Wildfire Hazard Potential for the United States (270-m), version 2023, Classified

Metadata:

Identification_Information:
Citation:
Citation_Information:
Originator: Dillon, Gregory K.
Publication_Date: 2023
Title:
Wildfire Hazard Potential for the United States (270-m), version 2023, Classified
Edition: 3rd
Geospatial_Data_Presentation_Form: raster digital data
Publication_Information:
Publication_Place: Fort Collins, CO
Publisher: Forest Service Research Data Archive
Online_Linkage: https://doi.org/10.2737/RDS-2015-0047-4
Description:
Abstract:
This dataset is the 2023 version of wildfire hazard potential (WHP) for the United States. The files included in this data publication represent an update to any previous versions of WHP or wildland fire potential (WFP) published by the USDA Forest Service. WHP is an index that quantifies the relative potential for high-intensity wildfire that may be difficult to manage, used as a measure to help prioritize where fuel treatments may be needed. This 2023 version of WHP was created from updated national wildfire hazard datasets of annual burn probability and fire intensity generated by the USDA Forest Service, Rocky Mountain Research Station with the large fire simulation system (FSim). Vegetation and wildland fuels data from LANDFIRE 2020 (version 2.2.0) were the primary inputs to the updated FSim modeling work and therefore form the foundation for this version of the WHP. As such, the data presented here reflect landscape conditions as of the end of 2020. LANDFIRE 2020 vegetation and fuels data were also used directly in the WHP mapping process, along with updated point locations of fire occurrence ca. 1992-2020. With these datasets as inputs, we produced an index of WHP for all of the conterminous United States at 270-meter resolution. We present the final WHP map in two forms: 1) continuous integer values, and 2) five WHP classes of very low, low, moderate, high, and very high. On its own, WHP is not an explicit map of wildfire threat

or risk, but when paired with spatial data depicting highly valued resources and assets such as structures or powerlines, it can approximate relative wildfire risk to those specific resources and assets. WHP is also not a forecast or wildfire outlook for any particular season, as it does not include any information on current or forecasted weather or fuel moisture conditions. It is instead intended for long-term strategic fuels management.
Purpose:
Federal wildfire managers often want to know, over large landscapes, where wildfires are likely to occur and how intense they may be. To meet this need we developed a map that we call wildfire hazard potential (WHP) - a raster geospatial product that can help to inform evaluations of wildfire risk or prioritization of fuels management needs across very large spatial scales (millions of acres). Our specific objective with the WHP map was to depict the relative potential for wildfire that would be difficult for suppression resources to contain.
Supplemental_Information:
This data publication is a fourth edition. Previous versions of this publication prior to 2014 were known as Wildland Fire Potential (WFP). These new data represent an update to all previous versions of WHP or WFP published by the USDA Forest Service.

To check for the latest version of the WHP geospatial data and map graphics, as well as documentation on the mapping process, see: https://www.firelab.org/project/wildfire-hazard- potential.

Details about the Wildfire Hazard Potential mapping process can be found in Dillon et al. (2015). Steps described in this paper about weighting for crown fire potential were dropped in the 2018 and subsequent versions due to changes to the FSim modeling products used as the primary inputs to WHP mapping.

Specific versions of the national wildfire hazard data simulated with FSim, LANDFIRE datasets, and fire occurrence data are listed in the Data Quality Information section of this document.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 20201231
Currentness_Reference:
Ground condition
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Description_of_Geographic_Extent:
Bounding_Coordinates:
West_Bounding_Coordinate: -128.391160
East_Bounding_Coordinate: -64.050943
North_Bounding_Coordinate: 52.484274
South_Bounding_Coordinate: 22.427882

