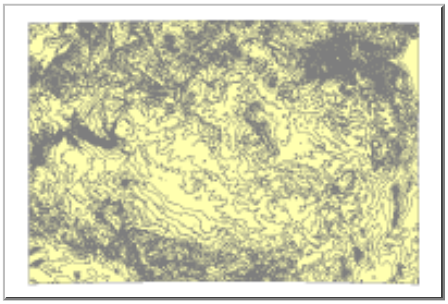
Navajo Nation Average Annual Maximum Temperature from 1971-2000 PRISM



Data format: Shapefile

File or table name: NN_Temp_Max

Coordinate system: Geographic

Theme keywords: Average Annual Maximum Temperature

Abstract: This data set is based upon spatially gridded average annual maximum temperature for the climatological period 1971-2000. Distribution of the point measurements to a spatial grid was accomplished using the PRISM model, developed and applied by Chris Daly of OSU PRISM Group. This data was further processed. Gridded data was contoured using a 2 degree Fahrenheit contour interval. These were used to create polygons that encompass a 2 degree Fahrenheit range.

FGDC and ESRI Metadata:

Metadata elements shown with blue text are defined in the Federal Geographic Data Committee's (FGDC) *Content Standard for Digital Geospatial Metadata (CSDGM)*. Elements shown with green text are defined in the *ESRI Profile of the CSDGM*. Elements shown with a green asterisk (*) will be automatically updated by ArcCatalog. ArcCatalog adds hints indicating which FGDC elements are mandatory; these are shown with gray text.

Identification Information:

Citation:

Citation information:

Originators: The PRISM Group at Oregon State University.

Title:

Navajo Nation Average Annual Maximum Temperature from 1971-2000 PRISM

***File or table name:** NN_Temp_Max

Publication date: 061206

***Geospatial data presentation form:** vector digital data

Publication information:

Publication place: Corvallis, Oregon, USA
Publisher: The PRISM Group at Oregon State University.

Online linkage:

Description:

Abstract:

This data set is based upon spatially gridded average annual maximum temperature for the climatological period 1971-2000. Distribution of the point measurements to a spatial grid was accomplished using the PRISM model, developed and applied by Chris Daly of OSU PRISM Group.

This data was further processed. Gridded data was contoured using a 2 degree Fahrenheit contour interval. These were used to create polygons that encompass a 2 degree Fahrenheit range.

Purpose:

Display and or analyses requiring spatially distributed monthly or annual maximum temperature for the climatological period 1971-2000.

Supplemental information:

There are many methods of interpolating climate from monitoring stations to grid points. Some provide estimates of acceptable accuracy in flat terrain, but few have been able to adequately explain the extreme, complex variations in climate that occur in mountainous regions. Significant progress in this area has been achieved through the development of PRISM (Parameter-elevation Regressions on Independent Slopes Model). PRISM is an analytical model that uses point data and an underlying grid such as a digital elevation model (DEM) or a 30 yr climatological average (e.g. 1971- 2000 average) to generate gridded estimates of monthly and annual precipitation and temperature (as well as other climatic parameters). PRISM is well suited to regions with mountainous terrain, because it incorporates a conceptual framework that addresses the spatial scale and pattern of orographic processes. Grids were modeled on a monthly basis. Annual grids of temperature are produced by averaging the monthly grids, and summing for precipitation.

***Language of dataset:** en

Time period of content:

Time period information:

Single date/time:

Calendar date: July 2007

Currentness reference:

publication date

Status:

Progress: Complete
Maintenance and update frequency: As needed

Spatial domain:
Bounding coordinates:
***West bounding coordinate:** -113.500000
***East bounding coordinate:** -106.000000
***North bounding coordinate:** 38.460061
***South bounding coordinate:** 33.400000

Local bounding coordinates:
***Left bounding coordinate:** -113.500000
***Right bounding coordinate:** -106.000000
***Top bounding coordinate:** 38.460061
***Bottom bounding coordinate:** 33.400000

Keywords:
Theme:
Theme keywords: Average Annual Maximum Temperature

Place:
Place keywords: Navajo Nation, Arizona, Colorado, New Mexico, Utah, Unseted States

Stratum:
Stratum keywords: maximum temperature

Temporal:
Temporal keywords: 1971-2000

Access constraints: Access pursuant to license agreement
Use constraints:
Acknowledgement of the following agencies in products derived from these data: PRISM Group at Oregon State University.

