weather and fuel moisture are available from weather stations around the state.

Limitations:

- It may be difficult for individuals with certain types of color blindness to distinguish between the different categories.
- You cannot search by address, but you can zoom in on the map to find your town.
- Local conditions may vary, and conditions may change quickly within a single day in some cases. Also be aware that wildfires can still occur on days with "Low" ratings.
- Explanation of rating categories contains some jargon that may be difficult to understand.
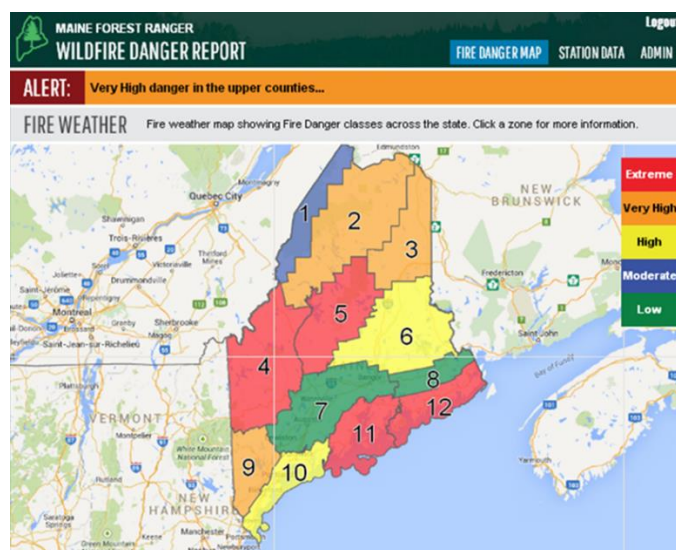

Image: Example wildfire danger report showing different categories on a map of Maine.

Northeast-Midwest Wildfire Risk Assessment Portal (WRAP) – <u>View Here</u>

Produced by the Northeast-Midwest State Foresters Alliance and partners, this tool provides information including burn probability, risk to potential structures, wildfire hazard potential, and more. You can use the map directly on the website listed below, or can visit that page and then click on "Launch Risk Explorer" for more detailed information. If prompted to sign in, start with the Basic map viewer. You can access it immediately and do not need to create an account. Each layer provides different information, so read about each one under "Map Themes".

Strengths:

- Allows you to search by address, community name, or latitude/longitude.
- Interface is user friendly, and each layer has a corresponding explanation.
- Covers the entire state in detail.

Limitations:

- Tool was designed to cover 20 states; may not reflect all local conditions in Maine.
- Map is based on 30 by 30 meter (~100 by ~100 foot) cells; resolution is fine enough to use at a community level but not at the level of an individual structure.
- There are many factors to consider when assessing fire risk, and this tool highlights a few. Local conditions may vary, and may have changed since tool was last updated.
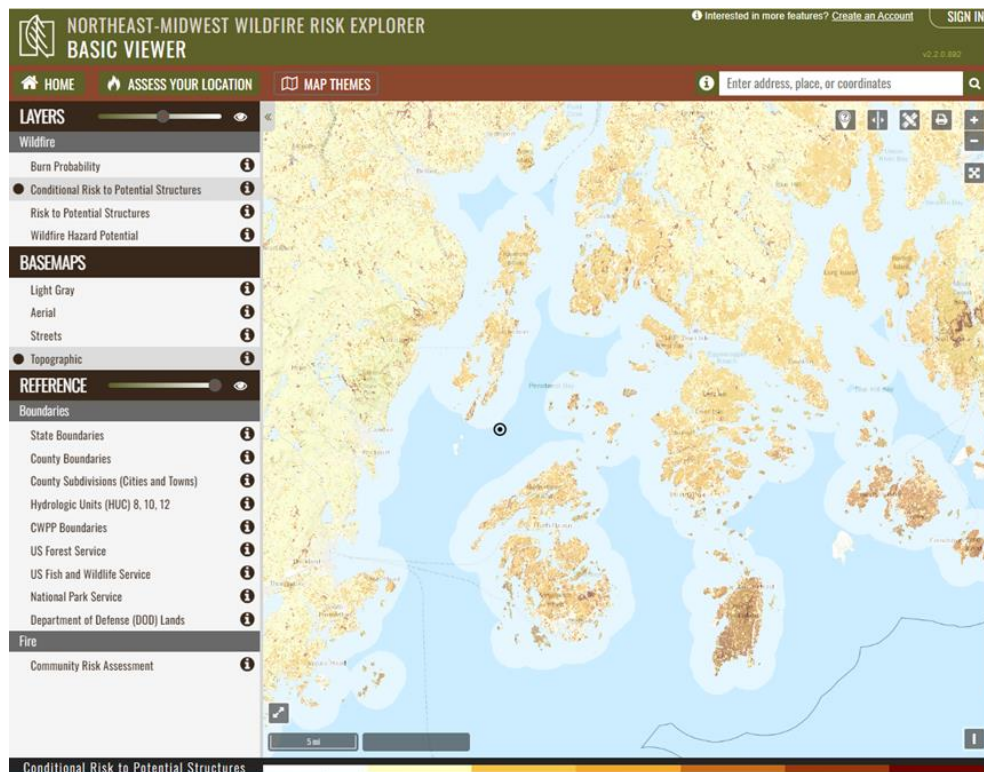

