

# Spectrum™ Technology Platform

Version 12.0 SP1

GeoEnrichment Risk Database Guide



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# 1 - Introduction

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## GeoEnrichment Risk Data

GeoEnrichment Risk Data provides comprehensive location-based coverage of distance to coastal boundaries, property fire protection, wildfire risk, and flood risks faced by insurance companies. This information is pre-calculated so that a user can immediately access the information with a pbKey from a geocoded address or US Address Fabric record.

For reference, see the *GeoEnrichment Risk Data Product Guide*. You can download the document in PDF format from here: [GeoEnrichment Risk Data Product Guide](#).

The GeoEnrichment Risk Data consists of the following:

### *Crime Index*

CrimeIndex data measures the likelihood of where crime may occur by 11 crime types for all block groups in the US and Puerto Rico. Pitney Bowes Software defines crime according to Federal Bureau of Investigation (FBI) definitions for crime. The specific crime variables measured are:

Overall Crime (a composite measure based on all crime types)

Violent Crime Score is composed of the following offenses

- Murder
- Rape
- Robbery
- Aggravated Assault

Property crime includes the offenses of

- Burglary
- Larceny-Theft
- Motor Vehicle Theft
- Arson

Each crime variable includes both a numerical score – where higher values denote the increased likelihood of criminal activity – and a qualitative categorization that helps explain the numerical crime score probability.

### *Distance to Coast*

The U.S. Coastal Waters includes a region file of Coastal Water boundaries and their water body names within 3 miles of the coastline. This dataset is linked to Location data based on the nearest coastal water to it. This dataset also includes the name and type of water body connected to the coastal water body to account for hurricane storm surge.

### *Earthquake*

This dataset provides information to easily determine the earthquake related information for a given location. The attributes include information from following earthquake related features:

- Historical Earthquake Information: Contains historical earthquake event details
- Earthquake Fault Lines: Comprises location of the fault lines
- Earthquake Fault Zones: Contains a 1/4 mile buffer around each fault line
- Soil Classifications: Comprises information on soil type which affects the amplification of ground motion.
- California PML Zones: California zone determination for the Probable Maximum loss of the expected insured loss after deductible, for structure and contents damage from large earthquakes

### *Wildfire Risk*

Wildfire Risk is a nation-wide wildfire hazard and risk assessment tool. Incorporating the predicted severity (hazard) and the predicted frequency (risk) of wildfire in a given location, Wildfire Risk gives a comprehensive view of the danger that a structure is exposed to. This dataset provides a Risk50 score which is an overall rating on the likelihood of a wild fire at a given location. The RiskDesc provides a descriptive name for the wild Wildfire Risk at a given location. This dataset also provides many other attributes that further describe the factors that are used to calculate the Risk50 score.

These attributes include information about where there has been extensive bark beetle kill and previous wildfire burn perimeters from the past year.

### *Flood Risk*

Flood Risk is a map database that includes digital versions of Flood Insurance Rate Maps (FIRMS), Flood Hazard Boundary Maps (FHBM), Digital Flood Insurance Rate Maps (DFIRM), Letter of Map Revisions (LOMR) and National Flood Insurance Program (NFIP) community participation maps. This dataset can be used to determine the flood zone for a given location.

### *Property Fire Protection*

This dataset provides information to allow the insurance industry to easily assess the structure fire for a given location. This dataset provides the drive distance and drive times to the three closest fire stations. This dataset also can be used to determine if a given location is within an incorporated place. This is important because incorporated places have fire hydrant standards which impacts the level of fire protection provided. This dataset also includes the distance to the nearest body of water for a given location which impacts the level of fire protection in rural areas where a local water body might be used as a source of water by fire fighters.

### *Premium Tax*

Pitney Bowes Insurance Premium District data is used by the insurance industry to determine sales tax on insurance premiums written in some states. This allows insurers to correctly determine the rate due on each insurance policy.

## Installation

1. Download your database(s). The database is downloaded as a .tar.bz2 file.
2. Extract the .tar.bz2 file.
3. Extract the .tar file.
4. Copy the data to any directory. Note the file name and path.

