

QGIS, Is Free Worth the Price?

Oregon GNSS Users Group
Meeting— June 17, 2022

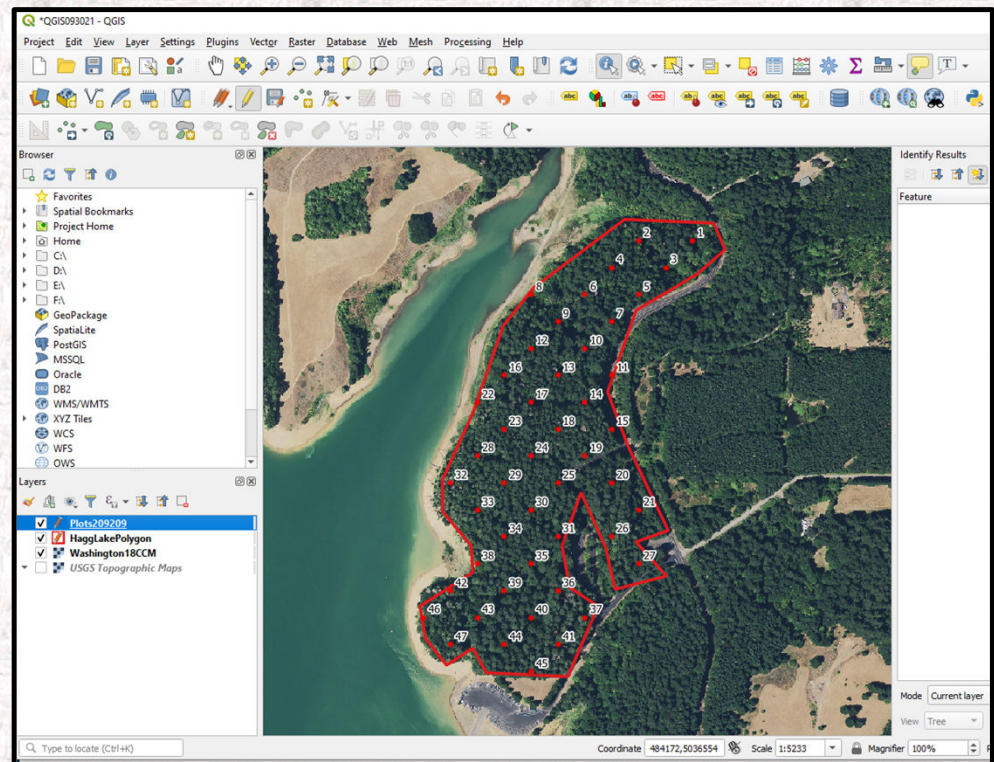
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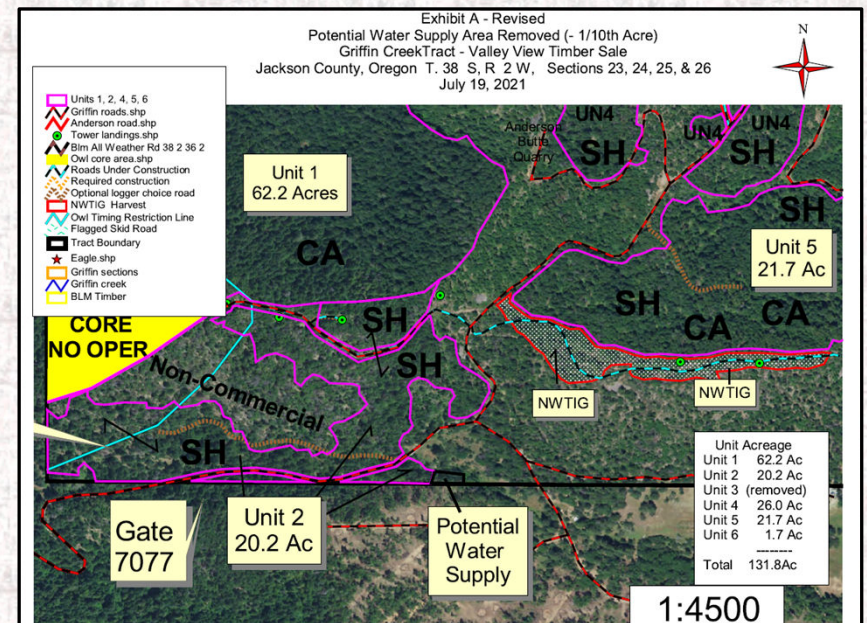
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What is GIS? (Geographical Information System)

