

MGIS 5574

WEB GIS AND SERVICES

FALL 2014 – MON. 7:00-9:00



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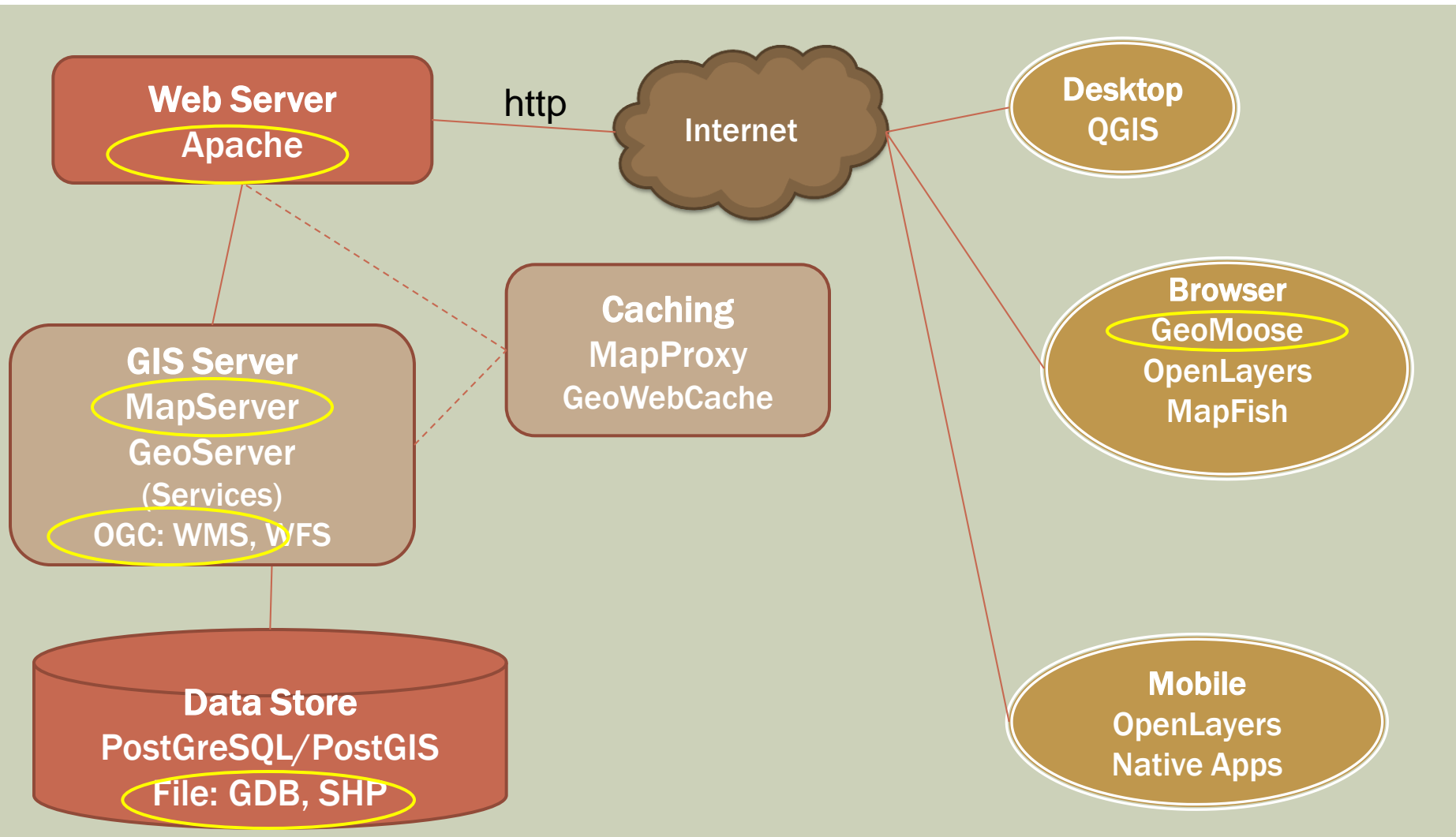
OPEN SOURCE GIS SOFTWARE

- Access and modify source code
- OSGeo (www.osgeo.org)
- Strong Vibrant Communities
- 2014 Free and Open Source Software for Geospatial (FOSS4G)
<http://vimeo.com/foss4g/videos>

WHY OPEN SOURCE?

