Spatially enable WordPress

with WP-GeoMeta-Lib

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Spatially enable WordPress
with WP-GeoMeta-Lib

1. Introduction to WordPress
2. WP-GeoMeta-Lib - What/Why/How
3. WordPress is a land of opportunity

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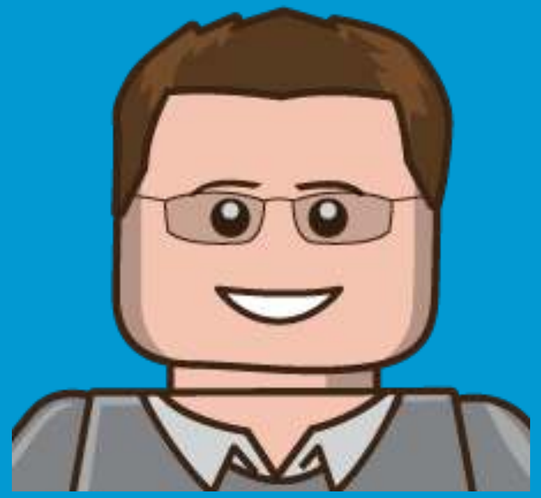
Who am I?



Michael Moore

@stuporglue

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FileMaker
An Apple Subsidiary
Business Alliance
Platinum Reseller

Consultants Network

WordPress

https://LuminFire.com/gis

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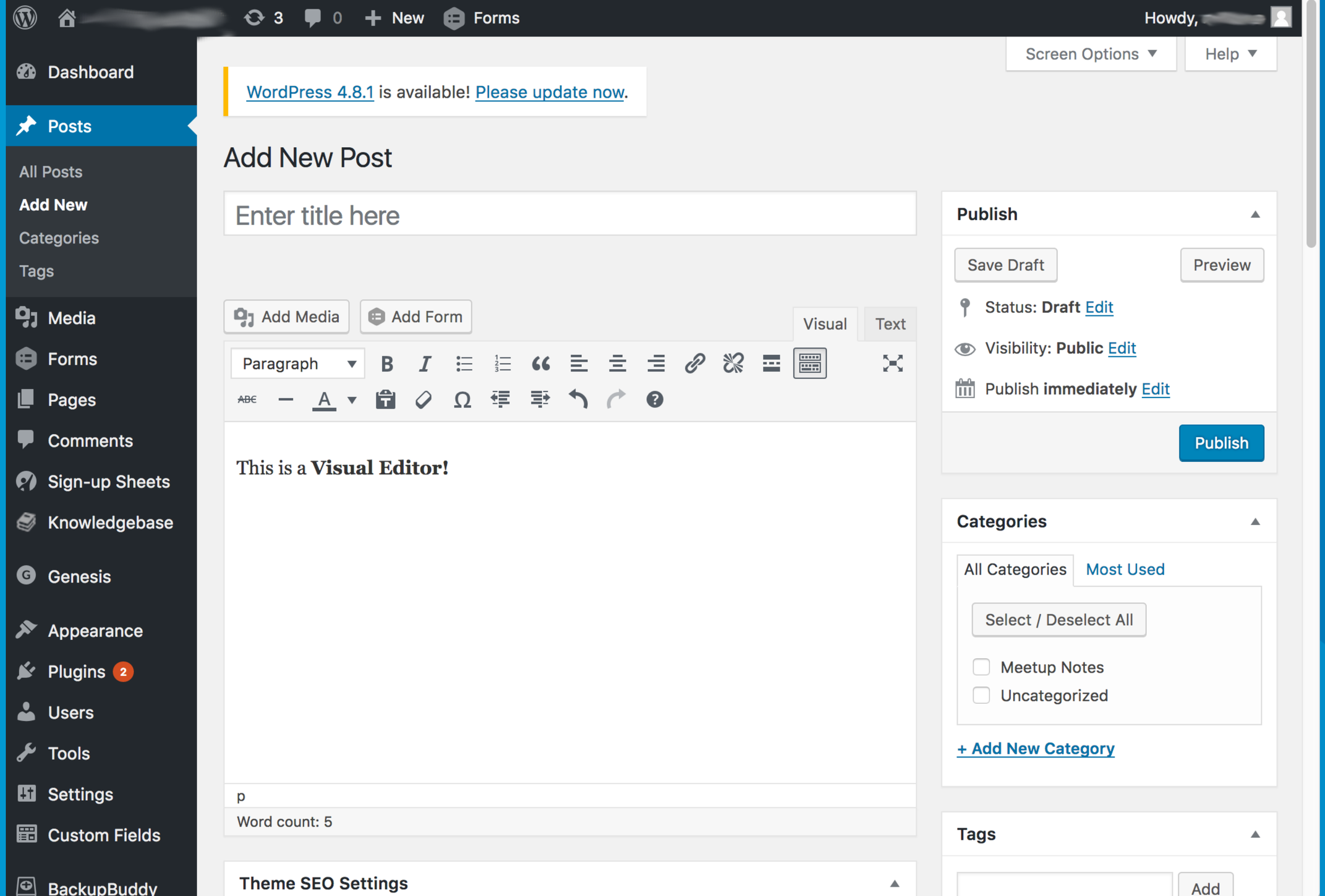

