

Historical and projected climate change trends for the United States and U.S. national parks

Data description

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Scientific article (open access web page and pdf file)

<<http://iopscience.iop.org/article/10.1088/1748-9326/aade09/pdf>>

Supplementary information <http://iopscience.iop.org/1748-9326/13/10/104001/media/ERL_13_104001_SD.pdf>

Geographic References

US 48 contiguous states

Projection: Lambert Azimuthal Equal Area

Horizontal datum: WGS-84

Latitude of origin: 50 degrees

Longitude of origin: -100 degrees

columns 7443

rows 4224

Upper left corner: -2565330.6808, 524784.4836

Spatial resolution: 800 m

Alaska

Projection: Albers Equal Area Conic

Horizontal datum: North America 1983

First standard parallel: 55 degrees

Second standard parallel: 65 degrees

Longitude of central meridian: -154 degrees

Latitude of origin: 50 degrees

columns 4762

rows 2557

Upper left corner: -2173225.1181, 2381118.1505

Spatial resolution: 771 m

Hawaii

Projection: Albers Equal Area Conic

Horizontal datum: North America 1983

First standard parallel: 8 degrees

Second standard parallel: 18 degrees

Longitude of central meridian: -157 degrees
Latitude of origin: 3 degrees
columns 1169
rows 750
Upper left corner: -347791.9250, 2130513.1083
Spatial resolution: 500 m

American Samoa

Projection: Albers Equal Area Conic
Horizontal datum: North America 1983
First standard parallel: -15 degrees
Second standard parallel: -12 degrees
Longitude of central meridian: -170 degrees
Latitude of origin: 0 degrees
columns 1567 (AS), 343 (Tutuila)
rows 264 (AS), 187 (Tutuila)
Upper left corner: -91884.4699, -1551517.1478 (AS), -92082.6559, -1559256.3248 (Tutuila)
Spatial resolution: 100 m

Guam

Projection: Albers Equal Area Conic
Horizontal datum: North America 1983
First standard parallel: 12 degrees
Second standard parallel: 15 degrees
Longitude of central meridian: 155 degrees
Latitude of origin: 0 degrees
columns 535
rows 606
Upper left corner: -1131687.6192, 1526628.4500
Spatial resolution: 100 m

Puerto Rico and Virgin Islands

Projection: Albers Equal Area Conic
Horizontal datum: North America 1983
First standard parallel: 8 degrees
Second standard parallel: 18 degrees
Longitude of central meridian: -66.5 degrees
Latitude of origin: 15 degrees
columns 33
rows 12
Upper left corner: -168365.8344, 465980.6226
Spatial resolution: 18500 m

GeoTiff files of principal results

historical temperature

century 1895-2010 (US48), 1901-2009 (others)
probability 1895-2010 (US48), 1901-2009 (others)

mean 1971-2000
standard deviation 1971-2000
velocity 1895-2010 (US48), 1901-2009 (others)

historical precipitation
century 1895-2010 (US48), 1901-2009 (others)
probability 1895-2010 (US48), 1901-2009 (others)
mean 1971-2000
standard deviation 1971-2000

projected temperature
RCP2.6 change 2100
RCP2.6 coefficient variation 2100
RCP2.6 velocity 2100
RCP8.5 change 2100
RCP8.5 coefficient variation 2100
RCP8.5 velocity 2100

projected precipitation
RCP2.6 change 2100
RCP2.6 coefficient variation 2100
RCP2.6 agreement 2100
RCP8.5 change 2100
RCP8.5 range 2100
RCP8.5 coefficient variation 2100

land mask
(for historical temperature, for areas outside US48, land mask varies slightly for some other variable classes)