Keywords:
Theme:
Theme_Keyword_Thesaurus: ISO 19115 Topic Category
Theme_Keyword: environment
Theme_Keyword: geoscientificInformation
Theme_Keyword: society
Theme_Keyword: structure
Theme:
Theme_Keyword_Thesaurus: National Research & Development Taxonomy
Theme_Keyword: Ecology, Ecosystems, & Environment
Theme_Keyword: Fire
Theme_Keyword: Fire detection
Theme_Keyword: Fire ecology
Theme_Keyword: Fire effects on environment
Theme_Keyword: Fire suppression, pre-suppression
Theme_Keyword: Prescribed fire
Theme_Keyword: Environment and People
Theme_Keyword: Forest management
Theme_Keyword: Landscape management
Theme:
Theme_Keyword_Thesaurus: None
Theme_Keyword: burn probability
Theme_Keyword: hazard
Theme_Keyword: fuels management
Theme_Keyword: fire suppression
Theme_Keyword: fire likelihood
Theme_Keyword: fire planning
Theme_Keyword: risk assessment
Theme_Keyword: wildfire hazard potential
Place:
Place_Keyword_Thesaurus: None
Place_Keyword: United States
Place_Keyword: conterminous United States
Place_Keyword: CONUS
Place_Keyword: Alaska
Place_Keyword: Hawaii
Access_Constraints: None
Use_Constraints:
These data were collected using funding from the U.S. Government and can be used without additional permissions or fees. If you use these data in a publication, presentation, or other research product please use the following citation: Dillon, Gregory K. 2023. Wildfire Hazard Potential for the United States (270-m), version 2023. 4th Edition. Fort Collins, CO: Forest Service Research Data Archive. https://doi.org/10.2737/RDS-2015-0047-4 The data presented here are the product of modeling, and as such carry an inherent degree of error and uncertainty. Users are strongly encouraged to read and fully comprehend the metadata and other available

documentation prior to data use. No warranty is made by the Originator as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data, or for purposes not intended by the Originator. These datasets are intended to provide nationally-consistent information for the purpose of comparing relative wildfire risk among communities nationally or within a state or county. Data included here are not intended to replace locally-calibrated state, regional, or local risk assessments where they exist. It is the responsibility of the user to be familiar with the value, assumptions, and limitations of these national data publications. Managers and planners must evaluate these data according to the scale and requirements specific to their needs. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USDA Forest Service, Fire Modeling Institute (FMI)
Contact_Person: Gregory K. Dillon
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City: Missoula
State_or_Province: MT
Postal_Code: 59808
Country: US
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Contact_Electronic_Mail_Address: `greg.dillon@usda.gov`
Contact Instructions: This contact information was current as of original publication date. For current information see Contact Us page on: https://doi.org/10.2737/RDS.
Browse_Graphic:
Browse_Graphic_File_Name: withheld
Browse_Graphic_File_Description:
JPEG image file containing a printable map graphic of the classified WHP for the entire United States.
Browse_Graphic_File_Type: JPG
Browse_Graphic:
Browse_Graphic_File_Name: withheld
Browse_Graphic_File_Description:
JPEG image file containing a printable map graphic of the continuous WHP for the entire United States.
Browse_Graphic_File_Type: JPG
Data_Set_Credit:
Funding for this project provided by USDA Forest Service, Fire Modeling Institute, which is part of the Rocky Mountain Research Station, Fire, Fuel and Smoke Science Program. Funding also provided by USDA Forest Service, Fire and Aviation Management. Pyrologix, LLC provided fire modeling support under contract with the

USDA Forest Service, Fire Modeling Institute.