3
0
New
Forms
Howdy,
Screen Options
Help
Dashboard
Posts
All Posts
Add New
Categories
Tags
Media
Forms
Pages
Comments
Sign-up Sheets
Knowledgebase
Genesis
Appearance
Plugins 2
Users
Tools
Settings
Custom Fields
BackupBuddy
WordPress 4.8.1 is available! Please update now.
Add New Post
Enter title here
Add Media
Add Form
Visual
Text
Paragraph
This is a Visual Editor!
p
Word count: 5
Theme SEO Settings
Publish
Save Draft
Preview
Status: Draft Edit
Visibility: Public Edit
Publish immediately Edit
Publish
Categories
All Categories
Most Used
Select / Deselect All
Meetup Notes
Uncategorized
+ Add New Category
Tags
Add

Plugins

Extend your WordPress experience with 51,648 plugins.

Search plugins

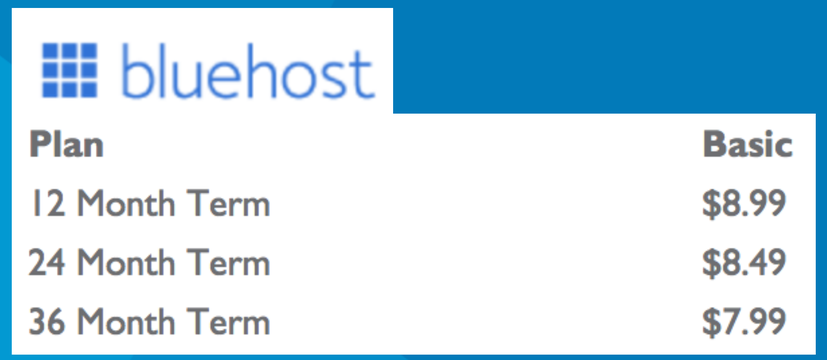
O diretório de plugins também está disponível em Português do Brasil.

Pros of WP: Ease of Use

- Famous 5-Minute Install
- 1-Click installers on many web hosts
- No dev skills needed for admins
- TONS of tutorials
- Lots of online support (api, forums, meetups, etc.)

Pros of WP: Ubiquitous

- On the cheapest of hosts
- Developers and Themers are plentiful
- “Nobody ever got fired for choosing WP”



Pros of WordPress: Often the Right Tool (for building websites)

- Good bang for your buck
- Has most needed functionality (w/ plugins)
- Known Quantity

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Cons of WP: GIS Support

- Few GIS related plugins
- Few maintained PHP GIS libraries
- Lack of community GIS awareness