**Note:** You may install databases on a mapped drive, but performance will be affected since you will be accessing them on a network rather than accessing them locally.

5. After you install the database files, you will need to define the database as a resource.

For more information, see "Adding a GeoEnrichment Module Database Resource" in the applicable version of the *GeoEnrichment Guide* at [support.pb.com/spectrum](https://support.pb.com/spectrum).

## Address Fabric Version Compatibility

Distance to Coast, Wildfire Risk and Flood Risk databases require Address Fabric June 2017 vintage.

Property Fire Protection database requires Address Fabric June 2017 vintage.

The Address Fabric is based on July 2017 geocoding data

# 2 - Data Layouts

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## Crime Index

CrimeIndex data measures the likelihood of where crime may occur by 11 crime types for all block groups in the US and Puerto Rico. Pitney Bowes Software defines crime according to Federal Bureau of Investigation (FBI) definitions for crime. The specific crime variables measured are:

Overall Crime (a composite measure based on all crime types)

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- Burglary
- Larceny-Theft
- Motor Vehicle Theft
- Arson

Each crime variable includes both a numerical score – where higher values denote the increased likelihood of criminal activity – and a qualitative categorization that helps explain the numerical crime score probability.

## Crime Index Data Fields

Field Name	Field Type	Description
pbkey	Char(17)	A unique address identifier that is returned when an address match is made using the Master Location Dataset.
code	Char(12)	Block Group Layer code
composite_crime	Float	Composite measure based on all crime types
violent_crime	Float	Violent crime - measure



Field Name	Field Type	Description
robbery	Float	Robbery - measure The taking or attempting to take anything of value from the care, custody, or control of a person or persons by force or threat of force or violence and / or by putting the victim in fear.
rape	Float	Rape - measure Penetration, no matter how slight, of the vagina or anus with any body part or object, or oral penetration by a sex organ of another person, without the consent of the victim.
aggravated_assault	Float	Aggravated assault - measure An unlawful attack by one person upon another for the purpose of inflicting severe or aggravated bodily injury.
murder	Float	Murder - measure The willful (non-negligent) killing of one human being by another.
property_crime	Float	Property crime - measure
arson	Float	Arson - measure As any willful or malicious burning or attempting to burn, with or without intent to defraud, a dwelling house, public building, motor vehicle or aircraft, personal property of another, and other such cases.
burglary	Float	Burglary - measure The unlawful entry of a structure to commit a felony or theft. To classify an offense as a burglary, the use of force to gain entry need not have occurred.
car_theft	Float	Motor vehicle theft - measure Motor vehicle theft is defined as the theft or attempted theft of a motor vehicle.
larceny	Float	Larceny-theft - measure The unlawful taking, carrying, leading, or riding away of property from the possession or constructive possession of another.
composite_crime_category	Char(15)	Composite crime - category lowest / low / below average / above average / high / highest
violent_crime_category	Char(15)	Violent crime - category lowest / low / below average / above average / high / highest
robbery_category	Char(15)	Robbery - category lowest / low / below average / above average / high / highest

Field Name	Field Type	Description
rape_category	Char(15)	Rape - category lowest / low / below average / above average / high / highest
aggravated_assault_category	Char(15)	Aggravated assault - category lowest / low / below average / above average / high / highest
murder_category	Char(15)	Murder - category lowest / low / below average / above average / high / highest
property_crime_category	Char(15)	Property crime - category lowest / low / below average / above average / high / highest
arson_category	Char(15)	Arson - category lowest / low / below average / above average / high / highest
burglary_category	Char(15)	Burglary - category lowest / low / below average / above average / high / highest
car_theft_category	Char(15)	Motor vehicle theft - category lowest / low / below average / above average / high / highest
larceny_category	Char(15)	Larceny-theft - category lowest / low / below average / above average / high / highest

## Distance to Coast

GeoEnrichment Distance to Coast is built upon the Coastal Waters data bundle. All of the attribute categories from Coastal Waters are assigned to each impacted locations from the Address Fabric. So a user with a pbKey can quickly integrate the distance to coast risk values into processing. GeoEnrichment Distance to Coast risk delivers all elements of the Coastal Waters data without any GIS processing by using the pbKey as a lookup.