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Native_Data_Set_Environment:
Esri ArcGIS 12.9.4.32739
Cross_Reference:
Citation_Information:
Originator: Dillon, Gregory K.
Originator: Scott, Joe H.
Originator: Jaffe, Melissa R.
Originator: Olszewski, Julia H.
Originator: Vogler, Kevin C.
Originator: Finney, Mark A.
Originator: Short, Karen C.
Originator: Riley, Karin L.
Originator: Grenfell, Isaac C.
Originator: Jolly, W. Matthew
Originator: Brittain, Stuart
Publication_Date: 2023
Title:
Spatial datasets of probabilistic wildfire risk components for the United States (270m)
Edition: 3rd
Geospatial_Data_Presentation_Form: raster digital data
Publication_Information:
Publication_Place: Fort Collins, CO
Publisher: Forest Service Research Data Archive
Online_Linkage: https://doi.org/10.2737/RDS-2016-0034-3
Cross_Reference:
Citation_Information:
Originator: Dillon, Gregory K.
Originator: Gilbertson-Day, Julie W.
Publication_Date: 2020
Title:
Wildfire Hazard Potential for the United States (270-m), version 2020
Edition: 3rd
Geospatial_Data_Presentation_Form: raster digital data
Publication_Information:
Publication_Place: Fort Collins, CO
Publisher: Forest Service Research Data Archive
Online_Linkage: https://doi.org/10.2737/RDS-2015-0047-3
Cross_Reference:
Citation_Information:

Originator: Dillon, Gregory K.
Publication_Date: 2018
Title:
Wildfire Hazard Potential (WHP) for the conterminous United States (270-m GRID), version 2018 continuous
Edition: 2nd
Geospatial_Data_Presentation_Form: raster digital data
Publication_Information:
Publication_Place: Fort Collins, CO
Publisher: Forest Service Research Data Archive
Online_Linkage: https://doi.org/10.2737/RDS-2015-0047-2
Cross_Reference:
Citation_Information:
Originator: Dillon, Gregory K.
Publication_Date: 2015
Title:
Wildfire Hazard Potential (WHP) for the conterminous United States (270-m GRID), version 2014 continuous
Edition: 1st
Geospatial_Data_Presentation_Form: raster digital data
Publication_Information:
Publication_Place: Fort Collins, CO
Publisher: Forest Service Research Data Archive
Online_Linkage: https://doi.org/10.2737/RDS-2015-0047
Cross_Reference:
Citation_Information:
Originator: Dillon, Gregory K.
Publication_Date: 2018
Title:
Wildfire Hazard Potential (WHP) for the conterminous United States (270-m GRID), version 2018 classified
Edition: 2nd
Geospatial_Data_Presentation_Form: raster digital data
Publication_Information:
Publication_Place: Fort Collins, CO
Publisher: Forest Service Research Data Archive
Online_Linkage: https://doi.org/10.2737/RDS-2015-0046-2
Cross_Reference:
Citation_Information:
Originator: Dillon, Gregory K.
Publication_Date: 2015
Title:
Wildfire Hazard Potential (WHP) for the conterminous United States (270-m GRID), version 2014 classified
Edition: 1st
Geospatial_Data_Presentation_Form: raster digital data

Publication_Information:
Publication_Place: Fort Collins, CO
Publisher: Forest Service Research Data Archive
Online_Linkage: https://doi.org/10.2737/RDS-2015-0046
Cross_Reference:
Citation_Information:
Originator: Dillon, Gregory K.
Publication_Date: 2015
Title:
Wildland Fire Potential (WFP) for the conterminous United States (270-m GRID), version 2012 continuous
Edition: 1st
Geospatial_Data_Presentation_Form: raster digital data
Publication_Information:
Publication_Place: Fort Collins, CO
Publisher: Forest Service Research Data Archive
Online_Linkage: https://doi.org/10.2737/RDS-2015-0045
Cross_Reference:
Citation_Information:
Originator: Dillon, Gregory K.
Publication_Date: 2015
Title:
Wildland Fire Potential (WFP) for the conterminous United States (270-m GRID), version 2012 classified
Edition: 1st
Geospatial_Data_Presentation_Form: raster digital data
Publication_Information:
Publication_Place: Fort Collins, CO
Publisher: Forest Service Research Data Archive
Online_Linkage: https://doi.org/10.2737/RDS-2015-0044
Cross_Reference:
Citation_Information:
Originator: Dillon, Gregory K.
Originator: Menakis, James
Originator: Fay, Frank
Publication_Date: 2015
Title:
Wildland fire potential: A tool for assessing wildfire risk and fuels management needs
Geospatial_Data_Presentation_Form: conference proceedings
Other_Citation_Details:
p. 60-76
Online_Linkage: https://www.fs.usda.gov/treesearch/pubs/49429