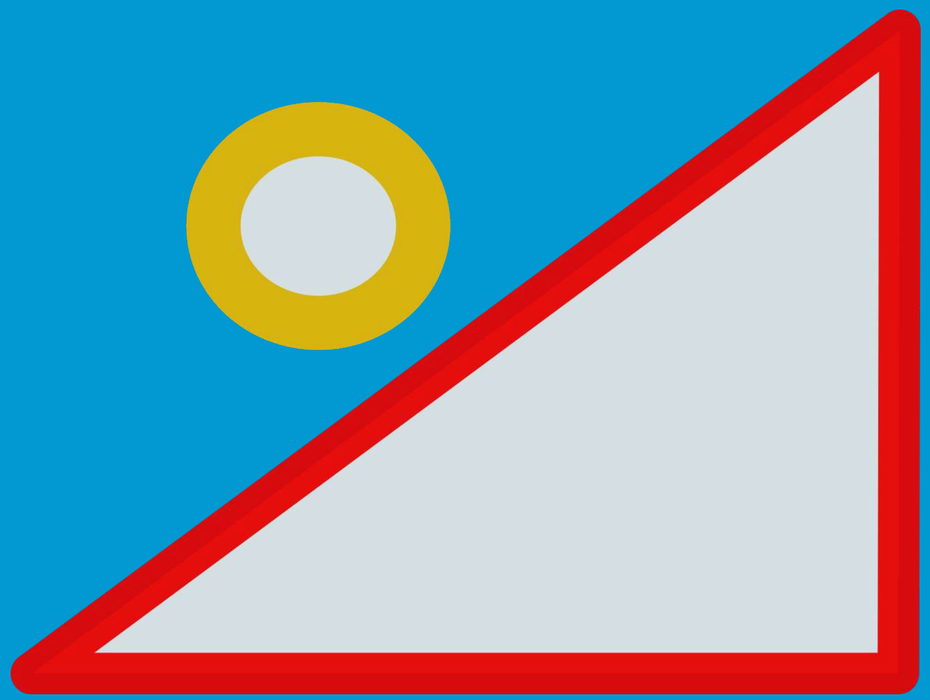
Cons of WP: All Meta Values are Text

meta_id	post_id	meta_key	meta_value
17	3	Name	Steve
18	3	Birthdate	01/01/80
19	3	Address	123 Main St.
20	3	City	Duluth
21	3	State	MN
22	3	Age	37
23	4	Name	Frank
24	4	Birthdate	02/02/90
25	4	Address	321 1st Ave
26	4	City	Superior
27	4	State	WI
28	4	Age	26

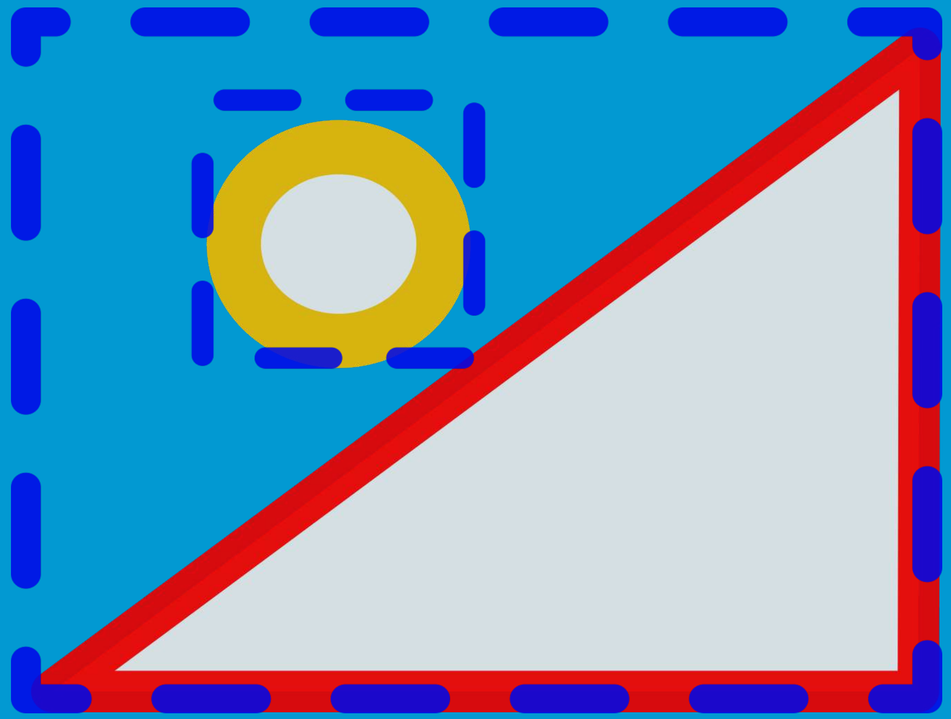
LONGTEXT

String/Text
Date
Number

MySQL: Do These Shapes Intersect?



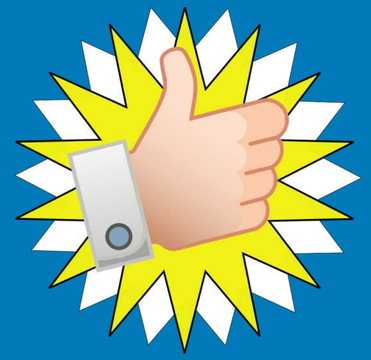
MySQL: Do These Shapes Intersect?



MySQL 5.6

Spatial Intersect
ST_INTERSECTS()