- A spatial system that creates, manages, analyzes, and maps all types of data. Examples:
 - ArcGIS
 - MapInfo
 - QGIS (Open Source)
 - AutoCAD
 - And many others



What is QGIS?

- Quantum Geographic Information System
- Open-Source mapping software available at no charge
 - Latest Version: Long Term 3.16
- A functional GIS system running on multiple platforms
 - Windows
 - Linux
 - Macintosh (MacOS)

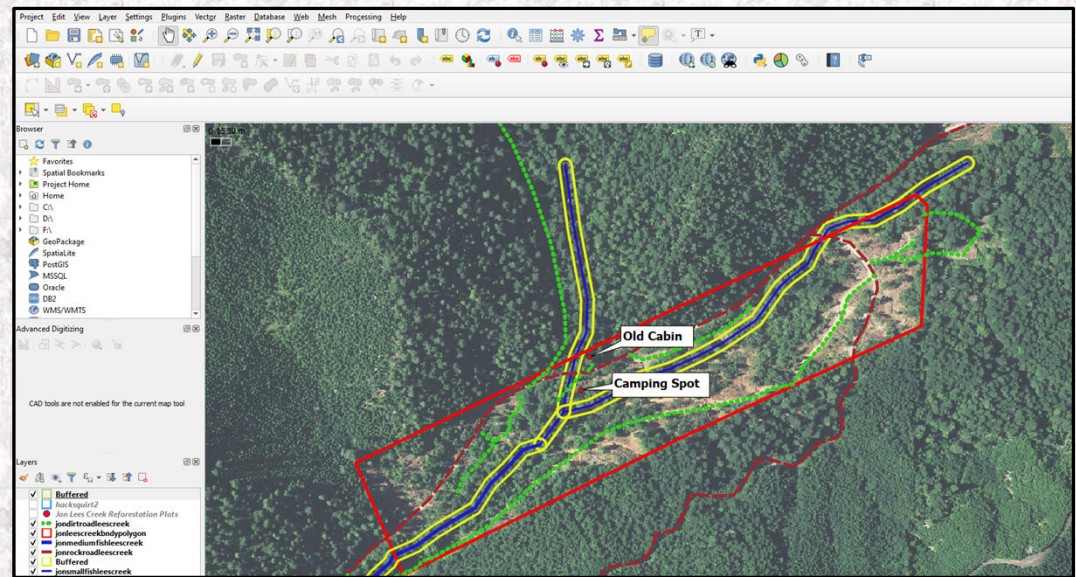


What Foresters/Surveyors Want From A GIS:

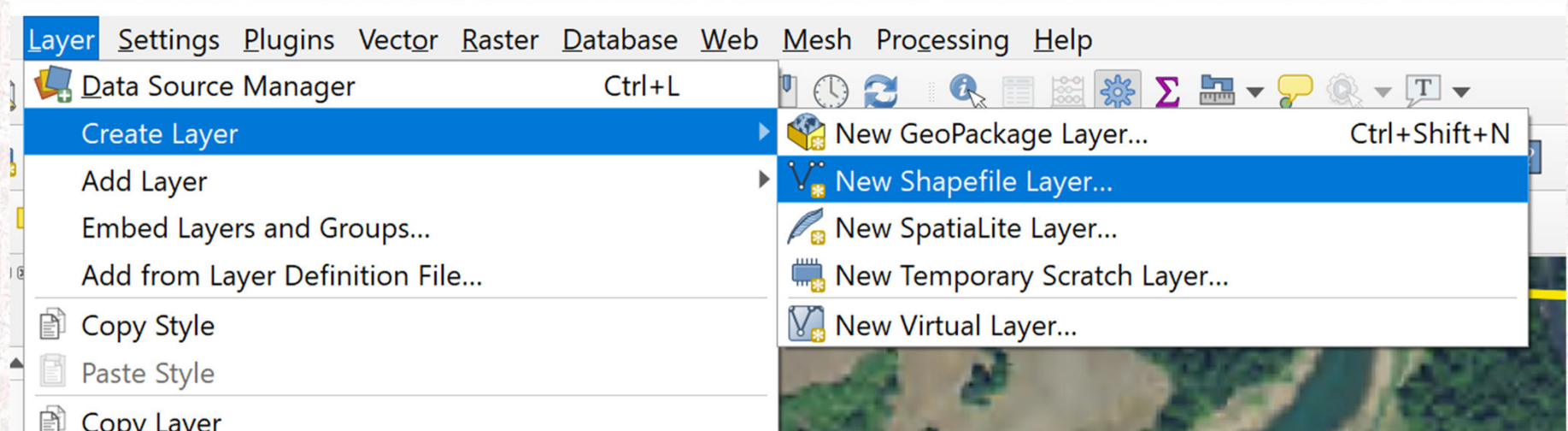
- Be able to bring in imagery & shape files as Points, Lines and Polygons
- Create new points, lines and polygons (and edit them)
- Calculate Acreage
- Make a plot grid
- Make a professional, printable map at a known scale
- Change Shape File Coordinate Systems
- Export map data to a GeoPDF (Avenza Maps)
- Be Able to buffer streams and roads
- Clip data in a variety of ways
- Analyse data
- Search, find, summarize data
- Utilize imagery from a variety of on-line sources

QGIS Demo (not live)

- Bring in NAIP imagery file
- Make a timber sale polygon
- Make a plot grid for cruising/Rotate the plots
- Calculate acreage
- Make a printable map
- Export map data to Avenza



How To Create a New Shape File



Fill In The
Blanks:

Name

Type

Fields

OK

New Shapefile Layer

File name: D:\QGIS_FB\Hagg Lake Polygon.shp

File encoding: UTF-8

Geometry type: Polygon

Additional dimensions: None Z (+ M values) M values

Coordinate System: EPSG:2269 - NAD83 / Oregon North (ft)

New Field

Name: []

Type: Date

Length: 9 Precision: []