- **Cost**
 - Initial software
 - Annual maintenance
 - Scaling
- **Access to source code to modify**
 - Embed into commercial products
 - Customization / Enhancements
- **Flexibility**

OPEN SOURCE GIS STACK



NEXT 2 WEEKS

- **GeoMOOSE Configuration**
- **MapServer Configuration**

SOFTWARE USED FOR THIS CLASS

- MapServer (<http://mapserver.org>)
 - Server Side
 - Map rendering engine
 - Reads and processes GIS data sources
- GeoMOOSE (<http://www.geomoose.org>)
 - Client-side Configuration Framework
 - Provides the user interface and configuration options for an out of the box web mapping application
 - Uses OpenLayers and Dojo Toolkit JavaScript APIs
 - Uses PHP for some services

WINDOWS (MS4W)

- **MS4W (MapServer for Windows)**
 - Packaged for installation on windows
 - All in one software package
 - Contains Apache, MapServer and PHP software
 - Already configured
 - Download from www.maptools.org
 - Can be installed on any windows machine
 - Follow MS4W Installation Readme for help
 - Access installation by going to <http://localhost> or <http://127.0.0.1>

LINUX OR OTHERS

- Need to install and configure each package
 - Apache
 - PHP
 - MapServer CGI
 - Php5 mapscript
 - Php5 GD and sqlite

```
sudo apt-get update
sudo apt-get upgrade
sudo apt-get install subversion libapache2-mod-php5
sudo apt-get install postgresql-9.3-postgis-2.1 postgresql-contrib php5-pgsql php5-curl
sudo apt-get install cgi-mapserver php5-mapscript
sudo apt-get install php5-gd php5-sqlite (used by GeoMoose services)
```


MS4W (WHAT'S INCLUDED)

- Apache (Web Server)
 - Configuration files, installed as windows service
- PHP (Server-side programming language)
- MapServer
 - Configured to use as CGI or MapScript (PHP, Python, Java, Csharp)
- Utilities (command line)
 - GDAL, OGR, MapServer
- Application Plug-ins (GeoMOOSE, etc.)
- Readme File

HOW TO INSTALL THE CLASS SOFTWARE (MS4W)

- Instructions in MS4W/GeoMOOSE installation PDF and posted on Moodle site.

GEOMOOSE BACKGROUND

- Original Source Code from City of Saint Paul Public Works – “GISmo”
- 2007 Received a FGCD project – officially established GeoMoose project – version 1.0
- 2009 – Version 2.0 – Integration of OpenLayers
- 2011 – Project Steering Committee formed
- 2012 – Version 2.6 – Integration of Dojo Toolkit
- 2013 – OSGEO Incubation Project
- 2014 – Version 2.7