## Coastal Risk Data Fields

Field Name	Field Type	Description
pbkey	Char (17)	A unique address identifier that is returned when an address match is made using the Master Location Dataset.
dc_name	Char (40)	Name of water boundary
dc_cnty	Char (5)	Five Character Census Bureau FIPS code that identifies the county from which the record came.
dc_state	Char (2)	State
dc_type	Integer	Water Feature Type: 0: Unknown Type 1: Oceans and Seas 2: Lake 7: Others 99: Intermittent Water Body
dc_adjname	Char (40)	Name of water boundary into which the record flows.
dc_adjtype	Integer	Water feature type of the adjacent water boundary.
dc_dist	Float	Distance to waterbody in feet

## Earthquake

This dataset provides information to easily determine the earthquake related information for a given location. The attributes include information from following earthquake related features:

- Historical Earthquake Information: Contains historical earthquake event details
- Earthquake Fault Lines: Comprises location of the fault lines

- Earthquake Fault Zones: Contains a 1/4 mile buffer around each fault line
- Soil Classifications: Comprises information on soil type which affects the amplification of ground motion.
- California PML Zones: California zone determination for the Probable Maximum loss of the expected insured loss after deductible, for structure and contents damage from large earthquakes.

## Earthquake Data Fields

Field Name	Field Type	Description
pbkey	Char(17)	A unique address identifier that is returned when an address match is made using the Master Location Dataset.
eq_r0	Integer	Count of R0 events*  <b>Note:</b> Eq_R* describes aggregate earthquake event data in the United States. The R numbers correspond to the Magnitude Scale.
eq_r1	Integer	Count of R1 events*
eq_r2	Integer	Count of R2 events*
eq_r3	Integer	Count of R3 events*
eq_r4	Integer	Count of R4 events*
eq_r5	Integer	Count of R5 events*
eq_r6	Integer	Count of R6 events*
eq_r7	Integer	Count of R7 events*
eq_r0_ge	Integer	Count of events >= R0*
eq_r1_ge	Integer	Count of events >= R1*
eq_r2_ge	Integer	Count of events >= R2*

Field Name	Field Type	Description
eq_r3_ge	Integer	Count of events >= R3*
eq_r4_ge	Integer	Count of events >= R4*
eq_r5_ge	Integer	Count of events >= R5*
eq_r6_ge	Integer	Count of events >= R6*
eq_r7_ge	Integer	Count of events >= R7*
eqf_name	Char (80)	Name of fault
eqf_sliprt	Char (15)	Slip Rate is obtained when the amount of offset is divided by the time interval. Normalized to millimeters per year (mm/yr)
eqf_type	Char (25)	Fault type based on fault location
eqf_slrdcd	Char (15)	Slip direction The next two characters of the four-character code describe the slip direction: _ = no data C_ = center E_ = east LL = left lateral N_ = north NE = northeast NW = northwest RL = right lateral S_ = south SE = southeast SW = southwest W_ = west
eqf_age	Char (30)	Age of fault in years
eqf_slpsns	Char (15)	Angle of dip of the fault and the relative direction of movement across the fault]
eqf_dipdir	Char (15)	General direction of the fault dip which is the angle that the fault is inclined from the horizontal plane
eqf_state	Char (2)	State in which the Soil Classification Polygon centroid falls within the State boundary (note some polygons bordering the coast may have a null State value)
pml_zonegrade	Char (2)	Probable Maximum Loss Zone Grade – Currently only from the State of California]

Field Name	Field Type	Description
eqs_nehrp	Char (2)	Modified NEHRP Classification  <b>Note:</b> Pitney Bowes has adopted a modified NEHRP soil type classification, based on the Site Classification Based on Geological Genesis by Wen et al. (2008). For more information refer to the <b>Modified NEHRP Classification</b> table below.
eqs_index	Double	Numeric value representing NEHRP classification
newmadrid_dist	Double	Numeric value representing distance to New Madrid Fault region