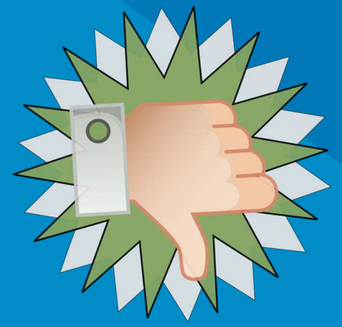
No



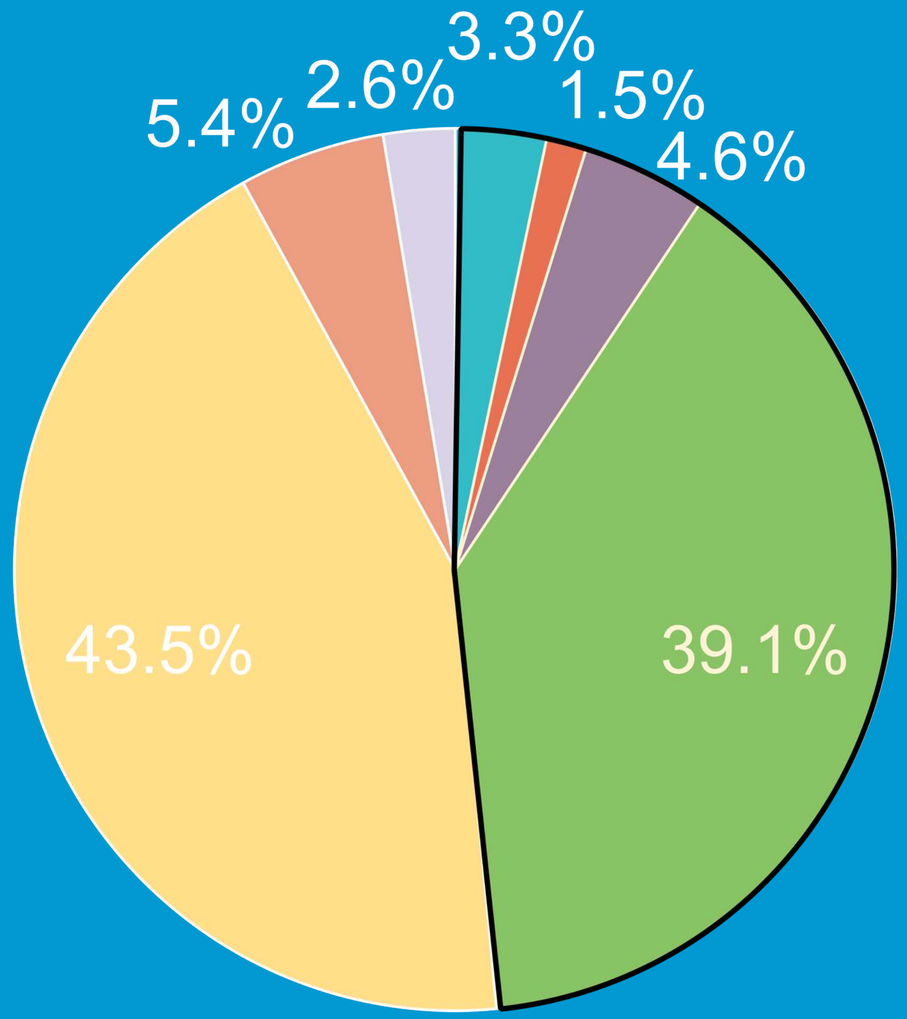
MySQL 5.5

BBOX Intersect
INTERSECTS()

Yes

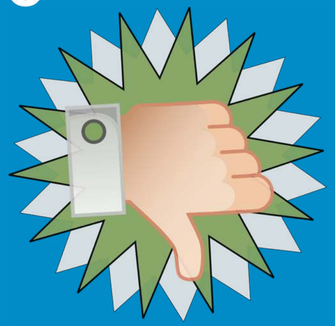


Cons of WP: MySQL



10.1
10.0
5.7
5.6 48.5%
5.5 51.5%
5.1
5.0

29% (11/2016)



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Why does WP-GeoMeta-Lib exist?