Back to Top

Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report:

The data described here are derived from wildfire simulation modeling, and their exact accuracy cannot be measured. They are intended to be relative measures of wildfire risk for planning purposes. The FSim datasets of burn probability and intensity used as primary inputs were objectively evaluated and calibrated against historic wildfire occurrence statistics within 136 distinct regions of contemporary wildfire activity (pyromes) across the United States (Short et al. 2020). See Dillon et al. (2023) for a more detailed description of FSim calibration. Some LANDFIRE fuels and vegetation data used as inputs have also been evaluated for efficacy and calibrated to meet the objectives of LANDFIRE. More information can be found at: https://www.landfire.gov/lf_evaluation.php.

Short, Karen C.; Grenfell, Isaac C.; Riley, Karin L.; Vogler, Kevin C. 2020. Pyromes of the conterminous United States. Fort Collins, CO: Forest Service Research Data Archive. https://doi.org/10.2737/RDS-2020-0020

Dillon, Gregory K.; Scott, Joe H.; Jaffe, Melissa R.; Olszewski, Julia H.; Vogler, Kevin C.; Finney, Mark A.; Short, Karen C.; Riley, Karin L.; Grenfell, Isaac C.; Jolly, W. Matthew; Brittain, Stuart. 2023. Spatial datasets of probabilistic wildfire risk components for the United States (270m). 3rd Edition. Fort Collins, CO: Forest Service Research Data Archive. https://doi.org/10.2737/RDS-2016-0034-3

Quantitative_Attribute_Accuracy_Assessment:
Attribute_Accuracy_Value: Unknown
Attribute_Accuracy_Explanation:
Quantitative accuracy cannot be evaluated.
Logical_Consistency_Report:
Values for non-burnable lands (6) and open water (7) were taken directly from a national mosaic of the FBFM40 layer in the landscape files used in national FSim modeling. The source for these landscape files was LANDFIRE 2020 (version 2.2.0) data resampled to 270-m resolution.
Completeness_Report:
All pixels that are part of the land and water of the United States have valid non-zero values.
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: Dillon, Gregory K.
Originator: Scott, Joe H.
Originator: Jaffe, Melissa R.
Originator: Olszewski, Julia H.
Originator: Vogler, Kevin C.
Originator: Finney, Mark A.
Originator: Short, Karen C.
Originator: Riley, Karin L.
Originator: Grenfell, Isaac C.
Originator: Jolly, W. Matthew

Originator: Brittain, Stuart
Publication_Date: 2023
Title:
Spatial datasets of probabilistic wildfire risk components for the United States (270m)
Edition: 3rd
Geospatial_Data_Presentation_Form: raster digital data
Publication_Information:
Publication_Place: Fort Collins, CO
Publisher: Forest Service Research Data Archive
Online_Linkage: https://doi.org/10.2737/RDS-2016-0034-3
Type_of_Source_Media: onLine
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 20150101
Source_Currentness_Reference:
Ground Condition
Source_Citation_Abbreviation:
FSim BP and FLPs (FLP1, FLP2, FLP3, FLP4, FLP5, FLP6)
Source_Contribution:
Burn probability (BP) and/or flame-length probabilities (FLPs) modeled with FSim were primary spatial inputs to datasets presented here. BP provided information about the overall probability of any 270-meter pixel experiencing a large fire of any intensity. FLPs provided information about the conditional probability of particular fire intensity levels (i.e., likelihood of a particular intensity level, given a fire) for every 270-meter pixel.
Source_Information:
Source_Citation:
Citation_Information:
Originator: Short, Karen C.
Publication_Date: 2022
Title:
Spatial wildfire occurrence data for the United States, 1992-2020 [FPA_FOD_20221014]
Edition: 6th
Geospatial_Data_Presentation_Form: vector digital data
Publication_Information:
Publication_Place: Fort Collins, CO
Publisher: Forest Service Research Data Archive
Other_Citation_Details:
Spatial wildfire occurrence Additional information is available in: Short, Karen C. 2014. A spatial database of wildfires in the United States, 1992-2011. Earth Systems Science Data 6:1-27. https://doi.org/10.5194/essd-6-1-2014
Online_Linkage: https://doi.org/10.2737/RDS-2013-0009.6
Type_of_Source_Media: onLine
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:

Beginning_Date: 1992
Ending_Date: 2020
Source_Currentness_Reference:
Observed
Source_Citation_Abbreviation:
FPA FOD
Source_Contribution:
The FPA point fire occurrence database (FPA FOD) was used in the process of creating the burn probability (BP) and fire intensity level (FIL) rasters. It was also used to create the small fire potential dataset during the WHP mapping process.
Source_Information:
Source_Citation:
Citation_Information:
Originator: U.S. Department of Agriculture, Forest Service
Originator: U.S. Department of the Interior
Publication_Date: 2022
Title:
LANDFIRE 2020
Edition: 2.2.0
Geospatial_Data_Presentation_Form: database
Other_Citation_Details:
Scott, Joe H.; Burgan, Robert E. 2005. Standard fire behavior fuel models: a comprehensive set for use with Rothermel's surface fire spread model. Gen. Tech. Rep. RMRS-GTR-153. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 72 p. https://doi.org/10.2737/rmrs-gtr-153
Online_Linkage: https://landfire.gov/
Type_of_Source_Media: onLine
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2020
Source_Currentness_Reference:
Ground Condition
Source_Citation_Abbreviation:
LANDFIRE FBFM40
Source_Contribution:
The LANDFIRE Fire Behavior Fuel Models layer was a primary input to the FSim BP and FIL datasets.
Source_Information:
Source_Citation:
Citation_Information:
Originator: U.S. Department of Agriculture, Forest Service
Originator: U.S. Department of the Interior
Publication_Date: 2022
Title:
LANDFIRE 2020

Edition: 2.2.0
Geospatial_Data_Presentation_Form: raster digital data
Other_Citation_Details:
Rollins, Matthew G. 2009. LANDFIRE: a nationally consistent vegetation, wildland fire, and fuel assessment. International Journal of Wildland Fire 18:235-249. https://doi.org/10.1071/wf08088
Online_Linkage: https://landfire.gov/
Type_of_Source_Media: onLine
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2020
Source_Currentness_Reference:
Ground Condition
Source_Citation_Abbreviation:
LANDFIRE EVT
Source_Contribution:
The LANDFIRE EVT layer was used to spatially apply resistance to control weights to create the final WHP.
Process_Step:
Process_Description:
1. Using the nationally-available 270-m FSim BP and FLP data, multiply BP by each FLP to get the actual probabilities of fire occurrence in each flame length class.
Source_Used_Citation_Abbreviation:
withheld
Process_Date: 202309
Process_Step:
Process_Description:
2. Weight the probabilities in each flame length class by the potential hazard they represent and sum them to derive a measure of large wildfire potential. Weights used were: FLP1 and FLP2 - 1; FLP3 and FLP4 - 8; FLP5 - 25; FLP6 - 75.
Process_Date: 202309
Process_Step:
Process_Description:
3. Create a separate surface of small wildfire potential based on ignition locations for fires smaller than 300 acres (generally not accounted for in FSim).
Source_Used_Citation_Abbreviation:
withheld
Process_Date: 202309
Process_Step:
Process_Description:
4. Integrate the large wildfire potential created in process steps 1-2 with the small wildfire potential created in process step 3. This was done by weighting each according to its relative contribution to total wildfire potential, then adding the weighted values.
Process_Date: 202309
Process_Step:

Process_Description:
5. Apply a set of resistance to control weights based on fireline construction rates in different fuel types.
Source_Used_Citation_Abbreviation:
withheld
Process_Date: 202309
Process_Step:
Process_Description:
6. Convert WHP values to integers by multiplying by 10,000 and rounding to the nearest whole number (preserves four decimal places of precision).
Process_Date: 202309
Process_Step:
Process_Description:
7. Evaluate the statistical distribution of WHP values and classify them into five classes: very low, low, moderate, high, very high. Add in non-burnable and water from LANDFIRE FMFM40 layer to produce final classified version of WHP.
Source_Used_Citation_Abbreviation:
withheld
Process_Date: 202309

Back to Top

Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Raster
Raster_Object_Information:
Raster_Object_Type: Grid Cell

Back to Top

Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: VAT_whp2023_cls_conus
Attribute:
Attribute_Label: OBJECTID
Attribute_Definition:
Internal feature number.
Attribute_Definition_Source:
Esri
Attribute_Domain_Values:
Unrepresentable_Domain:
Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: VALUE
Attribute:
Attribute_Label: COUNT
Attribute:
Attribute_Label: class_desc
Overview_Description:
Entity_and_Attribute_Overview:

The data included in this publication represent wildfire hazard potential (WHP). Data are provided as a continuous integer index. Baseline values in the 2018 WHP were constrained between 0 and 100,000, but the maximum value in the newest version exceeds 100,000 is some locations where the WHP value went up. Continuous values are grouped into the following classes in the classified version of the data: 1) very low, 2) low, 3) moderate, 4) high, 5) very high, 6) non-burnable lands, and 7) open water. Below is a complete list and description of the files included in this package.

DATA FILES (7)

These data are available in two different formats (GDB and TIF), which are each a separate download.

1) \Data\whp2023.gdb: Esri file geodatabase containing 270-meter resolution raster datasets of Wildfire Hazard Potential. This geodatabase includes 6 raster datasets:
whp2023_cls_ak: classified (5-class) WHP for Alaska,
whp2023_cls_conus: classified (5-class) WHP for the conterminous United States (CONUS),
whp2023_cls_hi: classified (5-class) WHP for Hawaii,
whp2023_cnt_ak: continuous integer WHP index values for Alaska,
whp2023_cnt_conus: continuous integer WHP index values for the conterminous United States, and
whp2023_cnt_hi: continuous integer WHP index values for Hawaii.

2-7) \Data\whp2023_GeoTIF\whp2023_*.tif: Geospatial TIF files (and associated files) with 270-meter resolution raster datasets of Wildfire Hazard Potential. There are 6 raster datasets:
whp2023_cls_ak.tif: classified (5-class) WHP for Alaska,
whp2023_cls_conus.tif: classified (5-class) WHP for the conterminous United States,
whp2023_cls_hi.tif: classified (5-class) WHP for Hawaii,
whp2023_cnt_ak.tif: continuous integer WHP index values for Alaska,
whp2023_cnt_conus.tif: continuous integer WHP index values for the conterminous United States, and
whp2023_cnt_hi.tif: continuous integer WHP index values for Hawaii.
Note: The TIF files have associated files created by ArcGIS when exporting as TIF datasets.

Attributes found in whp2023_cls_*:
OBJECTID = Unique ID
VALUE = Class (1 = very low, 2 = low, 3 = moderate, 4 = high, 5 = very high, 6 = non-burnable, 7 = water)
COUNT = Count of pixels in each class
CLASS_DESC = Description of class values

Attributes found in whp2023_cnt_*:
OBJECTID = Unique ID
VALUE = Value of the continuous WHP index at each pixel
COUNT = Count of pixels with each unique value

SUPPLEMENTAL FILES (8)

Maps:

1) \Supplements\WHP2023_Classified_Map.jpg: JPEG image file containing a printable map graphic of the classified WHP for the entire United States.

2) \Supplements\WHP2023_Classified_Map.pdf: Portable Document Format file containing a printable map graphic of the classified WHP for the entire United States

3) \Supplements\WHP2023_Continuous_Map.jpg: JPEG image file containing a printable map graphic of the continuous WHP for the entire United States.

4) \Supplements\WHP2023_Continuous_Map.pdf: Portable Document Format file containing a printable map graphic of the continuous WHP for the entire United States.