Add to Fields List

Name	Type	Length	Precision
id	Integer	10	
date	Date	9	

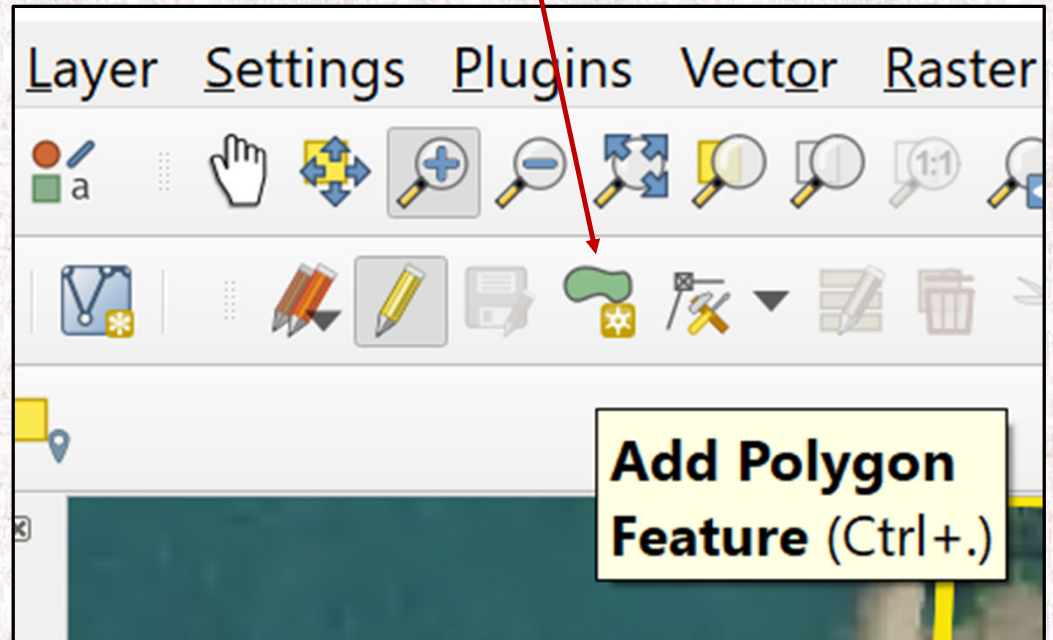
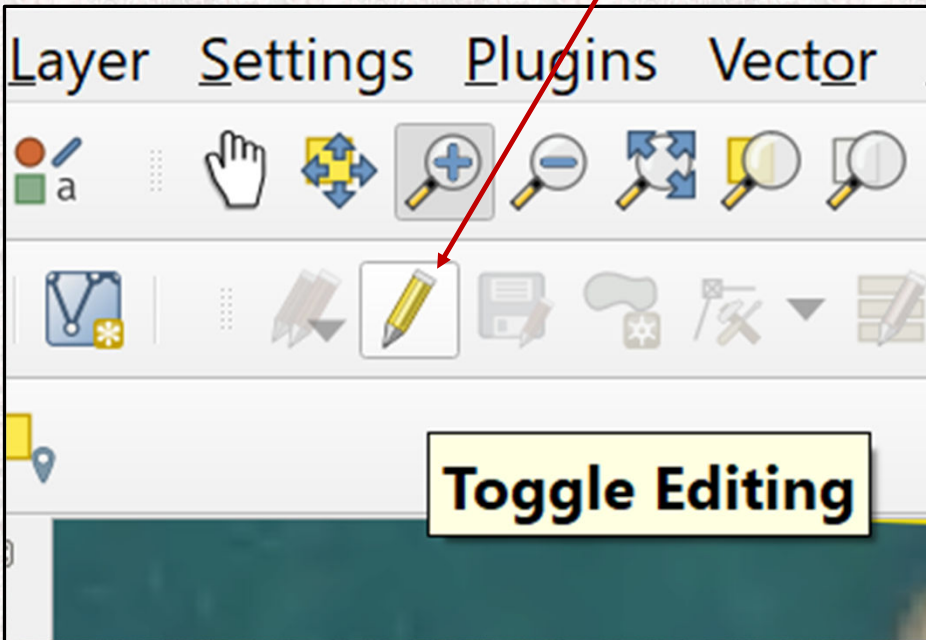
Remove Field

OK Cancel Help

Pick File
Location

Select
Coordinate
System

Toggle Editing – Create Polygon



Click Around the Polygon Perimeter



**Right
Mouse
Click**

**Enter
Fields**

Hagg Lake Polygon - Feature Attributes

id

date

October, 2021						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27	28	29	30	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	6

