

Package ‘dams’

November 5, 2016

Title Dams in the United States from the National Inventory of Dams (NID)

Description The single largest source of dams in the United States is the National Inventory of Dams (NID) <<http://nid.usace.army.mil>> from the US Army Corps of Engineers. Entire data from the NID cannot be obtained all at once and NID's website limits extraction of more than a couple of thousand records at a time. Moreover, selected data from the NID's user interface cannot not be saved to a file. In order to make the analysis of this data easier, all the data from NID was extracted manually. Subsequently, the raw data was checked for potential errors and cleaned. This package provides sample cleaned data from the NID and provides functionality to access the entire cleaned NID data.

Version 0.2

URL <https://github.com/jsta/dams>

BugReports <http://www.github.com/jsta/dams/issues>

Imports RCurl

Suggests ggplot2, maps, mapproj, testthat, knitr, rmarkdown

License GPL (>= 2)

LazyData true

Collate 'data.r' 'extract_nid.r'

Depends R (>= 2.10)

NeedsCompilation no

Repository CRAN

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RoxygenNote 5.0.1

VignetteBuilder knitr

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| dams | <i>Dams in the United States from the National Inventory of Dams (NID).</i> |
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Description

Data from NID was extracted manually from <<http://nid.usace.army.mil>>. Subsequently, the raw data was checked for potential errors and cleaned. dams package provides sample cleaned data from the NID and provides functionality to access the entire cleaned NID data.

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|---------|--|
| get_nid | <i>Retrieve desired data on dams from pre-processed NID data</i> |
|---------|--|

Description

Retrieve desired data on dams from pre-processed NID data

Usage

```
get_nid()
```

Examples

```
# entire NID data, all the 74000+ records from bitbucket.org/rationshop
## Not run:
dams_all <- get_nid()

## End(Not run)
```

nid_cleaned

Dams from the NID database

Description

The data dictionary from NID provides details on the data attributes. Below is only a short description of the attributes. Note that not all the attributes specified in the data dictionary are available in the data from NID. It appears that NID revised the data but not the data dictionary.

Usage

```
data(nid_cleaned)
```

Format

Data frame with 61 columns and 100 rows

Details

Variables:

- Dam_Name - The official name of the dam
- Other_Dam_Name - Names other than the official name (i.e., reservoir name) of the dam in common use
- NID_ID - The official NID identification number, known formerly as the National ID
- Num_Separate_Struct - Number of separate structures
- Other_Structure_ID - The identification number (S001, S002, etc.) for the saddle dam or dike associated with the larger dam project
- Longitude - Longitude at dam centerline, in decimal degrees, NAD83
- Latitude - Latitude at dam centerline, in decimal degrees, NAD83
- Section - The information is in any form that is understandable and that clearly designates the individual values, i.e. S21, 73N, R69W
- River - The River or Stream designation
- Owner_Type - Code to indicate the type of owner
- Private_Dam - Y or N indicating whether or not the dam is privately owned or not
- Dam_Designer - Name of the principal firm(s) or agency accomplishing design of dam and major appurtenant operating features
- Dam_Type - Codes to indicate the type of dam
- Core - Code to indicate the position, type of watertight member and certainty
- Foundation - Code for the material upon which dam is founded, and certainty
- Primary_Purpose - Code(s) to indicate the current purpose(s) for which the reservoir is used
- All_Purposes - Code(s) to indicate the current purpose(s) for which the reservoir is used

- Year_Completed - Year when the original main dam structure was completed
- Year_Modified - Year when major modifications or rehabilitation of dam or major control structures were completed
- Dam_Length - Length of the dam, in feet
- Dam_Height - Height of the dam, in feet
- Structural_Height - Structural height of the dam, in feet
- Hydraulic_Height - Hydraulic height of the dam, in feet
- NID_Height - Maximum value of dam height, structural height, and hydraulic height. Accepted as the general height of the dam
- Max_Discharge - Maximum discharge, in cubic feet per second
- Max_Storage - Maximum storage, in acre-feet
- Normal_Storage - Normal storage, in acre-feet
- NID_Storage - Maximum value of normal storage and maximum storage. Accepted as the general storage of the dam
- Surface_Area - Surface area, in acres
- Drainage_Area - Drainage area of the dam, in square miles
- EAP - Code indicating whether this dam has an Emergency Action Plan (EAP) developed by the dam owner
- Inspection_Date - Date of the most recent inspection of the dam prior to the transmittal of the data by the submitting agency
- Inspection_Frequency - The scheduled frequency interval for periodic inspections, in years
- Spillway_Type - Code that describes the type of spillway
- Spillway_Width - The width of the spillway, in feet
- Outlet_Gates - Code(s) that describe the type of (1) spillway and (2) controlled outlet gates
- Volume - Total number of cubic yards occupied by the materials used in the dam structure
- Num_Locks - Number of existing navigation locks for the project
- Length_Locks - Length of the primary navigation lock, in feet
- Width_Locks - Width of the primary navigation lock, in feet
- Permitting_Authority - Yes if the state regulatory organization has the authority to review
- Inspection_Authority - Yes if the state regulatory organization has the authority to require or perform the inspection
- Enforcement_Authority - Yes if the state regulatory organization has the authority to issue notices
- Jurisdictional_Dam - Yes if this dam meets the state regulatory organization's definition of a jurisdictional dam
- State_Reg_Dam - Calculated field based on Permitting Authority, Inspection Authority and Enforcement Authority
- State_Reg_Agency - Name of the primary state agency with regulatory or approval authority over the dam
- Fed_Funding - Code identifying which federal agency was involved in funding of the dam

- Fed_Design - Code identifying which federal agency was involved in the design of the dam
- Fed_Construction - Code identifying which federal agency was involved in the construction of the dam
- Fed_Regulatory - Code identifying which federal agency is involved in the regulation of the dam
- Fed_Inspection - Code identifying which federal agency is involved in the inspection of the dam
- Fed_Operation - Code identifying which federal agency is involved in the operation of the dam
- Fed_Owner - Code identifying which federal agency partly or wholly owns the dam
- Fed_Other - Code identifying which federal agency is involved in other aspects of the dam
- Source_Agency - Primary state or federal agency responsible for data
- State - State where dam is located
- Submit_Date - Date data was submitted to the US Army Corps of Engineers for inclusion to the National Inventory of Dams
- Url_Address - Web Site for more information on particular dam
- Congress_Rep - Name of congressional representative for the congressional district where dam is located
- Political_Party - Name of political party associated with the congressional representative for the congressional district where dam is located
- Congress_District - Congressional District where dam is located

References

NID: The National Inventory of Dams from the United States Army Corps of Engineers, <<http://nid.usace.army.mil>>, data extracted from NID's website in March 2014.

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