

OpenGeo Presentation to NOAA DMIT

April 4th, 2012

OpenGeo Background

- Supports open source geospatial worldwide
 - Community and Enterprise versions
 - Global support and service
 - Training
 - Advanced software development
- Founded 2002
- Global Partner Network

OpenGeo Supported Clients

- US Federal
 - Army Geospatial Center
 - FCC
 - NGA
 - NOAA
 - State Department
 - USGS



OpenGeo Supported Clients

- US State and Local Government
 - MassGIS
 - NYC DoITT
 - Portland Trimet
 - SFMTA
 - Howard County, MD



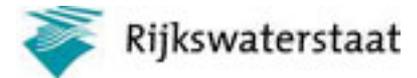
See where it takes you.



OpenGeo Supported Clients

- International Government

- AIFDR
- Australia New Zealand Spatial Marketplace
- Finnish Ministry of Agriculture (Tike)
- IGN
- Landgate (Australia)
- Ordnance Survey
- Rijkswaterstaat (Netherlands)



OpenGeo Supported Clients

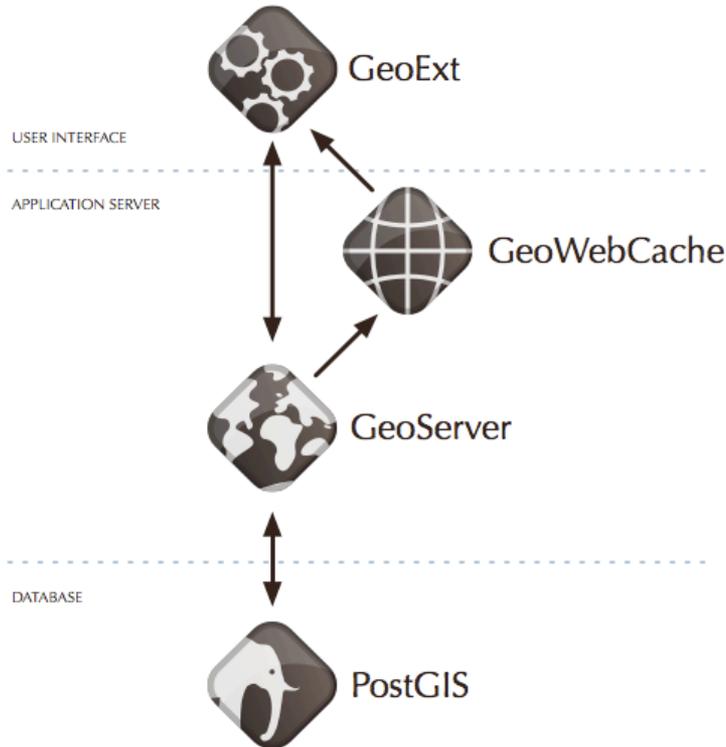
- International
 - Austrian Federal Railways
 - EB Services
 - Ericsson
 - GEM Foundation
 - Grontmij-Calbrot (Denmark)
 - NavCanada
 - SWECO (Sweden)
 - The World Bank



OpenGeo Suite



Bundle Five Open Source Projects



- User interface map component: **OpenLayers**
- User interface framework: **GeoExt / ExtJS**
- Application cache: **GeoWebCache** tile cache
- Application server: **GeoServer** map/feature server
- Storage: **PostGIS** PostgreSQL spatial database

The OpenGeo Suite

- Publish OGC Web Services
- Build high performance web applications through advanced framework

...all with an entire open source enterprise stack that scales massively and is easy to administer through an integrated console.

Leverage your technical and human infrastructure through integration with existing enterprise architecture

User Interface

Web-based



GeoExt



Google Maps



OpenLayers



Microsoft Virtual Earth

Desktop



uDig



Google Earth



QGIS



ArcGIS Desktop

Tiling



GWC

TileCache

Web Services



GeoServer



Mapnik



CubeWerx



MapServer



ArcGIS Server / ArcIMS



ERDAS Apollo Server

Application Server

Database



PostGIS/PostgreSQL



Oracle Spatial



MySQL with Spatial



Microsoft SQL Server



IBM DB2



ArcGIS Server / ArcSDE

Keep In Touch

- Check out <http://opengeo.org>
- Email us at inquiry@opengeo.org

“Enterprise GIS Web Services Hosting Environment for NOAA”

- 2011/2012 HPCC Incubator Project
- Project goal: to **PROTOTYPE** a
 - Centralized resource, available free* to NOAA data publishers
 - Shared service potentially supported at NOAA CIO level
 - An option for how to make NOAA geospatial data more accessible to customers via OGC services