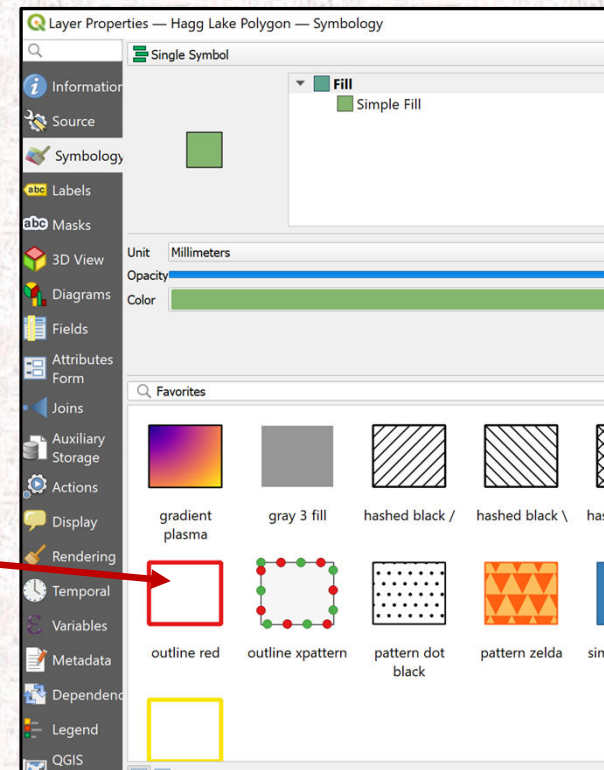
OK Cancel

Polygon Is Created – Needs Work



**Click
Properties/
Symbology**

**Pick
Outline**

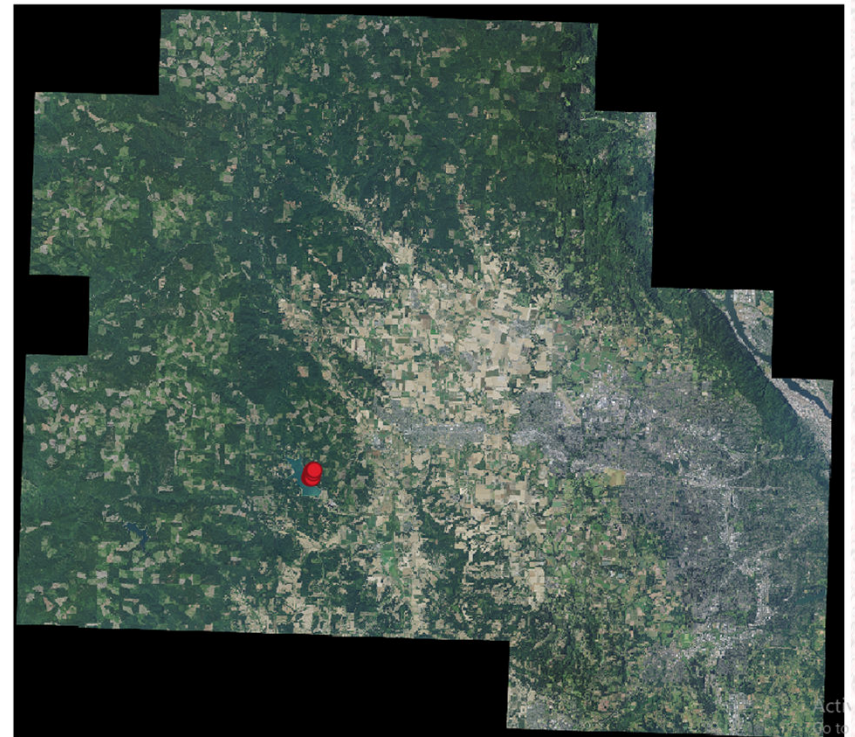


New Polygon is Complete



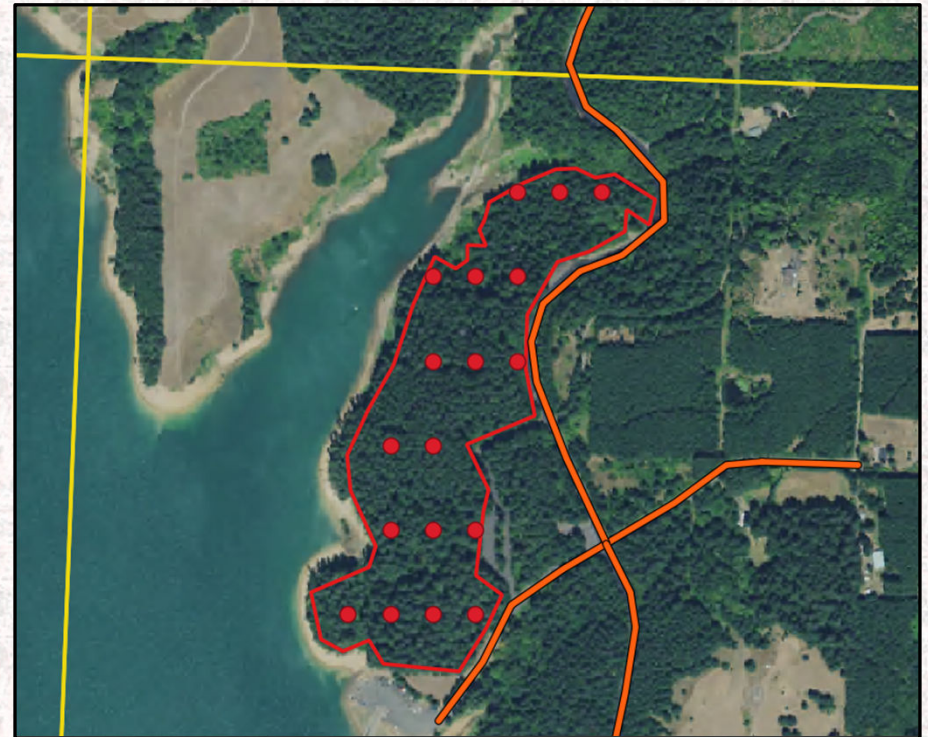
Imagery: On Your PC & On-line

- NAIP
- Eagle Digital Imagery
- MrSID, JPEG, TIFF and more
