

USDA Forest Service, RMRS Fire Sciences Laboratory
Fire Effects and Fire Behavior Projects
Metadata for Wildland Fire Risk to Flammable Structures,
Version 2000

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Identification_Information:

Citation

Citation_Information

 Originator: **USDA Forest Service, RMRS Fire Sciences Laboratory**
 Publication_Date: **20010115**
 Title: **Wildland Fire Risk to Flammable Structures, V 1.0**
 Geospatial_Data_Presentation_Form: **map**

Publication_Information

 Publication_Place: **Missoula, Montana**
 Publisher: **USDA Forest Service, RMRS Fire Sciences**

Laboratory

Description

Abstract:

The threat of wildland fire burning flammable structures is a national issue. Each year the risk increases from accumulating wildland fuels and building flammable structures adjacent to wildlands. We defined and mapped potential risk of wildland fire burning flammable structures for the conterminous United States. The map was an integration of three GIS data layers: Housing Density, Potential Fire Exposure, and Extreme Fire Weather Potential. Housing Density was a classification of human habitation ranging from wildland to city in units of houses per hectare. Housing Density was derived from estimates of ambient population. Potential Fire Exposure was a classification of vegetation types into fire behavior classes that exhibit

similar fire or heat intensity under extreme conditions. Extreme Fire Weather Potential was a classification of the average number of days per year where weather conditions, specifically temperature, relative humidity, and wind speed, were similar to conditions under which wildland fires had burned multiple structures in a single event. Flammable structures are structures that have a low resistance to ignitions. Wildland fires are vegetation fires that start and burn in unpopulated/undeveloped areas.

Purpose:

The purpose of this data is to provide a coarse-scale representation of wildland fire risk to flammable structures. The data are not intended to be summarized at a scale finer than the state level.

Time_Period_of_Content

Time_Period_Information

Range_of_Dates/Times

Beginning_Date:

Ending_Date:

Currentness_Reference: **Publication Date**

Status

Progress: **Complete**

Maintenance_and_Update_Frequency: **Unknown**

Spatial_Domain

Bounding_Coordinates

West_Bounding_Coordinate: **-119.938095**

East_Bounding_Coordinate: **-65.5722885**

North_Bounding_Coordinate: **46.6633530**

South_Bounding_Coordinate: **23.6649513**

Keywords

Theme

Theme_Keyword_Thesaurus: **None**

Theme_Keyword: **fire**

Theme_Keyword: **risk**

Theme_Keyword: **wildland**

Theme_Keyword: **urban-interface**

Theme_Keyword: **flammable structures**

Theme_Keyword: **United States**

Place

Place_Keyword_Thesaurus: **None**

Place_Keyword: **United States**

Access_Constraints:

None

Use_Constraints:

Point_of_Contact

Contact_Information

Contact_Organization_Primary

Contact_Organization: **USDA Forest Service, RMRS Fire Sciences**

Laboratory

Contact_Person: **Jim Menakis**

Contact_Position: **GIS Analyst, Fire Effects**

Contact_Address

Address_Type: **Mailing Address**

Address: **P.O. Box 8089**

City: **Missoula**

State_or_Province: **MT**

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Country: USA
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Contact_Facsimile_Telephone: (406) 329-4877
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Hours_of_Service: Monday-Friday, 8-5, Mountain Time
Native_Data_Set_Environment:
Arc/Info version 7.2.1
Pathname = /fsfiles/unit/fe/feprojb6/usajm/houserisk/d.version2000

Data_Quality_Information:

Attribute_Accuracy
Attribute_Accuracy_Report:
 unknown
Logical_Consistency_Report:
Completeness_Report:
 Data set is complete
Positional_Accuracy
Horizontal_Positional_Accuracy
Horizontal_Positional_Accuracy_Report:

 Unknown
Vertical_Positional_Accuracy
Vertical_Positional_Accuracy_Report:
 NONE
Lineage
Source_Information
Source_Citation
Citation_Information
Originator:
 Oak Ridge National Laboratory
 Geographic Information Science & Technology
Publication_Date: 19990418
Title: **Landscan Global Population**
Edition: 1
Geospatial_Data_Presentation_Form: **map**
Publication_Information
 Publication_Place: **Oak Ridge, TN**
 Publisher: **Oak Ridge National Laboratory**
Other_Citation_Details:
 Oak Ridge National Laboratory. 1999.
 Landscan Global Population 1998 Database.
Source_Scale_Denominator: 0
Type_of_Source_Media: **CD**
Source_Time_Period_of_Content
Time_Period_Information
 Range_of_Dates/Times
 Beginning_Date: **19980101**
 Ending_Date: **19981231**
Source_Currentness_Reference:
Source_Citation_Abbreviation: **ORNL**
Source_Contribution:
 Provided original global ambient population per 30 Arc

second grid cell. Used to create Housing Density Layer.

Source_Information

Source_Citation

Citation_Information

Originator:

**U.S. Air Force Combat Climatology Center
National Climatic Data Center**

Publication_Date: 20000207

Title: **International Surface Weather Observations**

Edition: **1982-1997**

Geospatial_Data_Presentation_Form: **other**

Publication_Information

Publication_Place: **Asheville, NC**

Publisher: **U.S. AFCCC**

Source_Scale_Denominator: 0

Type_of_Source_Media: **CD**

Source_Time_Period_of_Content

Time_Period_Information

Range_of_Dates/Times

Beginning_Date: **19820101**

Ending_Date: **19971231**

Source_Currentness_Reference:

Source_Citation_Abbreviation: **AFCC**

Source_Contribution:

Daily data of temperature, relative humidity, and wind speed measurements used to determine average number of days per year where extreme weather conditions were similar to conditions under which wildland fires burned structures.

Used to create Extreme Fire Weather Potential layer.

Source_Information

Source_Citation

Citation_Information

Originator:

**USDA Forest Service, RMRS Fire Sciences Lab., Fire Effects
Coarse-Scale Spatial Data for Wildland Fire & Fuel Management**

Publication_Date: 19991103

Title: **Potential Natural Vegetation Groups and Current Cover Types**

Edition: **Versions 2.0 and 1.0**

Geospatial_Data_Presentation_Form: **map**

Publication_Information

Publication_Place: **Missoula, MT**

Publisher: **RMRS Fire Sciences Lab., Fire Effects**

Other_Citation_Details:

See www.fs.fed.us/fire/fuelman for full citation

Source_Scale_Denominator: 0

Type_of_Source_Media: **digital**

Source_Time_Period_of_Content

Time_Period_Information

Range_of_Dates/Times

Beginning_Date: **19990101**

Ending_Date: **19991231**

Source_Currentness_Reference:

Source_Citation_Abbreviation: **CSFU**

Source_Contribution:

Source of vegetation types classified into fire behavior classes that exhibit similar fire or heat intensity under extreme weather conditions.

Process_Step
Process_Description:
 LandScan Global Population 1998 Database (population density) was classified to number of houses per acre, where 1 house is equal to 3 people, to create the Housing Density Layer.
Source_Used_Citation_Abbreviation: ORNL
Process_Date: 0
Source_Produced_Citation_Abbreviation:
Process_Step
Process_Description:
 Each Housing Density class was assigned a risk rating.
Process_Date: 0
Source_Produced_Citation_Abbreviation:
Process_Step
Process_Description:
 Potential Vegetation Groups and Current Cover Types were combined and classified into severe fire behavior classes that produce similar fire or heat intensity, creating the Potential Fire Exposure layer.
Source_Used_Citation_Abbreviation: CSFU
Process_Date: 0
Source_Produced_Citation_Abbreviation:
Process_Step
Process_Description:
 Average number of days per year during which weather conditions exceeded thresholds similar to past severe fire weather. Use to classify areas to Extreme Fire Weather Potential.

