

PRISM Gridded Climate Data – Downloads via Web Service

An open web service is available for downloads of individual zipped BIL grids, one BIL grid per request; other types of files must be downloaded manually using the prism.oregonstate.edu website. For more information on the formats, and for a complete explanation of the file naming conventions, see the [data formats](#) document. The files available via the web service are a subset of those available through web download. They are of the form

PRISM_<var>_<stability>_<scale&version>_<time period>[_all|_annual]_bil.zip

Before downloading data, be sure to acquaint yourself with our [terms of use](#), which explain how to acknowledge any use of our data.

Currently, the following data (BIL grids) can be downloaded via the web service:

- Variables:
 - ppt, tmin, tmax, tmean (data grids and normals grids)
 - tdmean, vpdmin, vpdmax (normals grids only)
- Recent data: 1981 to present; daily, monthly, annual data
- Historical data: 1895 through 1980; complete monthly and annual data by year
- Normals data: monthly and annual, each as a single grid

USAGE

Daily, Monthly, Annual Data Request Syntax

To initiate a request via this web service, use a client (web browser, the *wget* utility, etc.) that can perform an HTTP connection with the following parameters:

<http://services.nacse.org/prism/data/public/4km/<element>/<date>>

Where:

- <element> is *ppt*, *tmin*, *tmax*, or *tmean*
- <date> is:
 - YYYYMMDD for daily data (between yesterday and January 1st, 1981) – returns a single grid in a .zip file
 - YYYYMM for monthly data (between last month and January 1981) – returns a single grid in a .zip file
 - YYYY for annual data (between last year and 1981) – returns a single grid in a .zip file
 - YYYY for historical data (between 1980 and 1895) – returns a single zip file containing 12 monthly grids for YYYY plus the annual.

Valid HTTP examples:

Daily grid: <http://services.nacse.org/prism/data/public/4km/tmin/20090405>

Monthly grid: <http://services.nacse.org/prism/data/public/4km/tmin/200904>

Annual grid: <http://services.nacse.org/prism/data/public/4km/tmin/2009>

Historical monthly data: <http://services.nacse.org/prism/data/public/4km/tmin/1944>

Valid UNIX command line example:

```
wget --content-disposition http://services.nacse.org/prism/data/public/4km/tmin/20090405
```

Normals Request Syntax

To initiate a request via this web service, use a client (web browser, the *wget* utility, etc.) that can perform an HTTP connection with the following parameters:

<http://services.nacse.org/prism/data/public/normals/<resolution>/<element>/<month>>

Where:

- <resolution> is *4km* or *800m*
- <element> is *ppt*, *tmin*, *tmax*, or *tmean*
- <month> is:
 - MM with a range of 01-12, or the value 14, which provides the annual normal grid

Valid HTTP examples:

March 800m ppt normal: <http://services.nacse.org/prism/data/public/normals/800m/ppt/03>

October 4km tmin normal: <http://services.nacse.org/prism/data/public/normals/4km/tmin/10>

Annual 800m tmax normal: <http://services.nacse.org/prism/data/public/normals/4km/tmax/14>

Valid UNIX command line example:

```
wget --content-disposition http://services.nacse.org/prism/data/public/normals/4km/tmax/08
```

SAMPLE BULK DOWNLOAD SCRIPT

The web service provides a single grid per request. To perform a bulk download of multiple grids, create and run a script or batch job. An example Perl script is provided below – this example script will download a year's worth of daily ppt grids. (Note that it's important to use the `--content-disposition` switch with the `wget` command to preserve the original filename, as in the example below.)

```
#!/usr/bin/perl
use strict;
use warnings;
use DateTime;

my $day;
my $clim_var = 'ppt';
my $base_url = 'http://services.nacse.org/prism/data/public/4km';

my $start = DateTime->new( day => 1, month => 10, year => 1999 );
my $stop = DateTime->new( day => 30, month => 9, year => 2000 );

while($start <= $stop) {
    $day = $start->strftime('%Y%m%d'); #place date in proper form
    system("wget --content-disposition $base_url/$clim_var/$day");
    sleep 2; #to be nice to our server
    $start->add(days => 1);
}
}
```