

# Geothermal Favorability Map

## Interactive Mapping Application



### Tags

Geothermal Potential, geothermal, Geothermal, Western United States

### Summary

This is intended to highlight areas of elevated potential for the presence of undiscovered moderate (90 - 150° C) to high (> 150° C) temperature geothermal systems. It is not meant to be used to locate exact areas for exploration.

### Description

This is a surface showing relative favorability for the presence of geothermal systems in the western United States. It is an average of 12 models that correlates different geological and geophysical factors to the known presence of moderate (90 - 150° C) to high (> 150° C) temperature geothermal systems. as discussed in the reference in the 'Larger Work' section of this metadata file. The data is represented as a polygon contour file as well as a raster.

### Credits

U.S. Geological Survey

### Use limitations

There are no access and use limitations for this item.

### Extent

There is no extent for this item.

### Scale Range

There is no scale range for this item.

## ArcGIS Metadata

### Topics and Keywords

CONTENT TYPE Downloadable Data

PLACE KEYWORDS Western United States

THEME KEYWORDS geothermal

#### THESAURUS

TITLE EnergyResourceActivities

[Hide Thesaurus](#)

THEME KEYWORDS Geothermal Potential, Geothermal

[Hide Topics and Keywords](#)

## Citation

**TITLE** Geothermal Favorability Map Derived From Logistic Regression Models of the Western United States (favorabilitysurface.zip)

**PUBLICATION DATE** 2010-01-01

**EDITION** n/a

**FGDC GEOSPATIAL PRESENTATION FORMAT** Downloadable GIS Data

**COLLECTION TITLE** Quantifying the Undiscovered Geothermal Resources of the United States

[Hide Citation](#)

## Citation Contacts

**RESPONSIBLE PARTY**

**ORGANIZATION'S NAME** Colin F. Williams

**CONTACT'S ROLE** originator

**RESPONSIBLE PARTY**

**ORGANIZATION'S NAME** U.S. Geological Survey

**CONTACT'S ROLE** publisher

**CONTACT INFORMATION**

**ADDRESS**

**DELIVERY POINT** Menlo Park, California

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**RESPONSIBLE PARTY**

**ORGANIZATION'S NAME** Jacob DeAngelo

**CONTACT'S ROLE** originator

[Hide Citation Contacts](#)

## Resource Details

**DATASET LANGUAGES** English

**STATUS** completed

**GRAPHIC OVERVIEW**

**FILE NAME**

**PROCESSING ENVIRONMENT** Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.0.1770

**CREDITS**

U.S. Geological Survey

**ARCGIS ITEM PROPERTIES**

[Hide Resource Details](#)

## Extents

**EXTENT**

TEMPORAL EXTENT  
DATE AND TIME 2010-01-01

EXTENT  
GEOGRAPHIC EXTENT  
BOUNDING RECTANGLE  
WEST LONGITUDE -125.583257  
EAST LONGITUDE -101.253107  
SOUTH LATITUDE 30.884607  
NORTH LATITUDE 49.056361

[Hide Extents](#)

## Resource Points of Contact

POINT OF CONTACT  
INDIVIDUAL'S NAME Jacob DeAngelo  
ORGANIZATION'S NAME United States Geological Survey  
CONTACT'S POSITION Cartographer  
CONTACT'S ROLE point of contact

CONTACT INFORMATION  
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HOURS OF SERVICE  
Pacific Standard Time Business Hours

[Hide Contact information](#)

[Hide Resource Points of Contact](#)

## Resource Maintenance

RESOURCE MAINTENANCE  
UPDATE FREQUENCY not planned

[Hide Resource Maintenance](#)

## Resource Constraints

LEGAL CONSTRAINTS  
LIMITATIONS OF USE

Although these data have been processed successfully on a computer system at the U.S. Geological Survey, no warranty expressed or implied is made regarding the display or utility of the data on any other system, or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. The U.S. Geological survey shall not be held liable for improper or incorrect use of the data described and/or contained herein. Any use of trade, product, or firm names is for descriptive purposes only and does not imply endorsement by the U.S. Government. Although this information product, for the most part, is in the public domain, it also contains copyrighted materials as noted in the text. Permission to reproduce copyrighted items for other than personal use must be secured from the copyright owner.