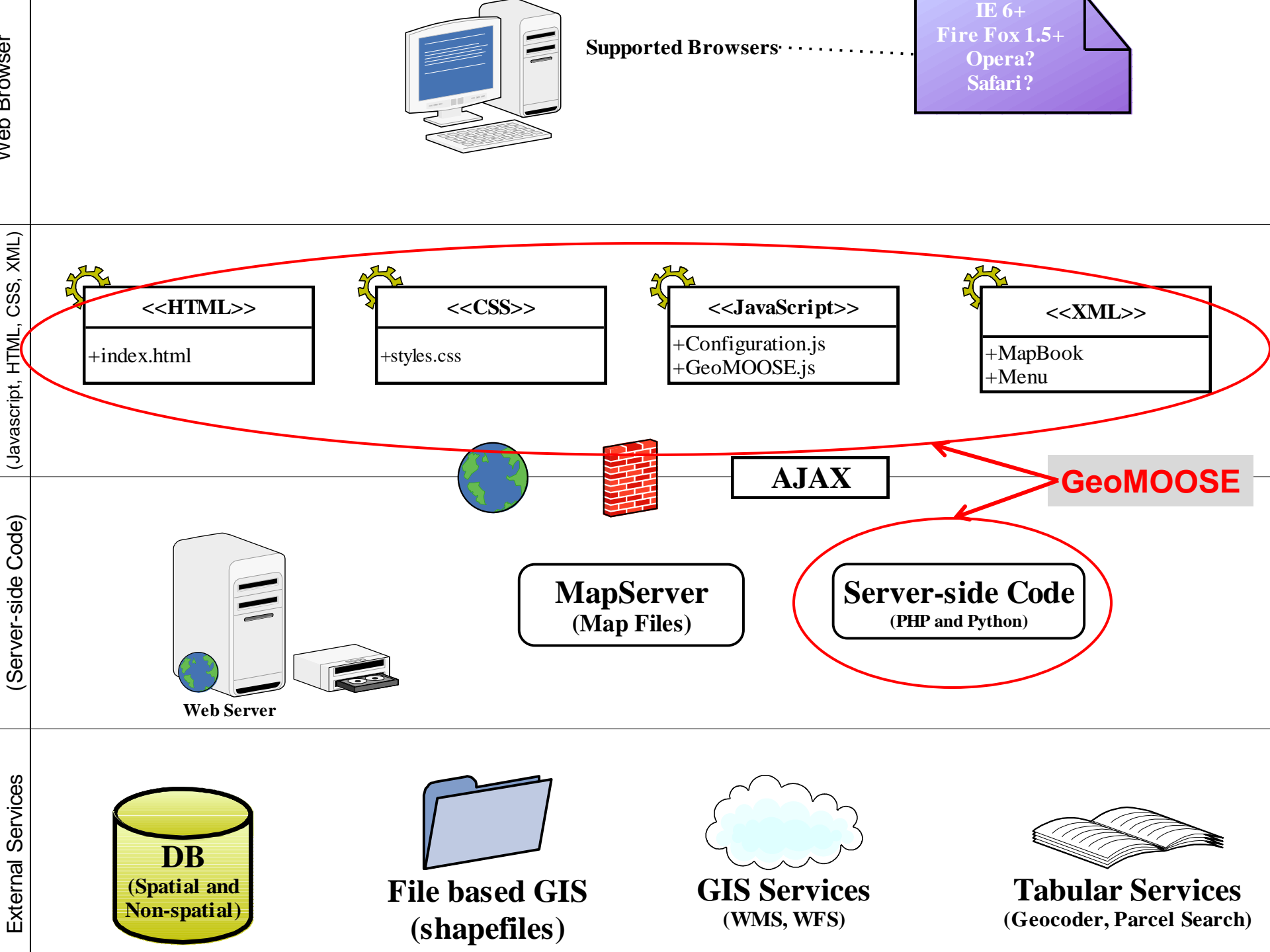


GEOMOOSE BACKGROUND

- **Configurable**
 - **For implementers**
- **Scalable Use**
 - **Beginners with little training to expert users**
 - **Many layers, services, data maintainers, clients**
- **Focus on needs of local government**

GEOMOOSE BACKGROUND

- Client-side code –HTML, CSS, XML, JavaScript
- 3rd Party Library Dependencies
 - [OpenLayers](#), [Proj4js](#) and [Dojo Toolkit](#)
- Server-side Services - Identify, Selection, Buffering, and Printing
- 3rd Party Library Dependencies
 - [PHP](#), [MapServer MapScript](#) and [FPDF](#)



GEOMOOSE GALLERY

MMCD - Windows Internet Explorer

http://mmcd.mapmorph.net/mmcd/mmcd.html

File Edit View Favorites Tools Help

MMCD



Home | Contact | Thursday, September 27, 2007

Zoom to Address Go to Site# Map Options Help

ZOOM IN ZOOM OUT PAN FULL VIEW SELECT SITE CLEAR

Zoom to City:
Map Layers Information

INFORMATION

Detailed information for the area you clicked on the map...