Source_Used_Citation_Abbreviation: AFCC
Process_Date: 0
Source_Produced_Citation_Abbreviation:
Process_Step
Process_Description:
 Housing Density, Potential Fire Exposure, and Extremem Fire Weather Potential were combined to create a matrix of all possible combinations. These combinations were grouped into classes of potential wildland fire risk to structures.
Process_Date: 0
Source_Produced_Citation_Abbreviation:

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: **Raster**
Raster_Object_Information
Raster_Object_Type: **Grid Cell**
Row_Count: **2871**
Column_Count: **4572**

Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition

Planar
Map_Projection
Map_Projection_Name: **Lambert Azimuthal Equal Area**
Lambert_Azimuthal_Equal_Area
Radius_of_sphere_of_reference: **6370997.00000**
Longitude_of_center_of_projection: **-100 0 0.00**
Latitude_of_center_of_projection: **45 0 0.000**
False_Easting: **0.00000**
False_Northing: **0.00000**
Planar_Coordinate_Information
Planar_Coordinate_Encoding_Method: **row and column**
Coordinate_Representation
Abscissa_Resolution: **1000**
Ordinate_Resolution: **1000**
Planar_Distance_Units: **meters**
Geodetic_Model
Horizontal_Datum_Name: **None**
Spheroid: **Defined**
Semi-major_Axis: **6370997**

Entity_and_Attribute_Information:

Detailed_Description

Entity_Type
Entity_Type_Label: **HOUSERISK.VAT**
Entity_Type_Definition: **Grid Cell Value Attribute Table**
Entity_Type_Definition_Source: **None**
Attribute
Attribute_Label: **VALUE**
Attribute_Definition:
cell value
Attribute_Definition_Source: **None**
Attribute_Domain_Values
Range_Domain
Range_Domain_Minimum: **1**
Range_Domain_Maximum: **9**
Beginning_Date_of_Attribute_Values: **20010115**
Attribute
Attribute_Label: **COUNT**
Attribute_Definition:
number of cells with said value
Attribute_Definition_Source: **None**
Attribute_Domain_Values
Range_Domain
Range_Domain_Minimum: **7621**
Range_Domain_Maximum: **2741521**
Attribute_Units_of_Measure: **cells**
Beginning_Date_of_Attribute_Values: **20010115**
Attribute
Attribute_Label: **HOUSERISK**
Attribute_Definition:
wildland fire risk to structures
Potential risk class of wildland fire burning flammable structures.

Attribute_Definition_Source: **None**
Attribute_Domain_Values
 Range_Domain
 Range_Domain_Minimum: **1**
 Range_Domain_Maximum: **9**
Beginning_Date_of_Attribute_Values: **20010115**
Attribute
 Attribute_Label: **RISK_CLASS**
 Attribute_Definition:
 risk class label
 Attribute_Definition_Source: **None**
 Attribute_Domain_Values
 Unrepresentable_Domain: **Character field**
 Beginning_Date_of_Attribute_Values: **20010115**
Attribute
 Attribute_Label: **COLORNAME_SHD**
 Attribute_Definition:
 shadeset value
 Attribute_Definition_Source: **None**
 Attribute_Domain_Values
 Range_Domain
 Range_Domain_Minimum: **4**
 Range_Domain_Maximum: **129**
 Beginning_Date_of_Attribute_Values: **20010115**

Distribution Information:

Distributor

Contact_Information

Contact_Organization_Primary

Contact_Organization: **USDA Forest Service, RMRS Fire Sciences**

Laboratory

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Contact_Position: **GIS Analyst, Fire Effects**
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Hours_of_Service: **Monday-Friday, 8-5, Mountain Time**

Distribution_Liability:

Users must assume responsibility to determine the usability of this data for their purposes.

Standard_Order_Process

Digital_Form

Digital_Transfer_Information

Format_Name: **Arc/Info Export**
Format_Version_Number: **7.1.2**

Metadata_Reference_Information:

Metadata_Date: 20010118

Metadata_Review_Date: 20010331

Metadata_Contact

Contact_Information

Contact_Organization_Primary

Contact_Organization: **USDA Forest Service, RMRS Fire Sciences**

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State_or_Province: **MT**

Postal_Code: **59807**

Country: **USA**

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Hours_of_Service: **Monday-Friday, 8-5, Mountain Time**

Metadata_Standard_Name: **FGDC Content Standards for Digital Geospatial**

Metadata

Metadata_Standard_Version: **19940608**