Point of contact:
Contact information:
Contact person primary:
Contact person: George H. Taylor, State Climatologist

Contact address:
Address type: mailing address
Address:
Strand Ag Hall 326, PRISM Group, Oregon State
City: Corvallis
State or province: Oregon
Postal code: 97331-2209
Country: USA

Contact voice telephone: (541) 737-5705
Contact facsimile telephone: (541) 737-5710

Contact electronic mail address: taylor@coas.oregonstate.edu

Security information:
Security classification system: None
Security classification: Unclassified
Security handling description: None

***Native dataset format:** Shapefile

***Native data set environment:**
Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog 9.1.0.780

Back to Top

Data Quality Information:

Logical consistency report:
All data were based on the same averaging period (1971-2000). Similar quality assurance procedures were used with all input data sets.

Completeness report:
Point estimates of temperature originated from some or all of the following sources: 1) National Weather Service (NWS) Cooperative (COOP) stations, 2) Natural Resources Conservation Service (NRCS) SNOTEL, 3) United States Forest Service (USFS) and Bureau of Land Management (BLM) RAWS Stations, 4) Bureau of Reclemation (AGRIMET) stations, 5) California Data Exchange Center (CDEC) stations, 6) Storage guages, 7) NRCS Snowcourse stations, 8) Other State and local station networks, 9) Estimated station data, 0) Canadian stations, 10) Upper air stations, and 11) NWSFederal Aviation Administration (FAA) Automated surface observation stations (ASOS). All COOP station data were subjected to quality control checks by the National Climatic Data Center (NCDC). All COOP, SNOTEL and other data were subjected to further quality control checks by the PRISM Group.

Positional accuracy:
Horizontal positional accuracy:
Horizontal positional accuracy report:
Accuracy of this data set is based on the original specification of the Defense Mapping Agency (DMA) 1 degree digital elevation models (DEM). The stated accuracy of the original DEMs are 130 m circular error with 90% probability.

Quantitative horizontal positional accuracy assessment:
Horizontal positional accuracy value: 130 m with 90%
Horizontal positional accuracy explanation:
The broad

Lineage:
Source information:
Source citation:
Citation information:
Originators: National Climatic Data Center (NCDC)

Title:
United States Summary of the Day

Publication date: 2006

Publication information:
Publication place: Asheville, NC, USA
Publisher: National Climatic Data Center (NCDC)

Type of source media: digital files
Source citation abbreviation:
DSI3200
Source contribution:
Location and values of known average monthly and annual maximum temperature

Source time period of content:
Time period information:

Source currentness reference:
ground condition

Process step:
Process description:
None provided by originator.

Process step:
Process description:
Data was imported into ESRI GRID format and reprojected. Grid was clipped to the area of the Navajo Nation. Grid values were converted from "Degrees C times 100" to Degrees Fahrenheit. A Vector contour coverage was created at a 2 Degrees Fahrenheit contour interval starting at zero degrees. Vector contours were closed using the edge of the Navajo Nation study area to build polygons representing a 2 degree range for every polygon. Each polygon was attributed with its range in the attribute TMAX_RANGE. Coverage was exported to a shapefile.

Process software and version: ESRI ArcGIS 9.1
Process date: July 2007

Process contact:
Contact information:
Contact organization primary:
Contact organization: TerraSpectra Geomatics

Contact address:
Address type: mailing and physical address
Address:
2700 E Sunset Rd, Ste A-10
City: Las Vegas
State or province: NV
Postal code: 89120
Country: USA

Contact voice telephone: 702-795-8254

Back to Top

Spatial Data Organization Information:

*Direct spatial reference method: Vector

Point and vector object information:
SDTS terms description:
*Name: NN_Temp_Max
*SDTS point and vector object type: G-polygon
*Point and vector object count: 5347

ESRI terms description:
*Name: NN_Temp_Max
*ESRI feature type: Simple
*ESRI feature geometry: Polygon
*ESRI topology: FALSE
*ESRI feature count: 5347
*Spatial index: FALSE
*Linear referencing: FALSE

Raster object information:
Row count: 3111
Column count: 7321
Vertical count: 1

Raster object type: Grid Cell

Back to Top

Spatial Reference Information:

Horizontal coordinate system definition:
Coordinate system name:
*Geographic coordinate system name: GCS_North_American_1983

Geographic:
*Latitude resolution: 0.000000
*Longitude resolution: 0.000000
*Geographic coordinate units: Decimal degrees

Geodetic model:
*Horizontal datum name: North American Datum of 1983
*Ellipsoid name: Geodetic Reference System 80
*Semi-major axis: 6378137.000000
*Denominator of flattening ratio: 298.257222

Back to Top

Entity and Attribute Information:

Detailed description:
*Name: NN_Temp_Max

Entity type:
*Entity type label: NN_Temp_Max

*Entity type type: Feature Class
*Entity type count: 5347
Entity type definition:
Average Annual Maximum Temperature for the period 1971 - 2000

Attribute:
*Attribute label: FID
*Attribute alias: FID
*Attribute definition:
Internal feature number.
*Attribute definition source:
ESRI

*Attribute type: OID
*Attribute width: 4
*Attribute precision: 0
*Attribute scale: 0

Attribute domain values:
*Unrepresentable domain:
Sequential unique whole numbers that are automatically generated.