**Table 1: Modified NEHRP Classification**

Modified NEHRP Classification	Numerical Index	Shear-wave Velocity (Vs) (m/s)	Description
B	1	>760	Most volcanic, plutonic, metamorphic and coarse grained sedimentary
BC	1.5	555-1000	Vretaceous siltstones or mudstone
C	2	360-760	Sedimentary rocks of Oligocener to Cretaceous age or younger coarse grained sedimentary rocks
CD	2.5	270-555	Sedimentary rocks of Miocene and younger age.
D	3	180-360	Younger alluvium
DE	3.5	90-270	Fine grained alluvial and estuarine deposits along the coast
E	4	<180	Intertidal mud

## Flood Risk

GeoEnrichment Flood Risk is built upon the FloodRisk Pro data bundle. All of the attribute categories from FloodRisk Pro are assigned to each impacted locations from the Address Fabric. So a user with a pbKey can quickly integrate the flood risk values into their processing. Additionally, elevation data is included in the GeoEnrichment process so that elevation profiles to the nearest flood threats are included.

### Flood Risk Data Fields

Field Name	Field Type	Description
pbkey	Char (17)	A unique address identifier that is returned when an address match is made using the Master Location Dataset.
flood_id	Integer	Unique Identifier
flood_mapname	Char (11)	Map Panel Identifier
flood_type	Char (3)	See TYPE Definitions  <b>Note:</b> For more information refer <b>Type Definitions</b> table given below.
flood_statecode	Char (2)	STATE FIPS Code
flood_fipscode	Char (5)	Deprecated
flood_floodzone	Char (12)	FLOOD ZONE with BFE ELEV or Additional Information
flood_prim_zone	Char (4)	FLOOD ZONE
flood_addl_info	Char (5)	Additional Information  <b>Note:</b> For more information refer to the <b>Additional Information Definition</b> table given below

Field Name	Field Type	Description
flood_bfe_elev	Char (4)	Base Flood Elevation (BFE) in feet
flood_communum	Char (6)	Community Number
flood_commstatus	Char (3)	Community Status in the National Flood Insurance Program as follows: E = Emergency NIP = Not in Program R = Regular SUS = Suspended
flood_map_eff_date	Date / Time	Map Effective Date
flood_lomr_date	Date / Time	Letter of Map Revision Date
flood_casenumbr	Char (20)	Letter of Map Revision Case Number
flood_dist100yr	Float	Distance to 100 year flood zone within 1 mile
elv_prof	Char (512)	List of elevation values in feet at intervals from the Address Fabric Location to the closest water body. The significant points are provided that describe the change in elevation.

**Table 2: Type Definitions**

Type	Remarks
Q3P	Printed Panel in Q3 Data
Q3I	Panel Not Printed in Q3 Data
DLC	Printed/ Not Printed Panel in DLG Data
DLP	Printed Panel in DLG Data
DLI	Panel Not Printed in DLG Data



Type	Remarks
PFP	Printed Panel (with Enhanced Details Like Flood ways as per Old Specifications)
PFI	Panel Not Printed (with Enhanced Details Like Flood ways as per Old Specifications)
PF1	Not Sure, May Be Typo Error, should be PFI
PFC	Printed/ Not Printed Panel (as per Old Specifications)
P2P	Printed Panel (Without Flood ways as per current specifications)
P2I	Panel Not Printed (as per Current Specifications)
P2C	Printed/ Not Printed Panel (as per Current Specifications)
NMP	Represents Never Mapped Areas
NMA	If a valid zone not available, Flood Zone given as NMA for Never Mapped Areas
Q3C	Printed/ Not Printed Panel in Q3 Data

**Table 3: Additional Information Definitions**

Addl_Info	Remarks
UB	Flood Polygon with Cobra Zones where the identification Date is not clear on Firm
UB1	Flood Polygon with Cobra Zones Dated 10-01-1983
UB10	Flood Polygon with Cobra Zones Dated 12-06-1999
UB11	Flood Polygon with Cobra Zones Dated 10-18-2004
UB12	Flood Polygon with Cobra Zones Dated 11-29-1999