- On-Line Imagery
 - Google Earth
 - ArcGIS On-line
 - Many Universities/States have imagery On-line



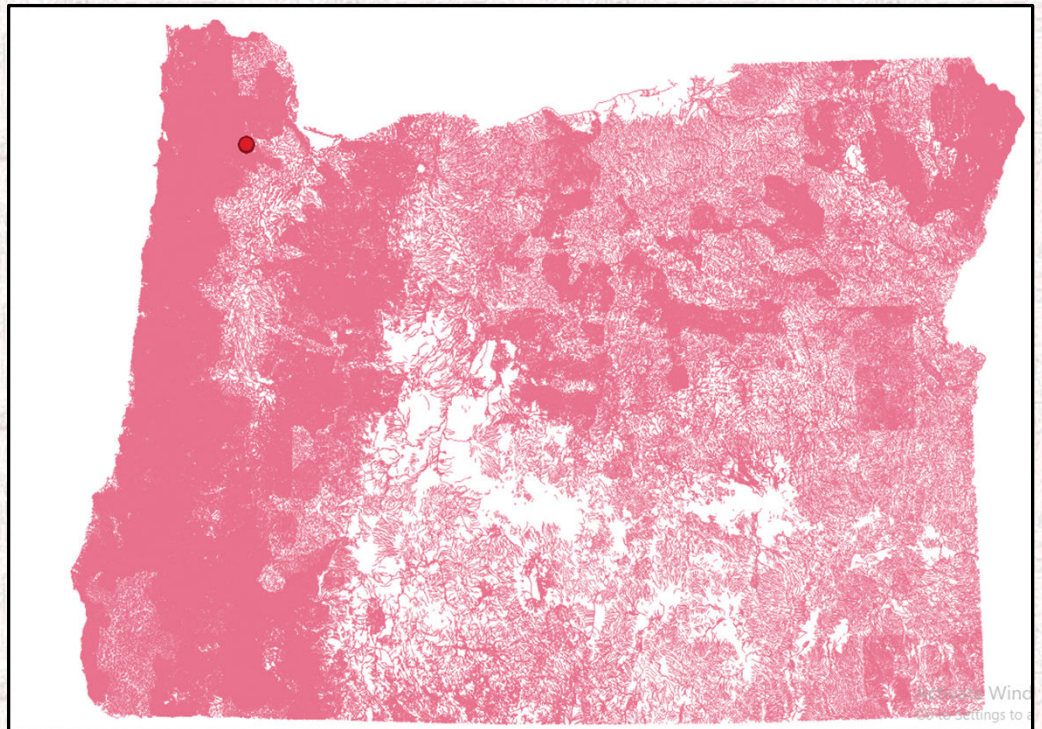
Plot Grids and Points/Lines/Polygons

- Have multiple shape files open at same time
- Points, Lines Polygons
- User defined symbology
- Not as many options as ArcGIS (but close)