Image: Conditional Risk to Potential Structures for southern Penobscot Bay and nearby areas. Darker colors indicate higher risk.

National Fire Protection Association (NFPA) Wildfire Threat to Homes Tutorial – View Here

Free training that introduces wildfire fundamentals and preventive actions for homeowners. This training is a good starting point, but the page has additional resources on defensible space and Firewise community risk assessment. If you are interested in learning more about Firewise certifications for communities, you can also contact the Maine Forest Service.

Strengths:

- Provides interactive, introductory materials for important concepts of wildfire behavior, defensible space, and community preparedness.
- Free to access, no account required.
- Easy to navigate.

Limitations:

- As a nationally-developed training, many examples are from the western or southern United States, which may be less relatable to a Maine audience.
- Some information regarding the Firewise program may go beyond what is required for an introduction to these topics. The Maine Forest Service assists communities who are interested in becoming Firewise certified. See more on Firewise here.

Image: screenshot of the web page showing the suggested training at the bottom.

AirNow Fire and Smoke Map – [View Here](#)

Produced by the United States Environmental Protection Agency (US EPA) and partner agencies. Provides an interactive map of North America showing wildfire activity, smoke plumes, smoke outlooks (if any), and data from air quality monitoring stations.

Strengths:

- Provides a relatively holistic view of wildfire activity and its impact on smoke and air quality.
- Provides air quality data over time for several locations in Maine.
- Explains public health implications of different air quality ratings and provides background information on the data presented and what they mean.

Limitations:

- Primarily focused on fine particulate matter less than 2.5 micrometers in diameter (PM2.5) produced by wildfires; does not provide complete information on all pollutants or air quality concerns.
- Symbology and units of measure may be confusing at first, but information on data sources, caveats, and limitations is available under Frequently Asked Questions (FAQs).
- Does not have a forecasting function unless smoke outlooks have been issued, but by observing trends some rough predictions can be made.
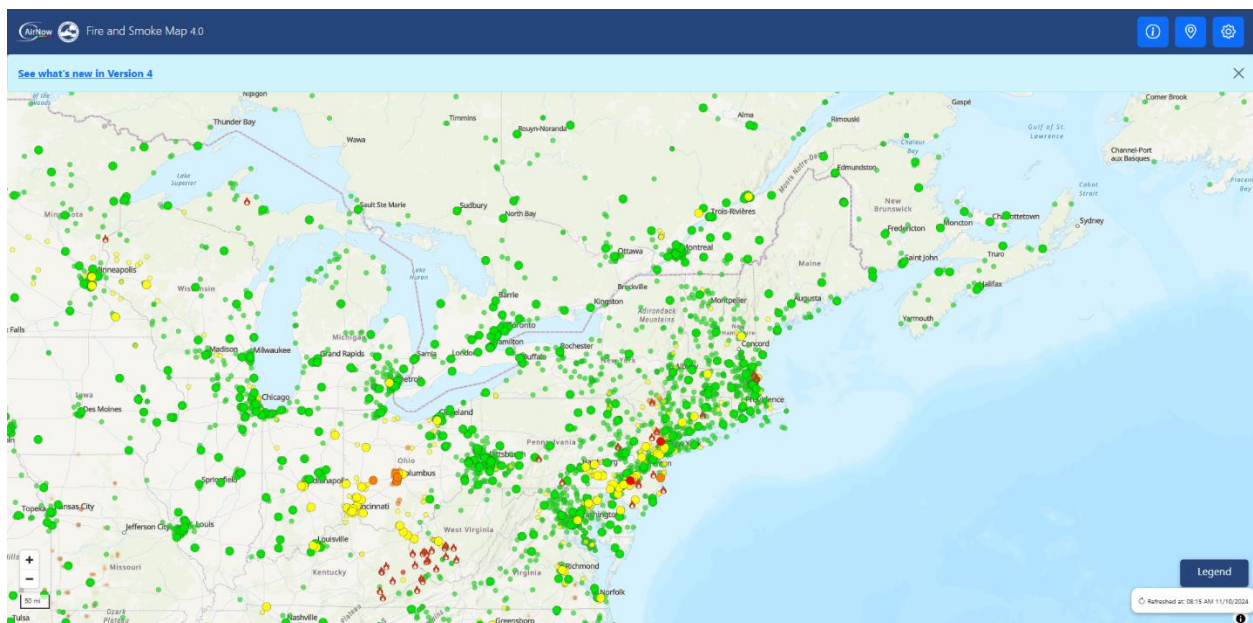- Local air quality sensor data not available for some parts of Maine.