Addl_Info	Remarks
UB13	Flood Polygon with Cobra Zones Dated 10-01-1983
UB2	Flood Polygon with Cobra Zones Dated 10-01-1983
UB21	Flood Polygon with Cobra Zones Dated 10-01-1983
UB3	Flood Polygon with Cobra Zones Dated 10-01-1983
UB31	Flood Polygon with Cobra Zones Dated 11-16-1991
F-UB3	Flood Polygon with Cobra Zones
UB4	Flood Polygon with Cobra Zones Dated 10-23-1992
UB41	Flood Polygon with Cobra Zones Dated 10-23-1992
UB5	Flood Polygon with Cobra Zones Dated 11-15-1993
UB51	Flood Polygon with Cobra Zones Dated 11-16-1993
UB6	Flood Polygon with Cobra Zones Dated 2-24-1997
UB61	Flood Polygon with Cobra Zones Dated 2-24-1997
UB8	Flood Polygon with Cobra Zones Dated 2-23-1995
UB9	Flood Polygon with Cobra Zones Dated 10-19-2000
UB91	Flood Polygon with Cobra Zones Dated 10-27-2000
(NULL)	Flood Polygon Not Covered with Cobra Zones and LOMR Updates
FE	Flood Polygon Falling within Flood Easement Boundary as Printed on Firms
LOMR	Flood Polygon with LOMR updates

Addl_Info	Remarks
F	Flood Polygon for which the the Base Flood Elevations are available
L	Flood Polygon Covered by Levees as Printed on Firms

## Premium Tax

Pitney Bowes Insurance Premium District data is used by the insurance industry to determine sales tax on insurance premiums written in some states. This allows insurers to correctly determine the rate due on each insurance policy. Pitney Bowes Insurance Premium District data is for use with Pitney Bowes geocoding and spatial technology.

### Premium Tax Data Fields

Field Name	Field Type	Description
pbkey	Char(17)	A unique address identifier that is returned when an address match is made using the Master Location Dataset.
tax_code	Char (7)	Fire Control District Name Example: 1615, 0491, 635
dist_name	Char (50)	IPD Name Example: South Walton Fire Control District, Lexington-Fayette County, Pleasantview FPD
dist_type	Char (10)	The type of district Example: MUNI, FIRE, POLICE,COUNTY, PREM
state_fips	Char (3)	State FIPS Code Example: 21, 3, 12

Field Name	Field Type	Description
state_abbr	Char (2)	State Abbreviation Example: KY, FL, AL
update	Char (10)	District Update Date in the format MMYYYY when boundary was updated or created Example: 052006
currency	Char (10)	Active Status Date in the format MMYYYY when district became or will become active Example: 052006
notes	Char (255)	Boundary notes
fips	Char (10)	State County FIPS Example: 015820
change_date	Char (10)	IPD Edit Date of any edit in the format MMDDYY Example: 012308
new_effect_date	Char (10)	Effective Date in the format MMDDYY which specifies Active Date Example: 100308
expiration_date	Char (10)	Expiration Date in the format MMDDYY which specifies Inactive Date Example: 063009
muni_gnis	Char (10)	Municipality GNIS (Geographic Names Information System). GNIS is US Nation's official repository of domestic geographic feature names information. Example: 876962
fire	Char (10)	Fire Tax Rate (Format is dependent on associated flag) Example: .1; 5.00
fireflag		Fire Flag P: Percentage (10% represented as 0.1000) F: Flat Fee M: Multiple (3% or 7% represented as 0.0300; 0.0700) Example: P, F, M