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## Spatial Data Properties

#### GEORECTIFIED GRID

NUMBER OF DIMENSIONS 2

#### AXIS DIMENSIONS PROPERTIES

DIMENSION TYPE row (y-axis)

DIMENSION SIZE 978

#### AXIS DIMENSIONS PROPERTIES

DIMENSION TYPE column (x-axis)

DIMENSION SIZE 904

#### AXIS DIMENSIONS PROPERTIES

DIMENSION TYPE vertical (z-axis)

DIMENSION SIZE 1

CELL GEOMETRY area

[Hide Georectified Grid](#)

[Hide Spatial Data Properties](#)

## Data Quality

#### SCOPE OF QUALITY INFORMATION

RESOURCE LEVEL dataset

[Hide Scope of quality information](#)

[Hide Data Quality](#)

## Lineage

#### SOURCE DATA

##### SOURCE CITATION

TITLE Assessment of moderate- and high-temperature geothermal resources of the United States

PUBLICATION DATE 2008-01-01

PRESENTATION FORMATS digital multimedia

FGDC GEOSPATIAL PRESENTATION FORMAT multimedia presentation

##### SERIES

NAME Sheet 2008-3082

##### OTHER CITATION DETAILS

Factsheet Williams, Colin F., Reed, Marshall J., Mariner, Robert H., DeAngelo, Jacob, Galanis, S. Peter, Jr., 2008, Assessment of moderate- and high-temperature geothermal resources of the United States: U.S. Geological Survey Fact Sheet 2008-3082, 4 p.

RESPONSIBLE PARTY

ORGANIZATION'S NAME Williams, Colin F  
CONTACT'S ROLE originator

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ORGANIZATION'S NAME DeAngelo, Jacob  
CONTACT'S ROLE originator

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ORGANIZATION'S NAME Mariner, Robert H.  
CONTACT'S ROLE originator

RESPONSIBLE PARTY

ORGANIZATION'S NAME Reed, Marshall J.  
CONTACT'S ROLE originator

RESPONSIBLE PARTY

ORGANIZATION'S NAME United States Geological Survey  
CONTACT'S ROLE publisher

CONTACT INFORMATION

ADDRESS

DELIVERY POINT Menlo Park, CA

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RESPONSIBLE PARTY

ORGANIZATION'S NAME Galanis, S. Peter, Jr..  
CONTACT'S ROLE originator

RESOURCE LOCATION ONLINE

LOCATION <https://pubs.usgs.gov/fs/2008/3082/>

*Hide Source citation*

*Hide Source data*

SOURCE DATA

SOURCE CITATION

TITLE Mapping geothermal potential in the western United States  
PUBLICATION DATE 2008-01-01

PRESENTATION FORMATS hardcopy document

FGDC GEOSPATIAL PRESENTATION FORMAT document

SERIES

NAME GRC Transactions, Vol. 32

OTHER CITATION DETAILS

Williams, C.F., and J. DeAngelo, 2008b, Mapping geothermal potential in the western United States, Transactions, Geothermal Resources Council, v. 32, p. 181 - 188.

RESPONSIBLE PARTY

ORGANIZATION'S NAME Williams, Colin F  
CONTACT'S ROLE originator

RESPONSIBLE PARTY

ORGANIZATION'S NAME DeAngelo, Jacob  
CONTACT'S ROLE originator

[Hide Source citation](#)

[Hide Source data](#)

[Hide Lineage](#)

## Distribution

### DISTRIBUTOR

#### CONTACT INFORMATION

ORGANIZATION'S NAME U.S. Geological Survey  
CONTACT'S ROLE distributor

#### CONTACT INFORMATION

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TYPE both

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ADMINISTRATIVE AREA CO

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COUNTRY US

E-MAIL ADDRESS [ask@usgs.gov](mailto:ask@usgs.gov)

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### AVAILABLE FORMAT

NAME Interactive Mapping Application

FORMAT INFORMATION CONTENT Online application available to view data

### AVAILABLE FORMAT

NAME Shapefile

FORMAT INFORMATION CONTENT Contains RASTER dataset as well as a polygon representation of geothermal favorability within the western us

### ORDERING PROCESS

#### TRANSFER OPTIONS

##### ONLINE SOURCE

LOCATION [https://certmapper.cr.usgs.gov/pubs/servlet/MapViewBroker?project=geothermal&Service=geothermal\\_west](https://certmapper.cr.usgs.gov/pubs/servlet/MapViewBroker?project=geothermal&Service=geothermal_west)