Symbology:

5) \Supplements\WHP2023_GISDataSymbology.xlsx: Microsoft Excel Open XML spreadsheet file with suggested class definitions and colors for displaying the raster datasets in any GIS software. (Information in this file is self-explanatory, no variable descriptions needed.)

Summary Data:

6) \Supplements\WHP2023_County_Summary.xlsx: Microsoft Excel Open XML spreadsheet file containing tabular summaries of the classified and continuous WHP spatial data for each of the 3,143 counties and equivalent governmental units in the United States. Summary statistics for the individual components of hazard (fire intensity and burn probability) are also included. This file contains 3 worksheets, which are defined below.

Worksheet 1: 'county summary': tabular data
Worksheet 2: 'variable descriptions': list and description of variables in the 'county summary' worksheet
Worksheet 3: 'supporting_information': sources and additional information about the data included in the 'county summary' worksheet

7) \Supplements\WHP2023_State_Summary.xlsx: Microsoft Excel Open XML

spreadsheet file containing tabular summaries of the classified and continuous WHP spatial data for each of the 50 United States and the District of Columbia. Summary statistics for the individual components of hazard (fire intensity and burn probability) are also included. This file contains 3 worksheets, which are defined below.
Worksheet 1: ‘state summary’: tabular data
Worksheet 2: ‘variable descriptions’: list and description of variables in the 'state summary' worksheet
Worksheet 3: 'supporting information’: sources and additional information about the data included in the 'state summary' worksheet

8) \Supplements\WHP2023_ZipCode_Summary.xlsx: Microsoft Excel Open XML spreadsheet file containing tabular summaries of the classified and continuous WHP spatial data for each of the 32,094 5-digit postal ZIP Code areas in the United States. Summary statistics for the individual components of hazard (fire intensity and burn probability) are also included.
Worksheet 1: ‘zipcode summary’: tabular data
Worksheet 2: ‘variable descriptions’: list and description of variables in the 'zipcode summary' worksheet
Worksheet 3: 'supporting information’: sources and additional information about the data included in the 'zipcode summary' worksheet
Entity_and_Attribute_Detail_Citation:
Dillon, Gregory K.; Menakis, James; Fay, Frank. 2015. Wildland fire potential: A tool for assessing wildfire risk and fuels management needs. In: Keane, Robert E.; Jolly, Matt; Parsons, Russell; Riley, Karin. Proceedings of the large wildland fires conference; May 19-23, 2014; Missoula, MT. Proc. RMRS-P-73. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. p. 60-76. https://www.fs.usda.gov/treesearch/pubs/49429

Esri. 2022. USA States. https://www.arcgis.com/home/item.html?id=1a6cae723af14f9cae228b133aebc620. (Accessed November 2023).

Esri. 2023. United States ZipCode Boundaries. https://www.arcgis.com/home/item.html?id=91379236cdca4fd88f3682283f63953e. (Accessed November 2023).

U.S. Census Bureau. 2022. 2022 TIGER/Line Shapefiles, Counties and Equivalent Entities. Released September 30, 2022. https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-line-file.2022.html#list-tab-790442341. (Accessed November 2023).

Back to Top

Distribution_Information:
Distributor:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USDA Forest Service, Research and Development

Contact_Position: Research Data Archivist
Contact_Address:
Address_Type: mailing and physical
Address: 240 West Prospect Road
City: Fort Collins
State_or_Province: CO
Postal_Code: 80526
Country: US
Contact_Voice_Telephone: see Contact Instructions
Contact Instructions: This contact information was current as of December 2023. For current information see Contact Us page on: https://doi.org/10.2737/RDS.
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Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Format_Name: TIFF
Format_Version_Number: 2023
Format_Information_Content:
Georeferenced (GeoTIFF) raster file (and associated files)
Digital_Transfer_Option:
Online_Option:
Computer_Contact_Information:
Network_Address:
Network_Resource_Name: https://doi.org/10.2737/RDS-2015-0047-4
Fees: None
Back to Top
Distribution_Information:
Distributor:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USDA Forest Service, Research and Development
Contact_Position: Research Data Archivist
Contact_Address:

Address_Type: mailing and physical
Address: 240 West Prospect Road
City: Fort Collins
State_or_Province: CO
Postal_Code: 80526
Country: US
Contact_Voice_Telephone: see Contact Instructions
Contact Instructions: This contact information was current as of December 2023. For current information see Contact Us page on: https://doi.org/10.2737/RDS.
Distribution_Liability:
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Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Format_Name: GDB
Format_Version_Number: 2023
Format_Information_Content:
Esri file geodatabase
Digital_Transfer_Option:
Online_Option:
Computer_Contact_Information:
Network_Address:
Network_Resource_Name: https://doi.org/10.2737/RDS-2015-0047-4
Fees: None
Back to Top
Distribution_Information:
Distributor:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USDA Forest Service, Research and Development
Contact_Position: Research Data Archivist
Contact_Address:
Address_Type: mailing and physical
Address: 240 West Prospect Road

City: Fort Collins
State_or_Province: CO
Postal_Code: 80526
Country: US
Contact_Voice_Telephone: see Contact Instructions
Contact Instructions: This contact information was current as of December 2023. For current information see Contact Us page on: https://doi.org/10.2737/RDS.
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Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Format_Name: XLSX
Format_Version_Number: see Format Specification
Format_Specification:
Microsoft Excel Open XML spreadsheet file
Digital_Transfer_Option:
Online_Option:
Computer_Contact_Information:
Network_Address:
Network_Resource_Name: https://doi.org/10.2737/RDS-2015-0047-4
Fees: None

Back to Top

Distribution_Information:
Distributor:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USDA Forest Service, Research and Development
Contact_Position: Research Data Archivist
Contact_Address:
Address_Type: mailing and physical
Address: 240 West Prospect Road
City: Fort Collins
State_or_Province: CO

Postal_Code: 80526
Country: US
Contact_Voice_Telephone: see Contact Instructions
Contact Instructions: This contact information was current as of December 2023. For current information see Contact Us page on: https://doi.org/10.2737/RDS.
Distribution_Liability:
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Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Format_Name: PDF
Format_Version_Number: see Format Specification
Format_Specification:
Portable Document Format file
Digital_Transfer_Option:
Online_Option:
Computer_Contact_Information:
Network_Address:
Network_Resource_Name: https://doi.org/10.2737/RDS-2015-0047-4
Fees: None
Back to Top
Distribution_Information:
Distributor:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USDA Forest Service, Research and Development
Contact_Position: Research Data Archivist
Contact_Address:
Address_Type: mailing and physical
Address: 240 West Prospect Road
City: Fort Collins
State_or_Province: CO
Postal_Code: 80526
Country: US

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Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Format_Name: JPEG
Format_Version_Number: see Format Specification
Format_Specification:
Joint Photograph Experts image file (JPG)
Digital_Transfer_Option:
Online_Option:
Computer_Contact_Information:
Network_Address:
Network_Resource_Name: https://doi.org/10.2737/RDS-2015-0047-4
Fees: None

Back to Top

Metadata_Reference_Information:
Metadata_Date: 20231220
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USDA Forest Service, Fire Modeling Institute (FMI)
Contact_Person: Gregory K. Dillon
Contact_Position: Director, Fire Modeling Institute
Contact_Address:
Address_Type: mailing and physical
Address: Missoula Fire Sciences Laboratory
Address: 5775 US Hwy 10 W
City: Missoula
State_or_Province: MT
Postal_Code: 59808

Country: US
Contact_Voice_Telephone: 406-329-4800
Contact_Electronic_Mail_Address: greg.dillon@usda.gov
Contact Instructions: This contact information was current as of original publication date. For current information see Contact Us page on: https://doi.org/10.2737/RDS.
Metadata_Standard_Name: FGDC Content Standard for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time

Back to Top