Field Name	Field Type	Description
casualty	Char (10)	Casualty Tax Rate (Format is dependent on associated flag) Example: .1; 5.00
casltyflag	Char (2)	Casualty Flag P: Percentage (10% represented as 0.1000) F: Flat Fee M: Multiple (3% or 7% represented as 0.0300; 0.0700) Example: P, F, M
vehicle	Char (10)	Vehicle Tax Rate (Format is dependent on associated flag) Example: .1; 5.00
vhclflag	Char (2)	Vehicle Flag P: Percentage (10% represented as 0.1000) F: Flat Fee M: Multiple (3% or 7% represented as 0.0300; 0.0700) Example: P, F, M
inlandmrrn	Char (5)	Inland Marine Tax Rate (Format is dependent on associated flag) Example: .1; 5.00
inlandflag	Char (2)	Inland Marine Flag P: Percentage (10% represented as 0.1000) F: Flat Fee M: Multiple (3% or 7% represented as 0.0300; 0.0700) Example: P, F, M
health	Char (10)	Health Tax Rate (Format is dependent on associated flag) Example: .1; 5.00
healthflag	Char (10)	Health Flag P: Percentage (10% represented as 0.1000) F: Flat Fee M: Multiple (3% or 7% represented as 0.0300; 0.0700) Example: P, F, M
life	Char (10)	Life Tax Rate (Format is dependent on associated flag) Example: .1; 5.00
lifeflag	Char (10)	Life Flag P: Percentage (10% represented as 0.1000) F: Flat Fee M: Multiple (3% or 7% represented as 0.0300; 0.0700) Example: P, F, M
other	Char (10)	Other Tax Rate (Format is dependent on associated flag) Example: .1; 5.00

Field Name	Field Type	Description
otherflag	Char (10)	Other Flag P: Percentage (10% represented as 0.1000) F: Flat Fee M: Multiple (3% or 7% represented as 0.0300; 0.0700) Example: P, F, M
mintax	Char (10)	Minimum Tax Rate (Format is dependent on associated flag) Example: .1; 5.00
mintaxflag	Char (10)	Minimum Tax Flag P: Percentage (10% represented as 0.1000) F: Flat Fee M: Multiple (3% or 7% represented as 0.0300; 0.0700) Example: P, F, M

## Property Fire Protection

GeoEnrichment Property Fire Risk is built upon the Fire Station data bundle. All of the attribute categories from Fire Station bundle are assigned to each impacted location from the Address Fabric. So a user with a pbKey can quickly integrate the property fire risk values into their processing. Additionally, the drive time and drive distance to the closest three fire stations by distance and time are provided. The Property Fire Protection GeoEnrichment dataset is to used to determine customized property fire protection scores. Additional information included is:

- If the property and the fire station are in a municipal area to indicate fire hydrant coverage
- The AM, PM and offpeak drive times
- Drive distance to the three closest fire stations

## Property Fire Protection Data Fields

Field Name	Type	Description
pbkey	Char(17)	A unique address identifier that is returned when an address match is made using the Master Location Dataset.

Field Name	Type	Description
place_code	Char(12)	Incorporated Place ID. Its value will be Null if the address is not in an incorporated place.
place_name	Char(40)	Incorporated Place Name. Its value will be Null if the address is not in an incorporated place
fs1_department_id	Integer	Fire Department ID of nearest Fire Station 1
fs1_department_type	Char(20)	Department type of nearest Fire Station 1
fs1_station_id	Integer	Station ID of nearest Fire Station 1
fs1_drivetime_ampeak	Double Precision	Routing drive time (in minutes) from data point (start point) to nearest Fire Station 1 (end point) during the peak time of day in the AM.
fs1_drivetime_pmpeak	Double Precision	Routing drive time (in minutes) from data point (start point) to nearest Fire Station 1 (end point) during the peak time of day in the PM.
fs1_drivetime_offpeak	Double Precision	Routing drive time (in minutes) from data point (start point) to nearest Fire Station 1 (end point) during an off-peak time of day.
fs1_drivetime_night	Double Precision	Routing drive time (in minutes) from data point (start point) to nearest Fire Station 1 (end point) during the night
fs1_drivedistance	Double Precision	Routing drive distance (in miles) from data point (start point) to nearest Fire Station 1 (end point).
fs2_department_id	Integer	Fire Department ID of nearest Fire Station 2
fs2_department_type	Char(20)	Department type of nearest Fire Station 2
fs2_station_id	Integer	Station ID of nearest Fire Station 2
fs2_drivetime_ampeak	Double Precision	Routing drive time (in minutes) from data point (start point) to nearest Fire Station 2 (end point) during the peak time of day in the AM.
fs2_drivetime_pmpeak	Double Precision	Routing drive time (in minutes) from data point (start point) to nearest Fire Station 2 (end point) during the peak time of day in the PM.
fs2_drivetime_offpeak	Double Precision	Routing drive time (in minutes) from data point (start point) to nearest Fire Station 2 (end point) during an off-peak time of day.