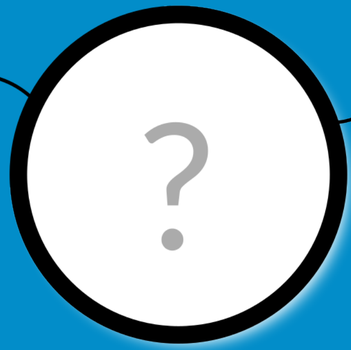
Collect

Store

Query

Display

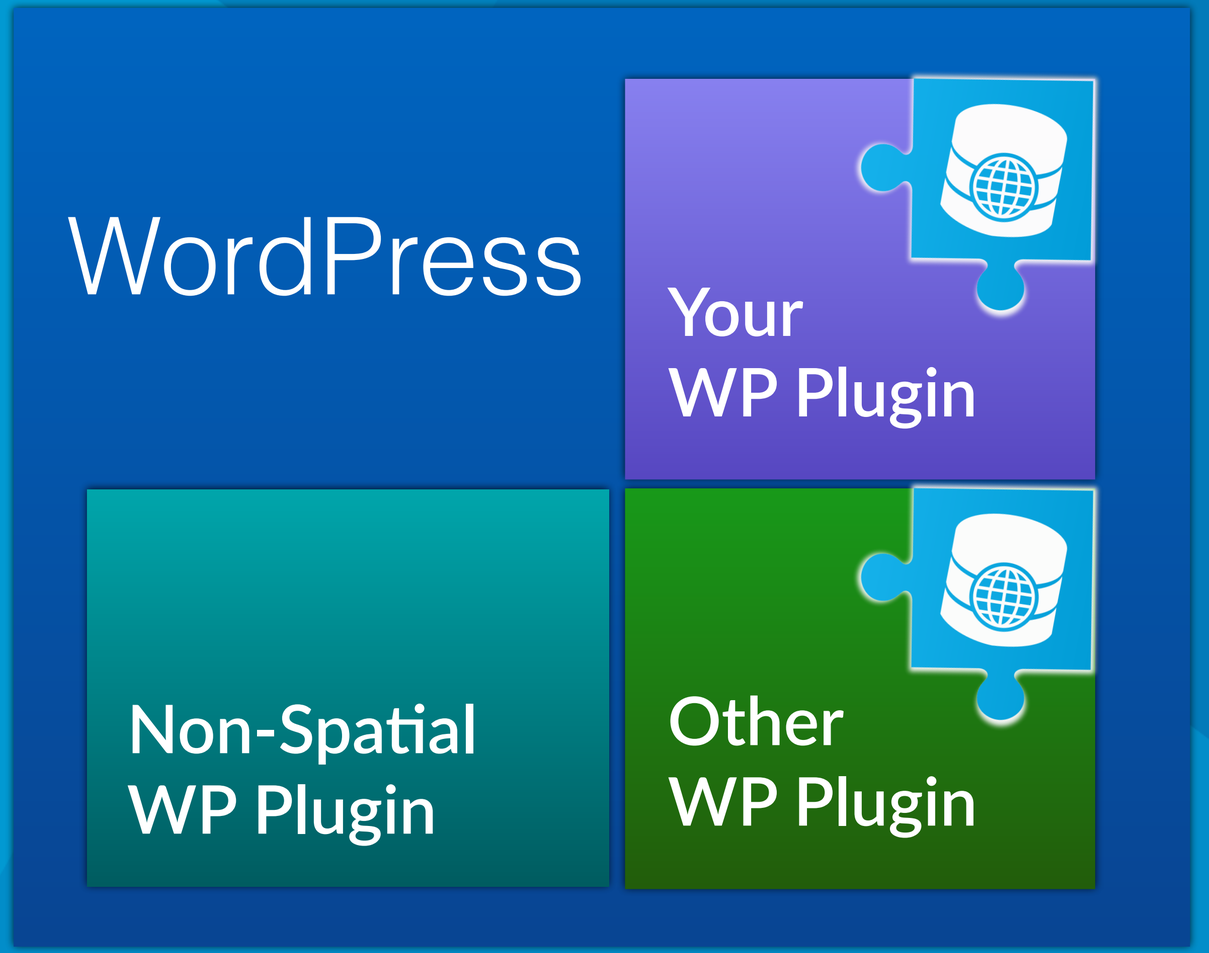
Analyze



What Is WP-GeoMeta-Lib

https://github.com/BrilliantPlugins/wp-geometa-lib

- PHP Library
- Include it in WP plugins
- Handles saving and querying spatial data



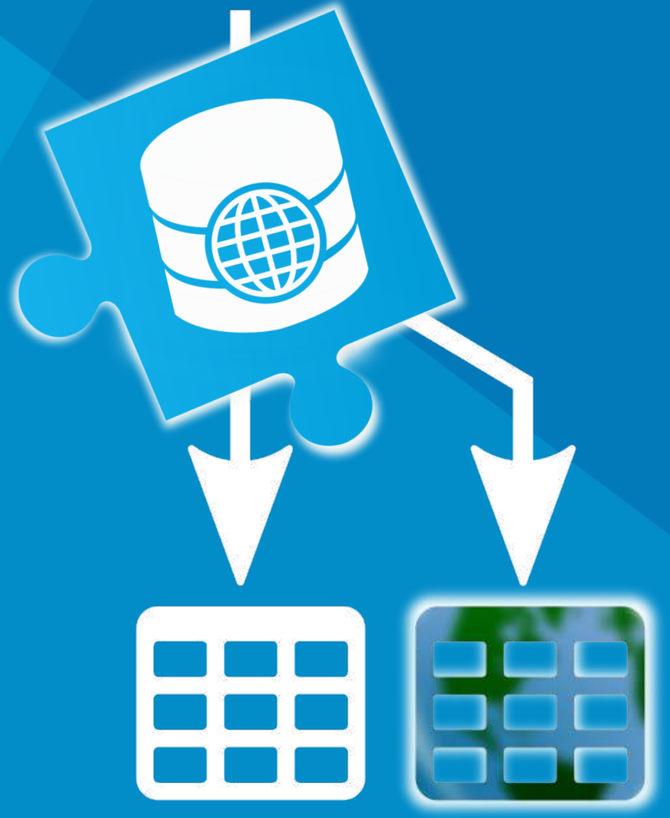
How Does It Work?