Objectives

- Solve basic problem of moving from shapefile(s) published on website to OGC-compliant services
- Apply open source software to meet agency need
- Integrate within NOAA enterprise (LDAP, WOC)
- Exclusively web-based UI and API – **HTTP Only!**
- Scalable royalty-free for more rapid enterprise deployment (no licenses necessary)

Implementation

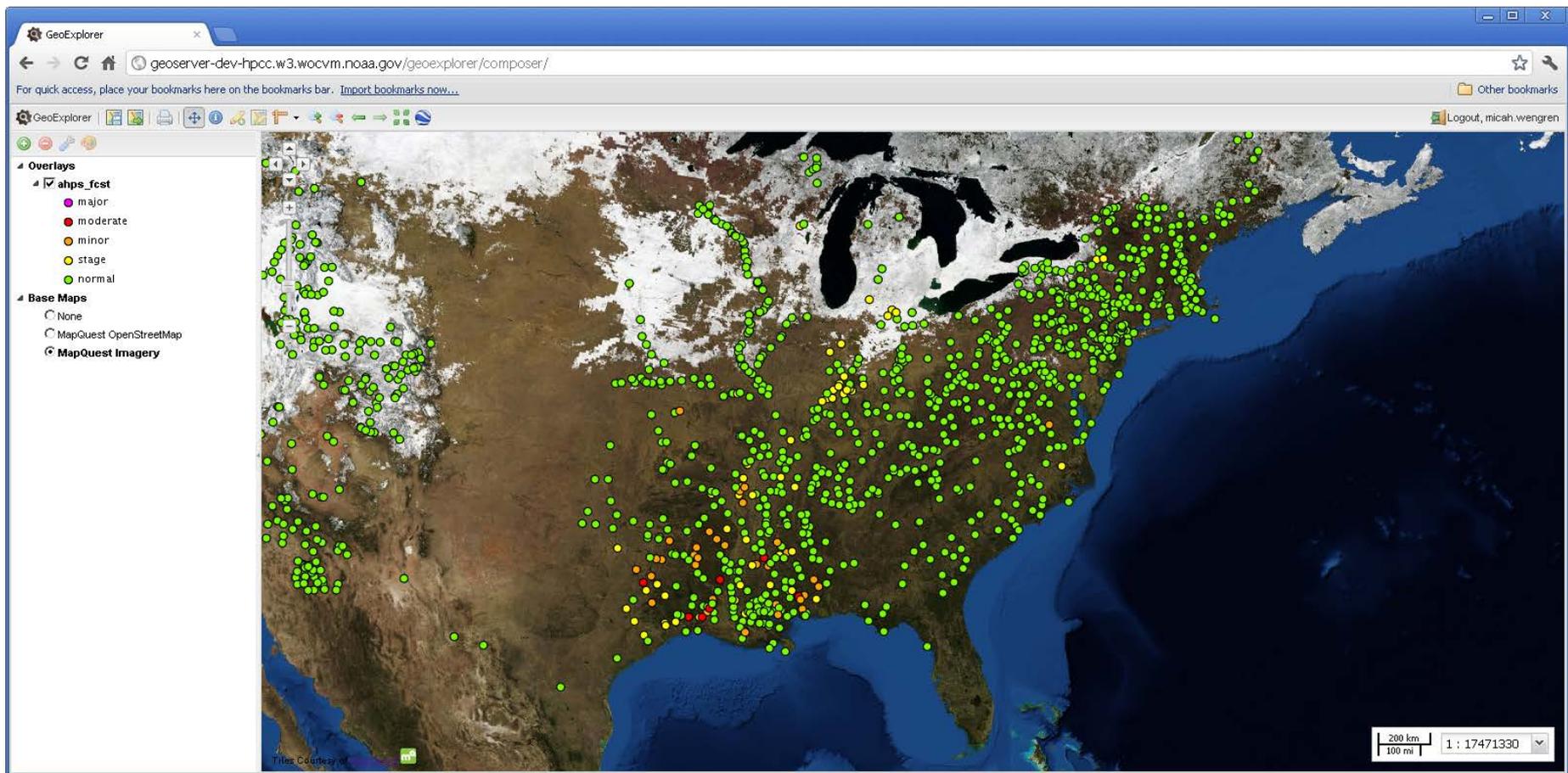
- NOAA requirements provided to OpenGeo
 - Input from NOAA GIS community, gather common needs across NOAA line offices
- Collaboration with open source developer community
 - NOAA requirements folded into core GeoServer product via 'GSIP' process: GSIP #s: 66, 67, 71, 73, 74
 - Released in next version of GeoServer
 - See: <http://geoserver.org/display/GEOS/GeoServer+Improvement+Proposals>