Image: A screenshot of the AirNow Fire and Smoke Map from November 10, 2024.

Maine Risk Map – <u>View Here</u>

Produced by the Maine Emergency Management Agency (MEMA), this tool provides certain metrics to inform risk assessment for several types of natural hazards that have occurred or may occur in Maine, along with layers showing certain types of infrastructure, facilities, and assets at risk. To access the tool, use the URL below, scroll down and click on "Maine Risk Map."

Strengths:

- Provides several useful datasets that can be sorted by type of natural hazard.
- Layers can be turned on and off at will to highlight one hazard or multiple hazards and overlay them with assets at risk.

Limitations:

- You may be prompted to sign in when opening the map. Try hitting "Cancel" on the pop up at least three times, and you should be able to access most of the layers without an account.
- Some map layers are not visible to the public.
- Many of the layers provide useful context on natural hazards but are not objective assessments of risk. For example, the Drought layer shows examples of previous drought events in Maine as snapshots in time, but it is not an assessment of the chances of potential droughts impacting the state in any given year.
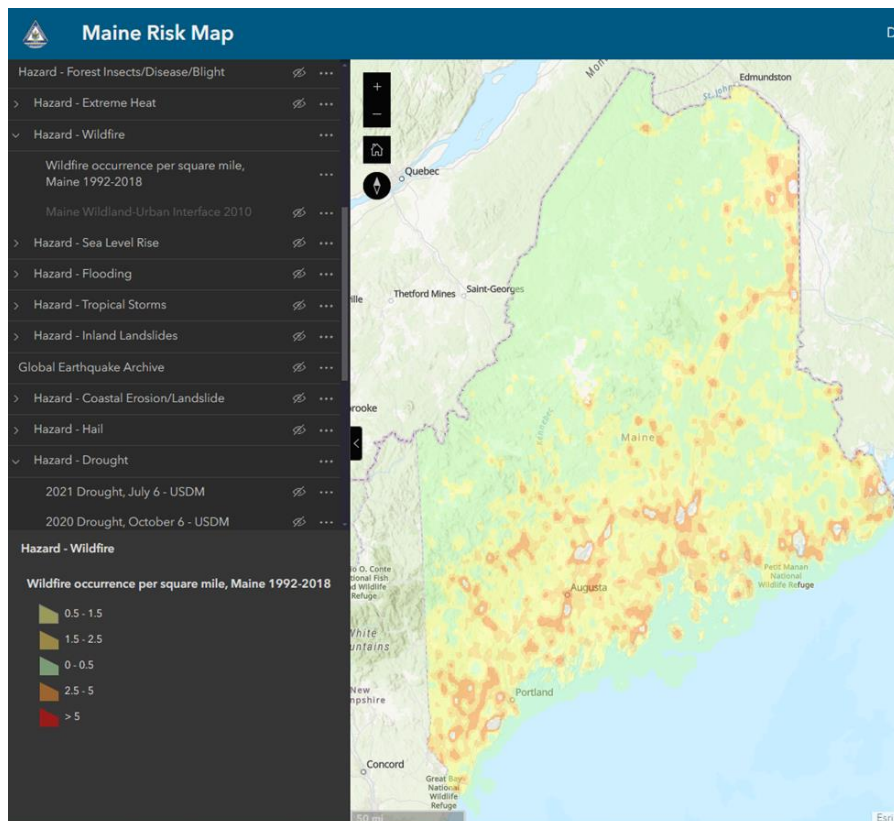