Attribute:
*Attribute label: Shape
*Attribute alias: Shape
*Attribute definition:
Feature geometry.
*Attribute definition source:
ESRI

*Attribute type: Geometry
*Attribute width: 0
*Attribute precision: 0
*Attribute scale: 0

Attribute domain values:
*Unrepresentable domain:
Coordinates defining the features.

Attribute:
*Attribute label: TMAX_RANGE
*Attribute alias: TMAX_RANGE
Attribute definition:
2 Degree F. Range for Avg. Ann. Max. Temp.

*Attribute type: String
*Attribute width: 10

Detailed description:
Entity type:
Entity type label: average maximum temperature grid cell value
Entity type definition:
ASCII values
Entity type definition source:
Self-evident

Attribute:

Attribute definition:

spatially gridded average maximum

Attribute definition source:

Daly, C., W. P. Gibson, G.H. Taylor, G. L. Johnson, P. Pasteris. 2002. A knowledge-based approach to the statistical mapping of climate. Climate Research, 22, 99-113, 2002

Attribute domain values:

Range domain:

Range domain minimum: -1250

Range domain maximum: 4659

Attribute units of measure: Degrees C times 100

Attribute:

Attribute number of decimals:

Attribute:

Overview description:

Dataset overview:

There are 5347 polygons.

Entity and attribute overview:

There is one thematic attribute - TMAX_RANGE - that indicates the 2 degree Fahrenheit of average annual maximum temperature.

Back to Top

Distribution Information:

Distributor:

Contact information:

Contact person primary:

Contact person: George Taylor

Contact organization: PRISM Group

Contact address:

Address type: mailing address

Address:

326 Strand Ag Hall

Address:

Oregon State University

City: Corvallis

State or province: OR

Postal code: 97331

Country: USA

Contact voice telephone: 541-737-5705

Contact electronic mail address: taylor@coas.oregonstate.edu

Resource description: Downloadable Data

Distribution liability:

This digital data set publication was prepared by the PRISM Group. Neither the PRISM Group nor any agency thereof, nor any of their employees, make any warranty, expressed or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or misuse of the data, or for damage, transmission of viruses or computer contamination through the distribution of these data sets or for the usefulness of any information, apparatus, product, or process disclosed in this report, or represents that its use would not infringe privately owned rights. Reference therein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the PRISM Group or any agency thereof. Any views and opinions of authors expressed herein do not necessarily state or reflect those of the PRISM Group or any agency thereof.

Standard order process:

Digital form:

Digital transfer information:

Format name: ARCINFO ASCII Grid
Transfer size: 91.296
*__Dataset size:__ 17.059

Back to Top

Metadata Reference Information:

*__Metadata date:__ 20070719

*__Language of metadata:__ en

Metadata contact:

Contact information:

Contact person primary:

Contact person: Wayne Gibson
Contact organization: The PRISM Group, College of Science, and College of Oceanic and Atmospheric Sciences, Oregon State University

Contact address:

Address type: mailing and physical address
Address:
Strand Agriculture Hall Rm 326
City: Corvallis
State or province: OR
Postal code: 97331

Contact voice telephone: 541-737-5705

*__Metadata standard name:__ FGDC Content Standards for Digital Geospatial Metadata
*__Metadata standard version:__ FGDC-STD-001-1998
*__Metadata time convention:__ local time

Metadata security information:
Metadata security classification system: none
Metadata security classification: Unclassified
Metadata security handling description:
None

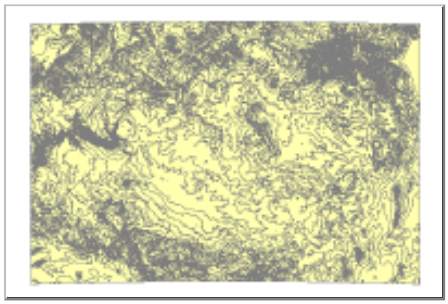
Metadata extensions:
Online linkage: <http:www.esri.commetadataesriprof80.html>
Profile name: ESRI Metadata Profile

Metadata extensions:
***Online linkage:** http://www.esri.com/metadata/esriprof80.html
***Profile name:** ESRI Metadata Profile

Back to Top

Binary Enclosures:

Thumbnail:
Enclosure type: Picture



Back to Top