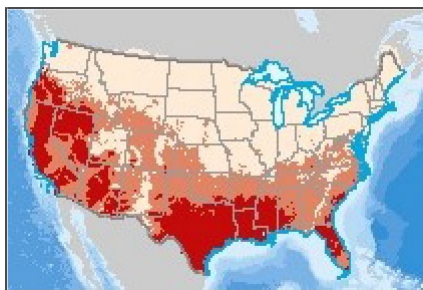


Keetch-Byram Drought Index (KBDI) Observed 99th Percentile



Tags

Keetch-Byram Drought Index, KBDI, wildfire risk

Summary

Depicts statistics for the Keetch-Byram Drought Index, (KBDI) which is used as a measure of wildfire risk, specifically the 99th percentile of the KBDI values for the years 1996-2000, based on historical observations.

Description

This layer provides statistics for the Keetch-Byram Drought Index, (KBDI) which is used as a measure of wildfire risk. KBDI values range from 0 (low wildfire potential) to 800 (extreme drought and unpredictable wildfire behavior). KBDI is calculated using daily maximum temperature, daily precipitation, and annual accumulated precipitation. The statistics in this layer are the 99th percentile of the KBDI values for the years 1996-2000, based on historical observations. The KBDI performs best in regions less sensitive to wind effects, and with sufficient fuel on the ground. Computations and conversion to GIS format were made using Geospatial Analysis Tool Kit for Regional Climate Data (GATOR). For more information, see: (1) Brown, E.K., J. Wang, and Yan Feng. 2020. U.S. wildfire potential: a historical view and future projection using high-resolution climate data. Environmental Research Letters. 16034060, and (2) Wang, J., and V. R. Kotamarthi, 2015: High-resolution dynamically downscaled projections of precipitation in the mid and late 21st century over North America. Earth's Future, 3, 268-288, doi:10.1002/2015EF000304, and (3) Kuiper, James, Veerabhadra Kotamarthi, Andrew Orr and Jiali Wang. Geospatial Analysis Tool Kit for Regional Climate Datasets (GATOR) An Open-source Tool to Compute Climate Statistic GIS Layers from Argonne Climate Modeling Results. Argonne National Laboratory, ANL/EVS-18/3, August, 2017.

Credits

Argonne National Laboratory

Use limitations

There are no access and use limitations for this item.

Extent

West	-124.772935	East	-66.953918
North	49.849766	South	25.127971

Scale Range

Maximum (zoomed in)	1:5,000
Minimum (zoomed out)	1:150,000,000

ArcGIS Metadata

Topics and Keywords

THEMES OR CATEGORIES OF THE RESOURCE climatologyMeteorologyAtmosphere, environment, planningCadastre

* CONTENT TYPE Downloadable Data
EXPORT TO FGDC CSDGM XML FORMAT AS RESOURCE DESCRIPTION No

Citation

TITLE Keetch-Byram Drought Index (KBDI) Observed 99th Percentile
PUBLICATION DATE 2021-08-02 00:00:00

PRESENTATION FORMATS * digital map

Citation Contacts

RESPONSIBLE PARTY
INDIVIDUAL'S NAME Jim Kuiper
ORGANIZATION'S NAME Argonne National Laboratory
CONTACT'S ROLE originator

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Resource Details

DATASET LANGUAGES * English (UNITED STATES)

SPATIAL REPRESENTATION TYPE * vector

* PROCESSING ENVIRONMENT Version 6.2 (Build 9200) ; Esri ArcGIS 10.8.1.14362

CREDITS
Argonne National Laboratory

ARCGIS ITEM PROPERTIES
* NAME kbdi_percentile_99_observed
* LOCATION
* ACCESS PROTOCOL Local Area Network

Extents

EXTENT
DESCRIPTION
Includes projections for 1996-2000

GEOGRAPHIC EXTENT
BOUNDING RECTANGLE

EXTENT TYPE Extent used for searching

* WEST LONGITUDE -124.772935
* EAST LONGITUDE -66.953918
* NORTH LATITUDE 49.849766
* SOUTH LATITUDE 25.127971
* EXTENT CONTAINS THE RESOURCE Yes

TEMPORAL EXTENT

BEGINNING DATE 1996-01-01 00:00:00
ENDING DATE 2000-12-31 00:00:00

EXTENT IN THE ITEM'S COORDINATE SYSTEM

* WEST LONGITUDE -13889659.612724
* EAST LONGITUDE -7453276.059509
* SOUTH LATITUDE 2891471.121814
* NORTH LATITUDE 6420298.532110
* EXTENT CONTAINS THE RESOURCE Yes

Spatial Reference

ARCGIS COORDINATE SYSTEM

* TYPE Projected
* GEOGRAPHIC COORDINATE REFERENCE GCS_WGS_1984
* PROJECTION WGS_1984_Web_Mercator_Auxiliary_Sphere
* COORDINATE REFERENCE DETAILS
 PROJECTED COORDINATE SYSTEM
 WELL-KNOWN IDENTIFIER 102100
 X ORIGIN -22041257.952553775
 Y ORIGIN -30241100
 XY SCALE 144148035.48642668
 Z ORIGIN -100000
 Z SCALE 10000
 M ORIGIN -100000
 M SCALE 10000