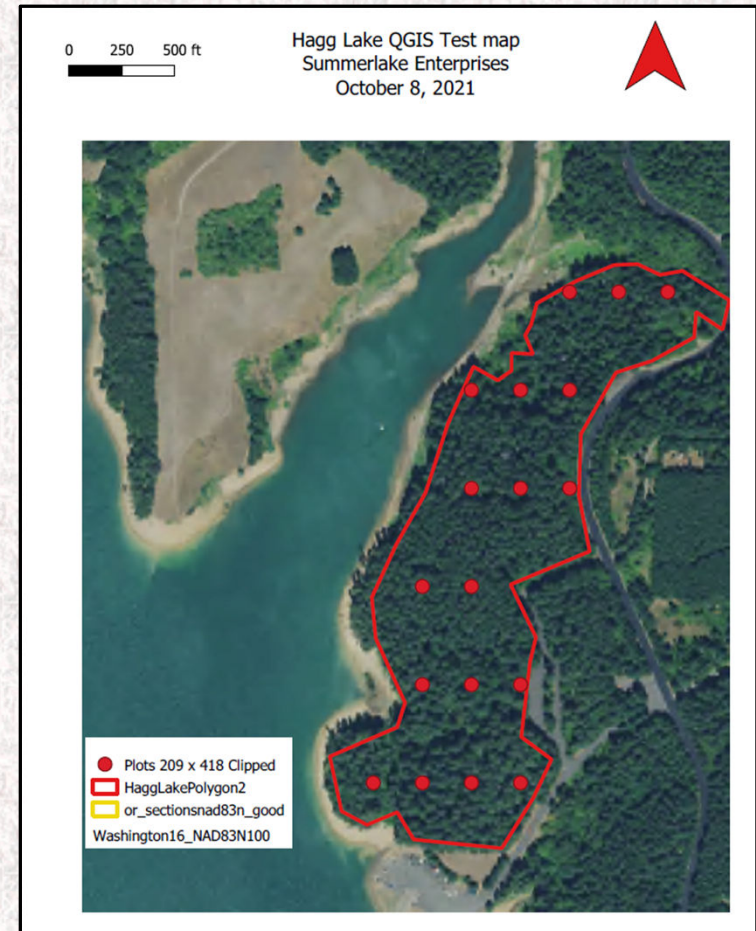
Shape Files On-line For Download

- County Tax Lots
- Oregon/Washington Stream Layers
- Federal/State Ownerships
- Highway and Road layers



Making A Map Layout

- Easy to add items:
 - Map area
 - Scale bar
 - Legend
 - North arrow
 - Text labels
- Print to printer/PDF
- Note: Not for Avenza Map



The Best About QGIS

- **FREE**
- **Relatively Easy (Often Easier/Faster Than ArcGIS)**
- **Calculate Acreage, make buffers, create plot grids**
- **Very robust in terms of types of imagery/files usable**
- **Make professional, printable maps**
- **Make GeoPDFs (Avenza Maps)**
- **Many people are using QGIS, so it is getting better**
- **Current users are generally very helpful to beginners**

The Worst About QGIS:

- Support is poor
- Not intuitive at times
- You will find simple things impossible (for a while)
- Knowing ArcGIS might help; might make it harder

QGIS: Conclusions

- **QGIS is robust and very capable**
- **FREE definitely is worth the price**
- **Expect to be frustrated at times!!!!**
- **Form a Support Group/Ask for help**
- **Be Persistent!!!**
- **Revel in your accomplishments**

Free Copy of QGIS and Some White Papers

- I have a few DVD's with QGIS 3.16 (Hannover) installation program.
- **White Papers on DVD:**
 - QGIS How to Bring In Layers
 - QGIS How to create a new shape file
 - QGIS How to create a plot grid
 - QGIS How to rotate a plot grid
 - QGIS How to create a map layout
- Contact me if you want one sent to you.
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 - 503-707-6236

Thanks!

- May your acreage calculations always be accurate
- May your maps be easy to understand and a thing of beauty
- May your QGIS frustrations be much less than your successes

