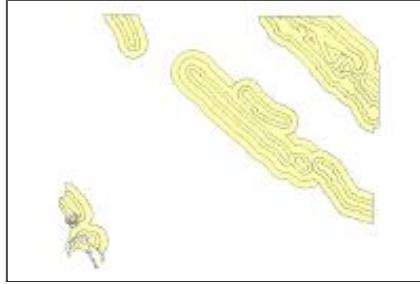


Geology_Near_Source_Shaking_CN



Tags

Faults, near-source shaking zones, earthquakes, Type A fault, Type B fault, magnitude, seismic, near-source shaking dataset, Building Code

Summary:

Near-Source Zones were generating for calculating base shear, which accounts for high ground motion and damage that have been observed within a few kilometers of historic earthquake ruptures.

This dataset is to be used with the associated active faults dataset, GEOLOGY_ACTIVE_FAULTS_CN, . Together, they digitally represent portions of the 1997 UniformBuilding Code.

Feature Type: Polygon

Number of Records: 4

Publication Date: 2021-09-23

Date of Data (Temporal Period Extent): 2021-09-18

Extent: San Diego County

Extent in Longitude Latitude

North 33.434214
West -117.289606 **East** -116.080306
South 32.624927

Extent in the item's coordinate system

North 2101618.722597
West 6244493.000005 **East** 6613436.999951
South 1808724.440363

Description:

Ground shaking is the earthquake effect that results in the vast majority of damage. Several factors control how ground motion interacts with structures, making the hazard of ground shaking difficult to predict. Seismic waves

propagating through the earth's crust are responsible for the ground vibrations normally felt during an earthquake. Seismic waves can vibrate in any direction and at different frequencies, depending on the frequency content of the earthquake, its rupture mechanism, the distance from the earthquake source, or epicenter, to an affected site, and the path and material through which the waves are moving. All of San Diego County is located within Seismic Zone 4 (Sec. 1629.4.1 of the CBC), which is the highest Seismic Zone, and like most of Southern California, is subject to ground shaking. In 1997, the Uniform Building Code incorporated Near-Source Zones for calculating base shear, which accounts for high ground motion and damage that have been observed within a few kilometers of historic earthquake ruptures. These Near-Source Zones were developed by the Strong Ground Motion Ad-Hoc Subcommittee of the Seismology Committee of the Structural Engineers Association of California (SEAOC). Several Near-Source Zones occur in the County. Active faults (faults which are known to have been active during Holocene time within the past 11,000 years) in the unincorporated portion of the County were classified as A or B in accordance with the criteria specified in 1997 UBC Table 16-U (DMG, 1998). Type A faults are capable of producing magnitude 7.0 earthquakes or greater and have a high rate of seismic activity (a slip rate of at least 5 millimeters per year). Segments of the San Jacinto and Elsinore fault zones are included in this category. Near-source velocity effects need to be considered in the design of buildings within 15 kilometers of a Type A fault. Type B faults are the majority of the rest of the seismogenic faults in California, and segments of the San Jacinto, Elsinore, and Rose Canyon fault zones are included in this category. Near-source velocity effects need to be considered in the design of buildings within 10 kilometers of a Type B fault.

Credits:

1997 Uniform Building Code. County of San Diego, Planning & Development Services, LUEG-GIS Service

Use Limitation:

This dataset is to be used with the associated Active Fault dataset. THIS MAP/DATA IS PROVIDED WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Please refer to SanGIS data end user use agreement and disclaimer which is available on the SanGIS website (www.sangis.org).

Topics and Keywords

Topic Categories: Geoscientific Planning Cadastral

Themes:

Faults, near-source shaking zones, earthquakes, Type A fault, Type B fault, magnitude, seismic, near-source shaking dataset, Building Code

Places:

County of San Diego, California

Resource Details:

Status: Completed
Type: Vector
Update Frequency: Not Planned
Next Update: Not specified

Spatial Reference System:

Type: Projected
Reference: GCS_North_American_1983
Projection: NAD_1983_StatePlane_California_VI_FIPS_0406_Feet

Identifier: 2230
Codespace: EPSG
Version: 5.3(9.0.0)

Contacts:

Point of Contact

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Distribution Ordering Instructions:

Data can be downloaded in shapefile format from the SanGIS Data Warehouse at <https://rdw.sandag.org/Account/Login>

Refer to SanGIS website (www.sangis.org) to obtain further information on mapping and data extraction services available from SanGIS.

Fields:

Overview:

Near-Source Zones were generating for calculating base shear within a few kilometers of historic earthquake ruptures. This dataset is to be used with the associated active faults dataset, GEOLOGY_ACTIVE_FAULTS_CN, Together, they

digitally represent portions of the 1997 UniformBuilding Code.

KM_ZONE is kilometer buffer zone. Values are kilometers from active fault

__FID (OID)

Internal feature number.

Shape (Geometry)

Feature geometry.

Km_zone (Integer)

KM_ZONE is kilometer buffer zone. Values are kilometers from active fault

Shape_STAr (Double)

Shape_STLe (Double)

Metadata Last Update: 2023-02-14

Regional GIS Data Warehouse (RGDW) Publication Stylesheet 1.4