Image: Map layer showing wildfires per square mile, 1992-2018.

Maine Tracking Network – View Here

From the Maine Center for Disease Control and Prevention, provides data on public health impacts from several environmental and climate-related causes including heat- and cold-related illnesses, tickborne diseases, asthma, and more. New tools are pending, including for air quality. Provides some information on risk factors, such as counties with low air conditioning rates, for example.

Strengths:

- Provides data for several public health issues related to natural hazards.
- Provides data on risk factors, where applicable.
- Data displays are customizable, and methodologies for data collection are well-explained.

Limitations:

- Air quality tool not yet available.
- Data only available at the county level (rather than at the town level).
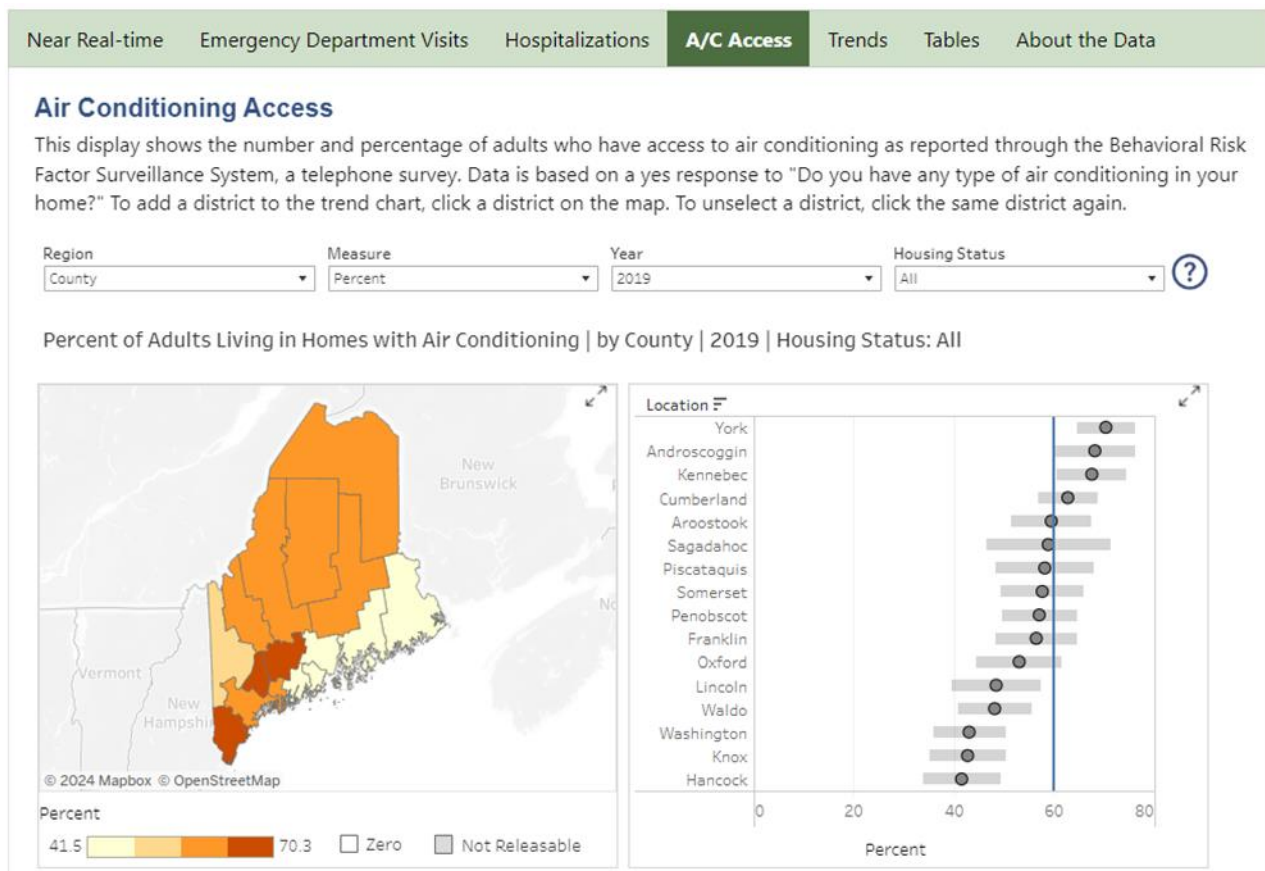- Data provides a reference point over time but does not model future projected risk.