 XY TOLERANCE 0.001
 Z TOLERANCE 0.001
 M TOLERANCE 0.001
 HIGH PRECISION true
 LATEST WELL-KNOWN IDENTIFIER 3857
 WELL-KNOWN TEXT PROJCS["WGS_1984_Web_Mercator_Auxiliary_Sphere",GEOGCS
 ["GCS_WGS_1984",DATUM["D_WGS_1984",SPHEROID
 ["WGS_1984",6378137.0,298.257223563]],PRIMEM["Greenwich",0.0],UNIT
 ["Degree",0.0174532925199433]],PROJECTION["Mercator_Auxiliary_Sphere"],PARAMETER
 ["False_Easting",0.0],PARAMETER["False_Northing",0.0],PARAMETER
 ["Central_Meridian",0.0],PARAMETER["Standard_Parallel_1",0.0],PARAMETER
 ["Auxiliary_Sphere_Type",0.0],UNIT["Meter",1.0],AUTHORITY["EPSG",3857]]

REFERENCE SYSTEM IDENTIFIER

* VALUE 3857
* CODESPACE EPSG
* VERSION 8.8(9.3.1.2)

Spatial Data Properties

VECTOR

* LEVEL OF TOPOLOGY FOR THIS DATASET geometry only

GEOMETRIC OBJECTS

FEATURE CLASS NAME kbdi_percentile_99_observed
* OBJECT TYPE composite
* OBJECT COUNT 53239

ARCGIS FEATURE CLASS PROPERTIES

FEATURE CLASS NAME kbd_i_percentile_99_observed
* FEATURE TYPE Simple
* GEOMETRY TYPE Polygon
* HAS TOPOLOGY FALSE
* FEATURE COUNT 53239
* SPATIAL INDEX TRUE
* LINEAR REFERENCING FALSE

Distribution

DISTRIBUTION FORMAT

* NAME File Geodatabase Feature Class

Fields

DETAILS FOR OBJECT kbd_i_percentile_99_observed

* TYPE Feature Class
* ROW COUNT 53239

FIELD OBJECTID

* ALIAS OBJECTID_12
* DATA TYPE OID
* WIDTH 4
* PRECISION 0
* SCALE 0
* FIELD DESCRIPTION
Internal feature number.

* DESCRIPTION SOURCE
Esri

* DESCRIPTION OF VALUES
Sequential unique whole numbers that are automatically generated.

FIELD Shape

* ALIAS Shape
* DATA TYPE Geometry
* WIDTH 0
* PRECISION 0
* SCALE 0
* FIELD DESCRIPTION
Feature geometry.

* DESCRIPTION SOURCE
Esri

* DESCRIPTION OF VALUES
Coordinates defining the features.

FIELD RowId

* ALIAS RowId
* DATA TYPE SmallInteger
* WIDTH 2
* PRECISION 0
* SCALE 0

FIELD ColumnId

* ALIAS ColumnId
* DATA TYPE SmallInteger
* WIDTH 2

- * PRECISION 0
- * SCALE 0

FIELD Latitude

- * ALIAS Latitude
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD Longitude

- * ALIAS Longitude
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD Percentile_99Pcnt_KBDI_1996

- * ALIAS 1996 - 99th Percentile of KBDI
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD Percentile_99Pcnt_KBDI_1997

- * ALIAS 1997 - 99th Percentile of KBDI
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD Percentile_99Pcnt_KBDI_1998

- * ALIAS 1998 - 99th Percentile of KBDI
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD Percentile_99Pcnt_KBDI_1999

- * ALIAS 1999 - 99th Percentile of KBDI
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD Percentile_99Pcnt_KBDI_2000

- * ALIAS 2000 - 99th Percentile of KBDI
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

Hide Field Percentile_99Pcnt_KBDI_2000 ▲

FIELD Percentile_99Pcnt_KBDI_1996_2000 ►

- * ALIAS 1996-2000 - 99th Percentile of KBDI
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD Shape_Length

- * ALIAS Shape_Length
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0
- * FIELD DESCRIPTION
Length of feature in internal units.
- * DESCRIPTION SOURCE
Esri
- * DESCRIPTION OF VALUES
Positive real numbers that are automatically generated.

FIELD Shape_Area

- * ALIAS Shape_Area
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0
- * FIELD DESCRIPTION
Area of feature in internal units squared.
- * DESCRIPTION SOURCE
Esri
- * DESCRIPTION OF VALUES
Positive real numbers that are automatically generated.

Metadata Details

- * METADATA LANGUAGE English (UNITED STATES)

SCOPE OF THE DATA DESCRIBED BY THE METADATA * dataset

SCOPE NAME * dataset

- * LAST UPDATE 2021-08-31

ARCGIS METADATA PROPERTIES

METADATA FORMAT ArcGIS 1.0

METADATA STYLE FGDC CSDGM Metadata

STANDARD OR PROFILE USED TO EDIT METADATA FGDC

CREATED IN ARCGIS FOR THE ITEM 2021-08-30 12:42:21

LAST MODIFIED IN ARCGIS FOR THE ITEM 2021-08-31 14:15:56

AUTOMATIC UPDATES

HAVE BEEN PERFORMED Yes

LAST UPDATE 2021-08-31 14:15:56