UTM Zone 15 Coordinates

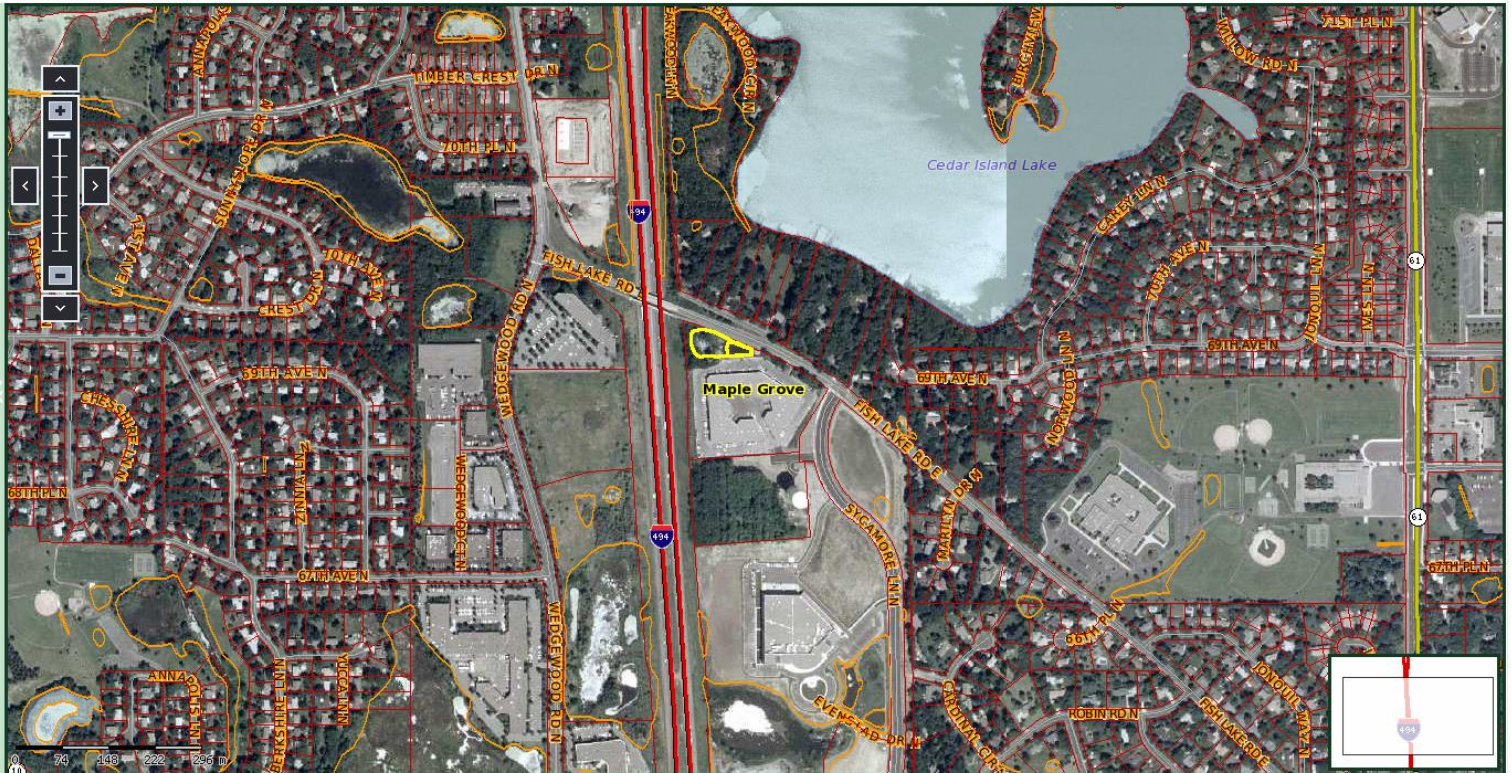
X: 464916.762305
Y: 4991952.544844

Breeding Sites Layer

Site Code: **273234-130**
Type: 4.1
Acres: 0.55

Parcel Layer

PIN: 053-3411922110007
Address: 6901 EAST FISH LAKE RD



Copyright © MMCD - All Rights Reserved. X,Y: 464932.59,4991924.39 Lat, Long: 45.0799,-93.4455

Scale 1: 4,991 | GeoMoose Powered

GEOMOOSE DOCUMENTATION

- <http://docs.geomoose.org/2.6/index.html>
- Getting Started
 - http://docs.geomoose.org/2.6/getting_started.html
- Implementer
 - <http://docs.geomoose.org/2.6/docs/index.html>
- MapBook (main GeoMoose config file, xml based)
 - <http://docs.geomoose.org/2.6/docs/mapbook.html>
- Local_settings.ini (config for services)
 - <http://docs.geomoose.org/2.6/docs/settings.html>

GEOMOOSE CONFIGURATION

- **Configure Application**
 - Projection, Units, Source File location
- **Configure User Interface**
 - Appearance, Default Settings, etc
- **Configure Map Layers**
- **Configure Services**
- **Beyond Configuration**
 - Extend, Customize, Modify Code

GEOMOOSE IN-CLASS EXERCISES

- **Focus on Application Setup and User Interface Configuration**
 - **Exercise #1 - How to create a new application from demo application?**
 - **Exercise #2 - Modifying the User Interface?**
 - **Exercise #3 - How to change the skin, logo, title and footer?**
 - **Exercise #4 - How to change configuration parameters?**
 - **Exercise #5 - More on configuration parameters**

ASSIGNMENT #2 - GEOMOOSE

- Assignment #2 will have you add a new layer to your GeoMoose application and setup the identify results for it.
- This assignment is due on Week 8 (Oct. 27th)
- <https://ay14.moodle.umn.edu/mod/assign/view.php?id=550286>

WEEK 6

- Familiarize yourself with the GeoMOOSE “How-To” Guides.
- <http://docs.geomoose.org/2.6/docs/index.html>
- Familiarize yourself with MapServer
 - www.mapserver.org