NLDAS_FORA0125_H_002

NLDAS Primary Forcing Data L4 Hourly 0.125 x 0.125 degree V002 (NLDAS_FORA0125_H) at GES DISC

VERSION 002 ENG

Spatial Coordinates

Temporal Coverages

DateTime Ranges

N: 53.0 S: 25.0 E: -67.0 W: -125.0

Bounding Rectangle

Abstract

This data set contains the primary forcing data "File A" for Phase 2 of the North American Land Data Assimilation System (NLDAS-2). The data are in 1/8th degree grid spacing and range from Jan 1979 to the present. The temporal resolution is hourly. The file format is WMO GRIB-1. Details about the generation of the NLDAS-2 forcing data sets can be found in Xia et al. (2012). The non-precipitation land surface forcing fields for NLDAS-2 are derived from the analysis fields of the NCEP North American Regional Reanalysis (NARR). NARR analysis fields are 32-km spatial resolution and 3-hourly temporal frequency. Those NARR fields that are utilized to generate NLDAS-2 forcing fields are spatially interpolated to the finer resolution of the NLDAS 1/8th-degree grid and then temporally disaggregated to the NLDAS hourly frequency. Additionally, the fields of surface pressure, surface downward longwave radiation, near-surface air temperature, and near-surface specific humidity are adjusted vertically to account for the vertical difference between the NARR and NLDAS fields of terrain height. This vertical adjustment applies the traditional vertical lapse rate of 6.5 K/km for air temperature. The details of the spatial interpolation, temporal disaggregation, and vertical adjustment are those employed in NLDAS-1, as presented by Cosgrove et al. (2003). The surface downward shortwave radiation field in "File A" is a bias-corrected field wherein a bias-correction algorithm was applied to the NARR surface downward shortwave radiation. This bias correction utilizes five years (1996-2000) of the hourly 1/8th-degree GOES-based surface downward shortwave radiation fields derived by Pinker et al. (2003). The potential evaporation field in "File A" is that computed in NARR using the modified Penman scheme of Mahrt and Ek (1984). The precipitation field in "File A" is not the NARR precipitation forcing, but is rather a product of a temporal disaggregation of a gauge-only CPC analysis of daily precipitation, performed directly on the NLDAS grid and including an orographic adjustment based on the widely-applied PRISM climatology. The precipitation is temporally disaggregated into hourly fields by deriving hourly disaggregation weights from either WSR-88D Doppler radar-based precipitation estimates, 8-km CMORPH hourly precipitation analyses, or NARR-simulated precipitation (based on availability, in order). The latter fields from radar, CMORPH, and NARR are used only to derive disaggregation weights and do not change the daily total precipitation. The field in "File A" that gives the fraction of total precipitation that is convective is an estimate derived from the following two NARR precipitation fields (which are provided in "File B"): NARR total precipitation and NARR convective precipitation (the latter is less than or equal to the NARR total precipitation and can be zero). The Convective Available Potential Energy (CAPE) is the final variable in the forcing data set, also interpolated from NARR. The hourly land surface forcing fields for NLDAS-2 are grouped into two GRIB files, "File A" and "File B". "File A" is the primary (default) forcing file and contains eleven fields. The data set applies a user-defined parameter table to indicate the contents and parameter number. The GRIBTAB file shows a list of parameters for this data set, along with their Product Definition Section (PDS) IDs and units. For more information, please see the README Document.

DOI

10.5067/6J5LHHOHZHN4

SEARCH FOR GRANULES FROM THIS COLLECTION

Data Identification Fields:

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Data Dates

Creation	2009-08-01T00:00:00.000Z
Last Revision	2009-08-01T00:00:00.000Z

Processing Level

Quality

4

The data are provisional and subject to change as model improvements are implemented and new input data sets become available.

Collection Progress

Active

Use Constraints

None

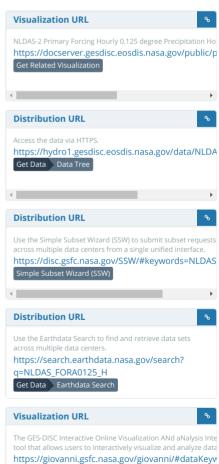
Access Constraints

None

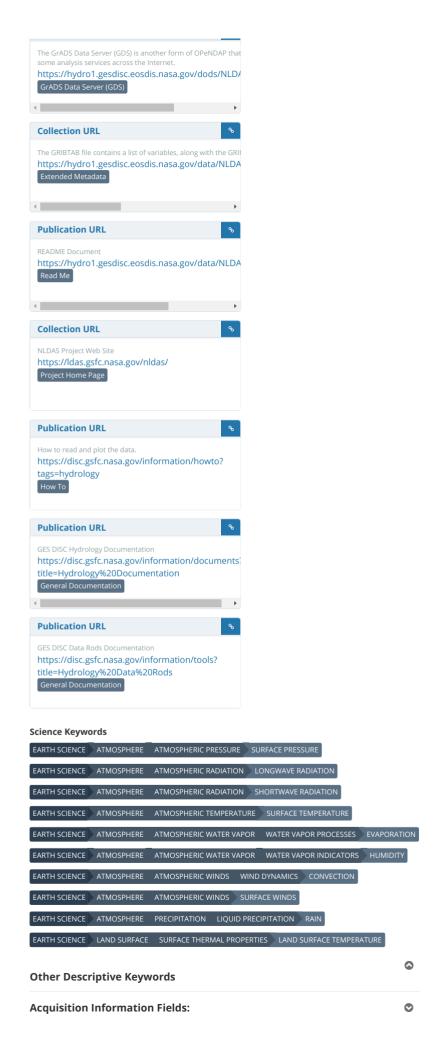
Publication References Continental-scale water and energy ... Author(s) Xia, Y., K. Mitchell, M. Ek, J. Sheffield, B. Cosgrove, E. Wood, L. Luo, C. Alonge, H. Wei, J. Meng, B. Livneh, D. Lettenmaier, V. Koren, Q. Duan, K. Mo, Y. Fan, and D. Mocko Real-time and retrospective forcing i... Author(s) Cosgrove, B. A., D. Lohmann, K. E. Mitchell, et al.

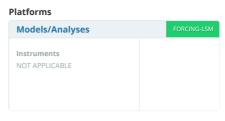


Related URLs



Distribution URL





Projects

Project Short Name	Campaigns	Project Dates
NLDAS	No campaigns listed.	No dates provided.

0

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0

0

0

Temporal Information Fields:

Spatial Information Fields:

Location Keywords

CONTINENT NORTH AMERICA

Data Centers



Data Contacts





Collection Citations Fields:

Collection Citations



Metadata Dates

Creation	2009-06-03T00:00:00.000Z
Last Revision	2018-06-22T00:00:00.000Z

Archive And Distribution Information Fields:

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File Distribution Information

GRIB

Format Type: Native Media: Online Archive Average File Size: 2 MB Fees: No Fee