☐	**wp_commentmeta**	InnoDB	utf8mb4_unicode_520_ci	16,384	32,768
☐	**wp_commentmeta_geo**	MyISAM	utf8mb4_unicode_520_ci	0	4,096
☐	**wp_postmeta**	InnoDB	utf8mb4_unicode_520_ci	3,686,400	32,768
☐	**wp_postmeta_geo**	MyISAM	utf8mb4_unicode_520_ci	1,234,124	23,552
☐	**wp_termmeta**	InnoDB	utf8mb4_unicode_520_ci	16,384	32,768
☐	**wp_termmeta_geo**	MyISAM	utf8mb4_unicode_520_ci	0	4,096
☐	**wp_usermeta**	InnoDB	utf8mb4_unicode_520_ci	16,384	32,768
☐	**wp_usermeta_geo**	MyISAM	utf8mb4_unicode_520_ci	0	4,096

How Does It Work?

update_post_meta( )

When spatial metadata is inserted, it’s re-routed and stored in the spatial table instead.



How Does It Work?

WP_Query(meta_value => ST_Intersect( ))

SELECT * FROM

SELECT * FROM

Parts of queries with spatial functions are re-routed to use the spatial tables.

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Opportunity

Collect

Store

Query

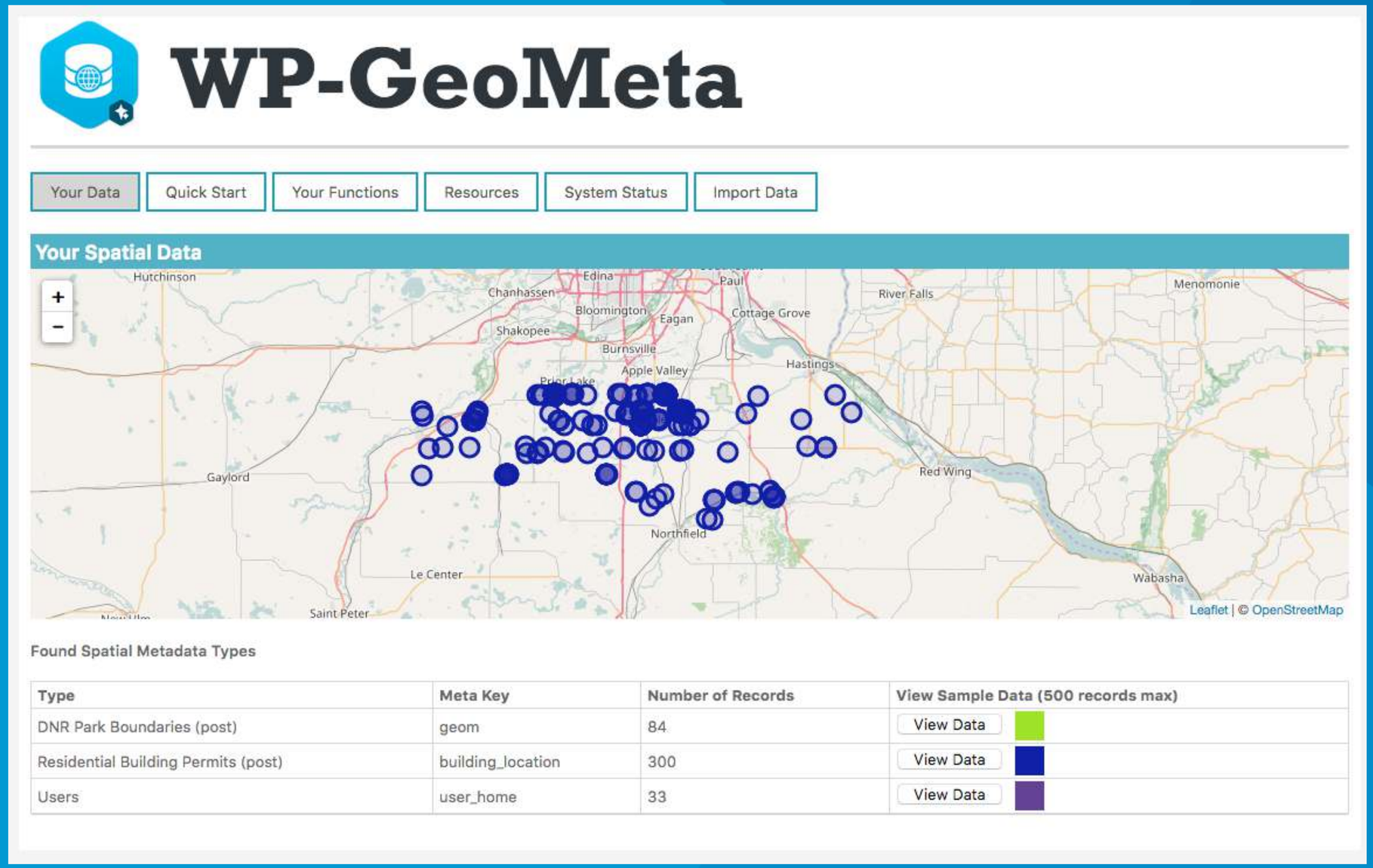
Display

?

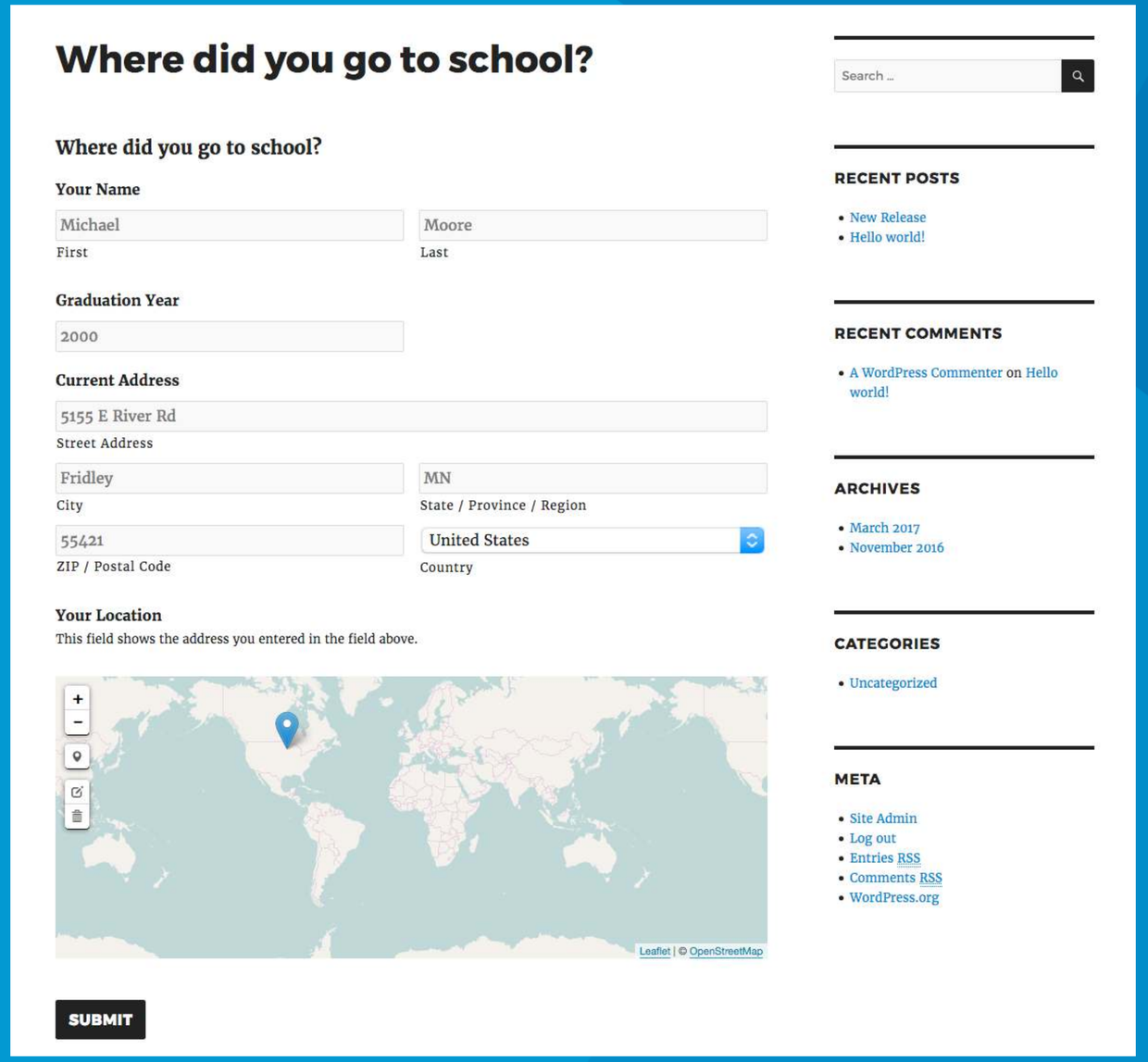
Analyze

> **WordPress is used by 59.3%** of all the websites whose content management system we know. This is 28.4% of all websites.