Field Name	Type	Description
fs2_drivetime_night	Double Precision	Routing drive time (in minutes) from data point (start point) to nearest Fire Station 2 (end point) during the night.
fs2_drivedistance	Double Precision	Routing drive distance (in miles) from data point (start point) to nearest Fire Station 2 (end point).
fs3_department_id	Integer	Fire Department ID of nearest Fire Station 3
fs3_department_type	Char(20)	Department type of nearest Fire Station 3
fs3_station_id	Integer	Station ID of nearest Fire Station 3
fs3_drivetime_ampeak	Double Precision	Routing drive time (in minutes) from data point (start point) to nearest Fire Station 3 (end point) during the peak time of day in the AM.
fs3_drivetime_pmpeak	Double Precision	Routing drive time (in minutes) from data point (start point) to nearest Fire Station 3 (end point) during the peak time of day in the PM.
fs3_drivetime_offpeak	Double Precision	Routing drive time (in minutes) from data point (start point) to nearest Fire Station 3 (end point) during an off-peak time of day.
fs3_drivetime_night	Double Precision	Routing drive time (in minutes) from data point (start point) to nearest Fire Station 3 (end point) during the night.
fs3_drivedistance	Double Precision	Routing drive distance (in miles) from data point (start point) to nearest Fire Station 3 (end point).
nearest_water_body	Double Precision	Distance (in feet) between data point and nearest waterbody point.

## Wildfire Risk

GeoEnrichment Wildfire Risk is built upon the FireRisk Pro data bundle. All of the attribute categories from FireRisk Pro are assigned to each impacted locations from the Address Fabric. So a user with a pbKey can quickly integrate the wildfire risk values into their processing. Additionally, the information from mountain pine beetle kill areas are added to the GeoEnrichment results. Burn perimeters from recent fires that have not yet been factored into vegetation survey used by FireRisk Pro are also



included. So GeoEnrichment Wildfire risk delivers all elements of the FireRisk Pro bundle without any GIS processing.

## Wildfire Risk Data Fields

Field Name	Field Type	Description
pbkey	Char(17)	A unique address identifier that is returned when an address match is made using the Master Location Dataset.
fire_refid	Integer	Unique reference value for data records. Note: REFID is not a static reference between product releases.
fire_statecode	Char (2)	State abbreviation
fire_fipscode	Integer	Federal Information Processing Standard (FIPS) state code.
fire_risktype	Char (2)	IF = Interface, IM = Intermix, WL = Wildland
fire_risk50	Integer	An overall risk rating to reflect the predicted fire behavior and likelihood of ignition. 0 = Low Risk, 49 = High Risk. See product reference guide for important details on how to use this value for different values of RISKTYPE (such as Interface versus Intermix and Wildland). The RISK50 rating should always be used in conjunction with the RISKTYPE to understand the specific hazard(s).
fire_fireshedid	Integer	FireShed identifier. Unique reference value when used with STATECODE and RISKTYPE. Note FIRESHEDID is not a static reference between product releases.
fire_riskdesc	Char (10)	Descriptive risk category.
fire_if_tier	Integer	Type of threat present in this area. 0 = Flame Impingement/Embers/Smoke, 1 = Embers/Smoke, 2 = Smoke. Valid when RISKTYPE = IF.
fire_im_freq	Integer	Likelihood of future wildfires based on simulation. 0 =Least Likely, 49 = Most likely. Valid when RISKTYPE = IM.
fire_im_fsprox	Integer	Distance to nearest fire station to reflect probability of a successful wildfire suppression or structure protection effort. 0 = Closer to Fire Station, 49 = Farther from Fire Station. Valid when RISKTYPE = IM.