DESCRIPTION Use this URI to view the map service using an online interactive mapping application

#### TRANSFER OPTIONS

TRANSFER SIZE 3.861

##### ONLINE SOURCE

##### LOCATION

[https://certmapper.cr.usgs.gov/data/geothermal/western\\_us/spatial/shape/favorabilitysurface.zip](https://certmapper.cr.usgs.gov/data/geothermal/western_us/spatial/shape/favorabilitysurface.zip)

DESCRIPTION The URL above links to a zipped file containing data described above

[Hide Distributor](#)

### TRANSFER OPTIONS

#### ONLINE SOURCE

LOCATION <https://energy.usgs.gov/other/geothermal/>

#### ONLINE SOURCE

##### LOCATION

[https://certmapper.cr.usgs.gov/data/geothermal/western\\_us/spatial/shape/favorabilitysurface.zip](https://certmapper.cr.usgs.gov/data/geothermal/western_us/spatial/shape/favorabilitysurface.zip)

[Hide Distribution](#)

## Fields

#### OVERVIEW DESCRIPTION

##### ENTITY AND ATTRIBUTE OVERVIEW

Grid cells represent a measure of generalized favorability for the presence of a moderate or high temperature geothermal system. This layer is an average of 12 models that correlates different geophysical factors to the known presence of moderate and high temperature geothermal systems, as discussed in the paper discussed in the 'Larger Work' section of this metadata file.

The units are Posterior Probability divided by Prior Probability (PPRB/Prior). This was done to normalize the probabilities of each of the 12 surfaces used to create this surface before averaging them together into this surface.

[Hide Overview Description](#)

[Hide Fields](#)

## References

#### AGGREGATE INFORMATION

ASSOCIATION TYPE larger work citation

##### AGGREGATE RESOURCE NAME

TITLE Quantifying the Undiscovered Geothermal Resources of the United States

PUBLICATION DATE 2009-01-01

FGDC GEOSPATIAL PRESENTATION FORMAT Online Reports or Chapters

##### SERIES

NAME Geothermal Resources Council, v. 33, p. 995 - 1002.

##### OTHER CITATION DETAILS

Williams, Colin F, and Reed, Marshall J, and DeAngelo, Jacob, and Galanis, Peter Jr, 2009, Quantifying the Undiscovered Geothermal Resources of the United States, Transactions, Geothermal Resources Council, v. 33, p. 995 - 1002.

##### RESPONSIBLE PARTY

ORGANIZATION'S NAME Galanis, Peter Jr.

CONTACT'S ROLE originator

##### RESPONSIBLE PARTY

ORGANIZATION'S NAME DeAngelo, Jacob

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##### RESPONSIBLE PARTY

ORGANIZATION'S NAME Reed, Marshall J

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##### RESPONSIBLE PARTY

ORGANIZATION'S NAME Williams, Colin F.

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[Hide Aggregate resource name](#)

[Hide References](#)

## Metadata Details

METADATA LANGUAGE English  
METADATA CHARACTER SET utf8 - 8 bit UCS Transfer Format

SCOPE OF THE DATA DESCRIBED BY THE METADATA dataset

LAST UPDATE 2010-04-05

ARCGIS METADATA PROPERTIES  
METADATA FORMAT ArcGIS 1.0

CREATED IN ARCGIS FOR THE ITEM 2010-04-05 13:27:00  
LAST MODIFIED IN ARCGIS FOR THE ITEM 2010-05-27 13:29:10

AUTOMATIC UPDATES  
HAVE BEEN PERFORMED No

ARCGIS METADATA IDENTIFIER {9837889B-8EA7-4243-AE2D-649092A5EBFA}  
PUBLISHED TO AN ARCIMS METADATA SERVICE Published

[Hide Metadata Details](#)

## Metadata Contacts

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## Thumbnail and Enclosures

ENCLOSURE  
ENCLOSURE TYPE File  
DESCRIPTION OF ENCLOSURE original metadata  
ORIGINAL METADATA DOCUMENT, WHICH WAS TRANSLATED yes  
SOURCE METADATA FORMAT fgdc

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## FGDC Metadata (read-only) ▼