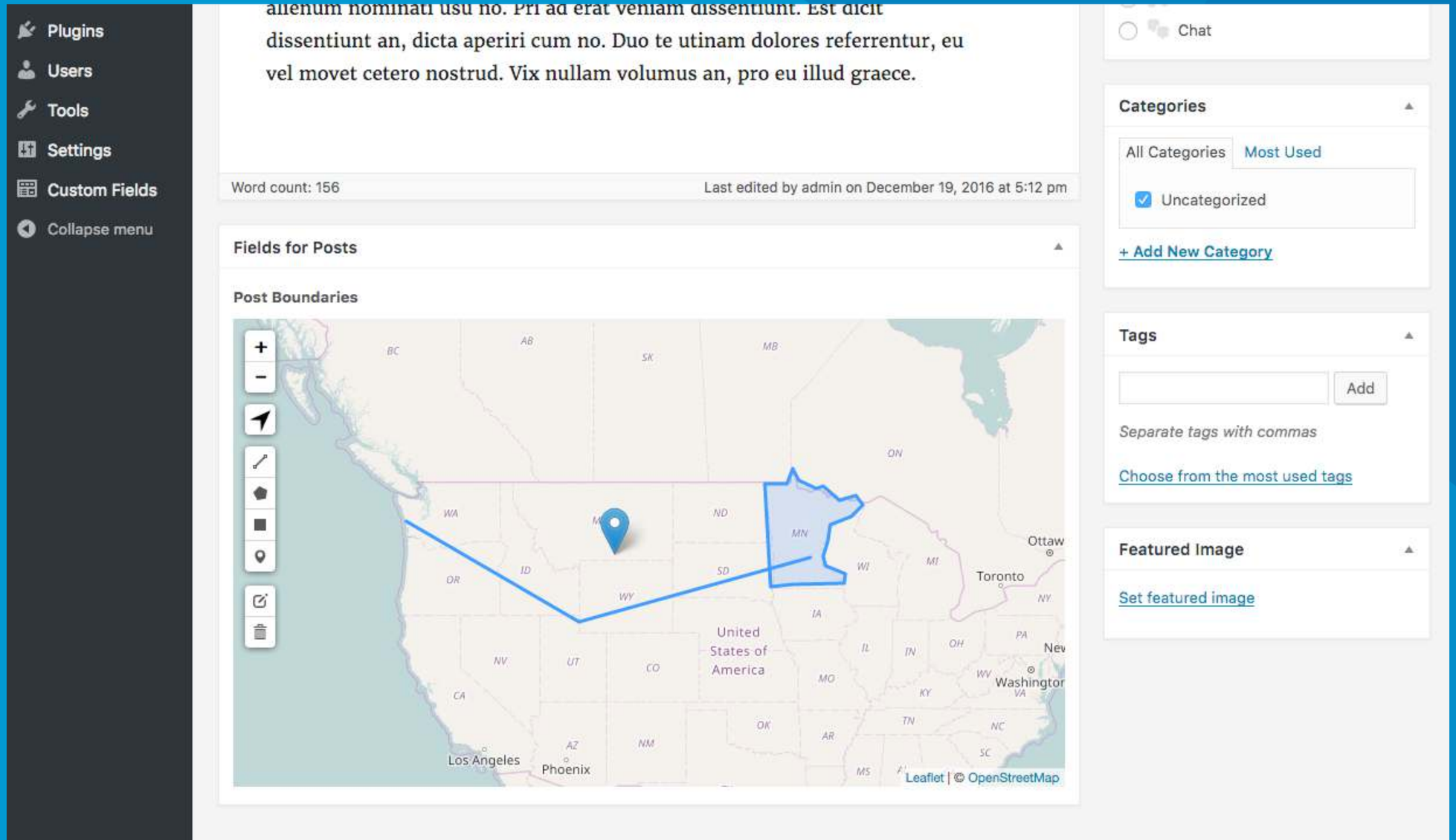
Plugin: WP-GeoMeta (not -lib)



Brilliant Geocoder for Gravity Forms



GeoMeta for ACF



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3. I should write a WordPress Plugin with WP-GeoMeta-Lib

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Questions

https://github.com/BrilliantPlugins/wp-geometa-lib

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