Field Name	Field Type	Description
fire_im_cntnui	Char (10)	Effect related to the continuity of burnable area (roads, bare ground, etc.) which may reduce wildfire severity. Greatest mitigating effect (Low) to greatest aggravating effect (High). Valid when RISKTYPE = IM.
fire_im_pstfire	Integer	Likelihood of future wildfires based on where they have occurred in the past. 0 = Least Likely, 49 = Most Likely. Valid when RISKTYPE = IM.
fire_im_severe	Integer	Severity of fire behavior based on topography (slope, aspect and elevation), prevailing weather patterns (based on weather readings at nation-wide stations) and the fuel type present (40 different subsets of grass, shrub and timber vegetation types). 0 = Lowest Severity, 49 = Highest Severity. Valid when RISKTYPE = IM.
fire_im_adjmnt	Integer	Intermix risk adjustment due to weighted effect of aspect, crownfire, evc, foehn, golfcourse, roaddist, slope and waterdist values. 0 = Greatest Mitigating Effect, 49 = Greatest Aggravating Effect. Valid when RISKTYPE = IM.
fire_im_aspect	Char(10)	Moisture drying effect relative to sun and topological slope. Greatest mitigating effect (Low) to greatest aggravating effect (High). Valid when RISKTYPE = IM.
fire_im_crown	Char(10)	Crown fire effect. Least aggravating effect (Low) to greatest aggravating effect (High). Valid when RISKTYPE = IM.
fire_im_vegcvr	Char(10)	Vegetation cover effect. Greatest mitigating effect (Low) to greatest aggravating effect (High). Valid when RISKTYPE = IM.
fire_im_foehn	Char (10)	Warm dry wind effect. Least aggravating effect (Low) to greatest aggravating effect (High). Valid when RISKTYPE = IM.
fire_im_golfcrcs	Char (10)	Irrigated golf course effect. Greatest mitigating effect (Low) to least mitigating effect (High). Valid when RISKTYPE = IM.
fire_im_roadist	Char (10)	Nearest important (evacuation/fire suppression access) road effect. Greatest mitigating effect (Low) to greatest aggravating effect (High). Valid when RISKTYPE = IM.
fire_im_slope	Char (10)	Slope fire suppression effect. Greatest mitigating effect (Low) to greatest aggravating effect (High). Valid when RISKTYPE = IM.

Field Name	Field Type	Description
fire_im_water	Char (10)	Availability of water body sources. Greatest mitigating effect (Low) to greatest aggravating effect (High). Valid when RISKTYPE = IM.
fire_wl_freq	Integer	Likelihood of future wildfires based on simulation. 0 = Least Likely, 49 = Most Likely. Valid when RISKTYPE = WL.
fire_wl_fsprox	Integer	Distance to nearest fire station to reflect probability of a successful wildfire suppression or structure protection effort. 0 = Closer to Fire Station, 49 = Farther from Fire Station. Valid when RISKTYPE = WL.
fire_wl_nonburn	Char (10)	Effect related to the continuity of burnable area (roads, bare ground, snow and ice, etc.) which may reduce wildfire severity. Captures coarser-scale interruptions in fuels than IM_VEGCVR component. Least mitigating (Low) to greatest mitigating (High). Valid when RISKTYPE = WL.
fire_wl_pstfire	Integer	Likelihood of future wildfires based on where they have occurred in the past. 0 = least likely, 49 = most likely. Valid when RISKTYPE = WL.
fire_wl_severe	Integer	Severity of fire behavior based on topography (slope, aspect and elevation), prevailing weather patterns (based on weather readings at nation-wide stations) and the fuel type present (40 different subsets of grass, shrub and timber vegetation types). 0 = Lowest Severity, 49 = Highest Severity. Valid when RISKTYPE = WL.
fire_beetle_flag	Char (1)	Represents whether MPB activity in the area between 1997 and 2012. No information about the severity, pervasiveness or impact to the fuel profile. The information can be used as a very general indication of the presence of MPB.
fire_fp_acres	Float	The calculated acreage inside of the fire perimeter
fire_fp_agency	Char (15)	The agency responsible for managing the fire
fire_fp_year	Char (4)	The year the fire started
fire_fp_firenm	Char (50)	The name of the fire
fire_fp_date	Date	The date the ignition occurred

Field Name	Field Type	Description
fire_dist_wui	Double	The distance to the Wildland Urban Interface (WUI)

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