Image: Percentage of adults living in homes with air conditioning, by county.

Tree Equity Score – [View Here](#)

Produced by American Forests (a nonprofit), this tool shows which parts of a community receive greater benefits from their urban forest than others, and which neighborhoods should be prioritized for additional investment in urban forestry. Considerations include percent canopy cover, heat disparity, and negative public health outcomes, along with several social vulnerability indicators.

Strengths:

- Combines environmental indicators with social vulnerability, allowing equity considerations to be integral in management decisions.
- Works well in denser, more urbanized communities.
- Easy to navigate, with explanations of how scores are calculated and areas within a community listed by priority level.

Limitations:

- This national tool was designed for larger cities than are found in most of Maine.
- Not available for many Maine communities; most smaller towns are excluded.
- In communities where it is available, it is most reliable in denser, more developed areas. Scores on the rural edges of communities are less reliable and more subject to variability.
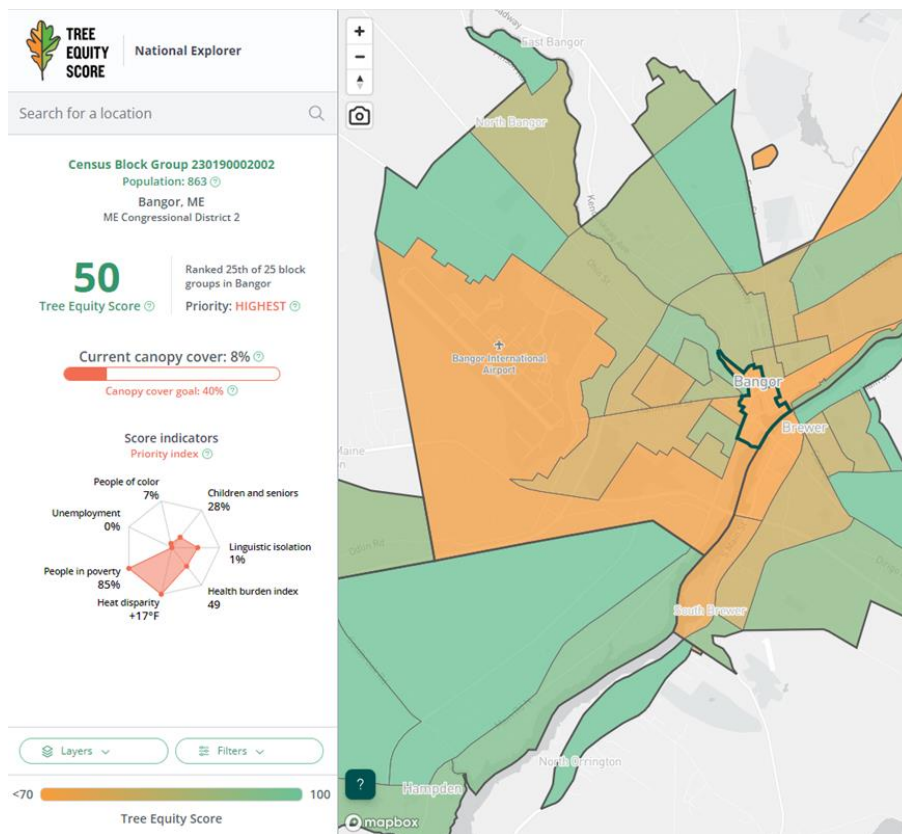

Image: Tree Equity Score tool highlighting downtown Bangor.