Knife River Indian Villages National Historic Site

Geologic Resources Inventory

GIS Data Explanation, September 20, 2011

Geologic-Geographic Information Systems (GIS) data related to Knife River Indian Villages National Historic Site is delivered in WinZip (zip) archive files. These data are a product of the NPS Geologic Resources Inventory (GRI) program which is funded by the Inventory and Monitoring (I&M) Division, and administered by the NPS Geologic Resources Division (GRD).

Geologic-GIS data for Knife River Indian Villages National Historic Site consist of a dedicated park map providing complete coverage of the park and surrounding area. Data files for the dedicated park map are named using the park four letter code (KNRI) as a prefix.

Geologic-GIS data are provided in ESRI 9.3 personal geodatabase (.mdb) and 9.3 shapefile (.shp) formats, as well as 2.2 KML/KMZ format for use with Google Earth software. WinZip files containing a geodatabase are identified with a "gdb.zip" suffix, whereas those containing shapefile data have a "shp.zip" suffix, and those containing KML data have a “kml.zip” suffix. In addition to GIS data, each GIS data WinZip file also contains the following files: 9.3 layer (.lyr) files complete with data layer symbology, FGDC-compliant metadata (.txt), a GRI ancillary map information document (.pdf) file that contains geologic unit descriptions, as well as ancillary information and any graphics from all source maps used to produce the GRI digital data for Knife River Indian Villages National Historic Site, and this file. Geodatabase WinZip files also include an ESRI 9.3 ArcGIS map document (.mxd) file that presents all of the GIS components of a GRI digital map in a user-friendly format for viewing and data analysis. The shapefile WinZip files contain individual shapefile metadata (.shp.xml and .dbf.xml) files for quick reference in ESRI 9.3 ArcCatalog.

For GIS datasets the GRI recommends extracting all map files for a particular GRI map to a single directory folder. The provided ArcGIS map document (.mxd) file and layer (.lyr) files use relative paths to access GIS data files that are located in the same folder. When adding GRI GIS data to a new or existing ArcGIS map document (.mxd) file, users should add layer (.lyr) files (e.g., knri_geologic_units_gdb.lyr) in order to ensure that the GIS data will be displayed with the appropriate title, symbology and labels (“_gdb” appended to a layer file name denotes a layer file to geodatabase GIS data, whereas “_shp” denotes a layer file to shapefile GIS data).

Detailed information concerning the source data used by the GRI is listed in the Source Citation sections(s) of the included map metadata record (e.g., knri_metadata.txt). Information concerning source data is also in the Source Map Information GIS table (knrimap), and repeated in the GRI ancillary map information document (.pdf) file.

The Google Earth KMZ file, knri_geology.kmz, contains a limited version of the full spatial dataset (limited features and symbology). Google Earth software is available for free at: http://www.google.com/earth/index.html. The KMZ file possesses on-line links to the GRI program and its products, as well as to this readme document (on-line version), the FGDC-compliant FAQ metadata (in .html format), and the GRI ancillary map information (.pdf) document pertaining to this dataset. The readme (.pdf) document, .html FAQ metadata file, and ancillary map information (.pdf) document are also included with the KMZ WinZip file, and users are encouraged to use these files (outside of Google Earth) should accessing the on-line versions via Google Earth be an issue. Users can also download Google Chrome (free at: http://www.google.com/chrome/) to view these files should their default browser not open these files in Google Earth.

Users of this data are cautioned about the locational accuracy of features and should not assume that features are exactly where they portrayed in Google Earth, ArcGIS or other software used to display the data. Refer to the positional accuracy report and use constraints within a map metadata record for additional information concerning the positional accuracy of features in a GRI dataset. Users are also encouraged to only use the Google Earth data for basic visualization, and to use the GIS data for any type of data analysis or investigation.

For detailed information regarding GIS parameters such as data attribute field definitions, attribute field codes, value definitions, and rules that govern relationships found in the data, refer to the NPS Geology-GIS Data Model document, gre_gdb_ggdm_v2dot1.pdf (available at: http://science.nature.nps.gov/im/inventory/geology/GeologyGISDataModel.cfm).

Digital geologic-GIS data in these WinZip files and all other digital geologic-GIS data prepared as products of the GRI program are available to download from the NPS Data Store Search Application: http://irma.nps.gov/App/Reference/Search. To find GRI data for a specific park or parks select the appropriate park(s), enter "GRI" as a Search Text term, and then select the Search Button.

For a complete listing of Geologic Resources Inventory products and direct links to the download site, visit the GRI publications webpage: http://www.nature.nps.gov/geology/inventory/gre_publications.cfm.

For more information about the Geologic Resources Inventory Program, visit the GRI webpage: http://www.nature.nps.gov/geology/inventory, or contact:

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To provide feedback or to inquire about the use of GRI products, contact Bruce Heise (contact information listed above). For information about the status of GRI digital geologic-GIS data for a park, contact:

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