Data Input

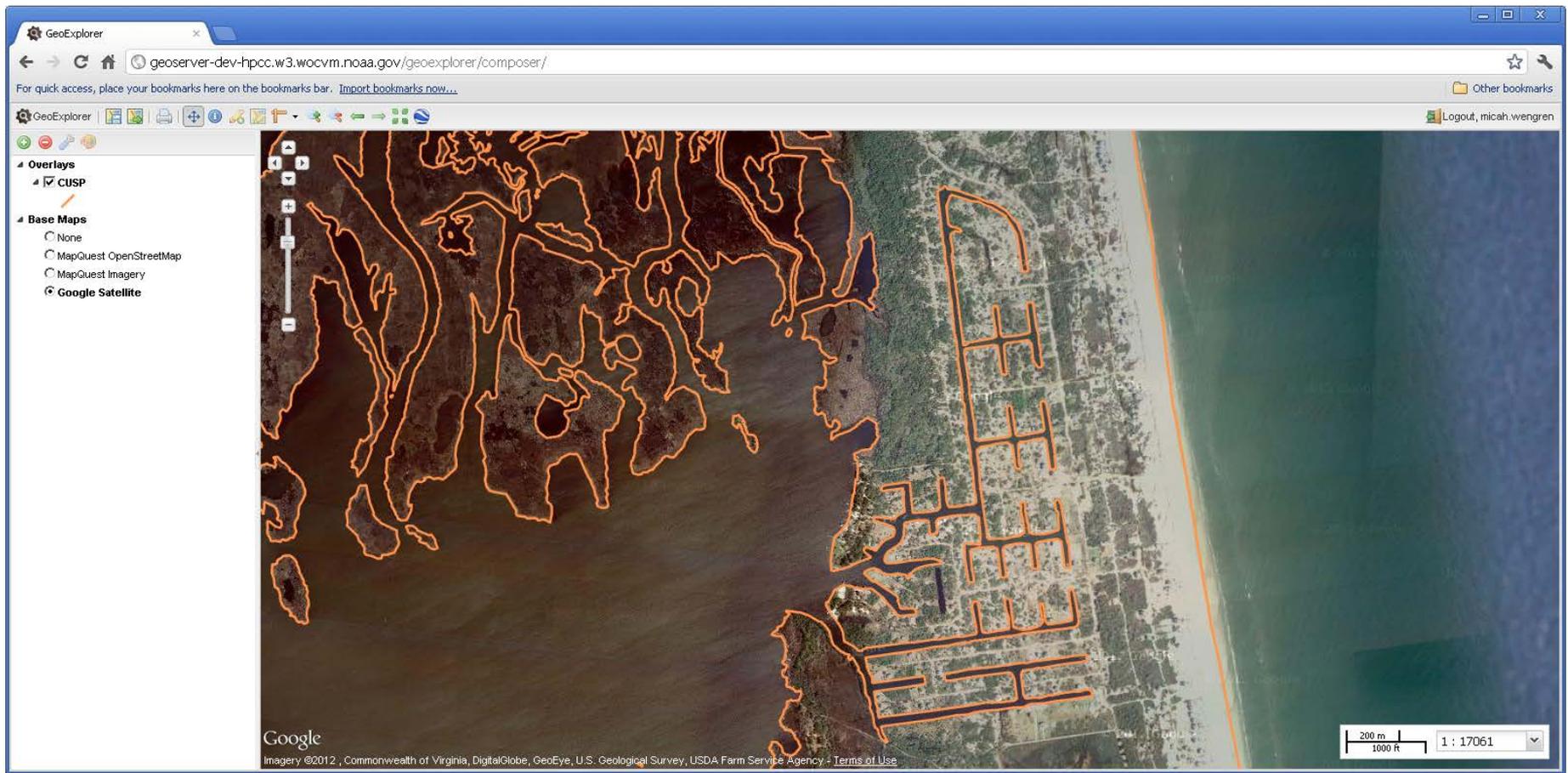
- Scriptable data upload capability
 - automated workflows supported – NWS short duration warnings, other process-generated data sets
- HTTP-based data publishing
 - REST API already provided by GeoServer

Data Retrieval

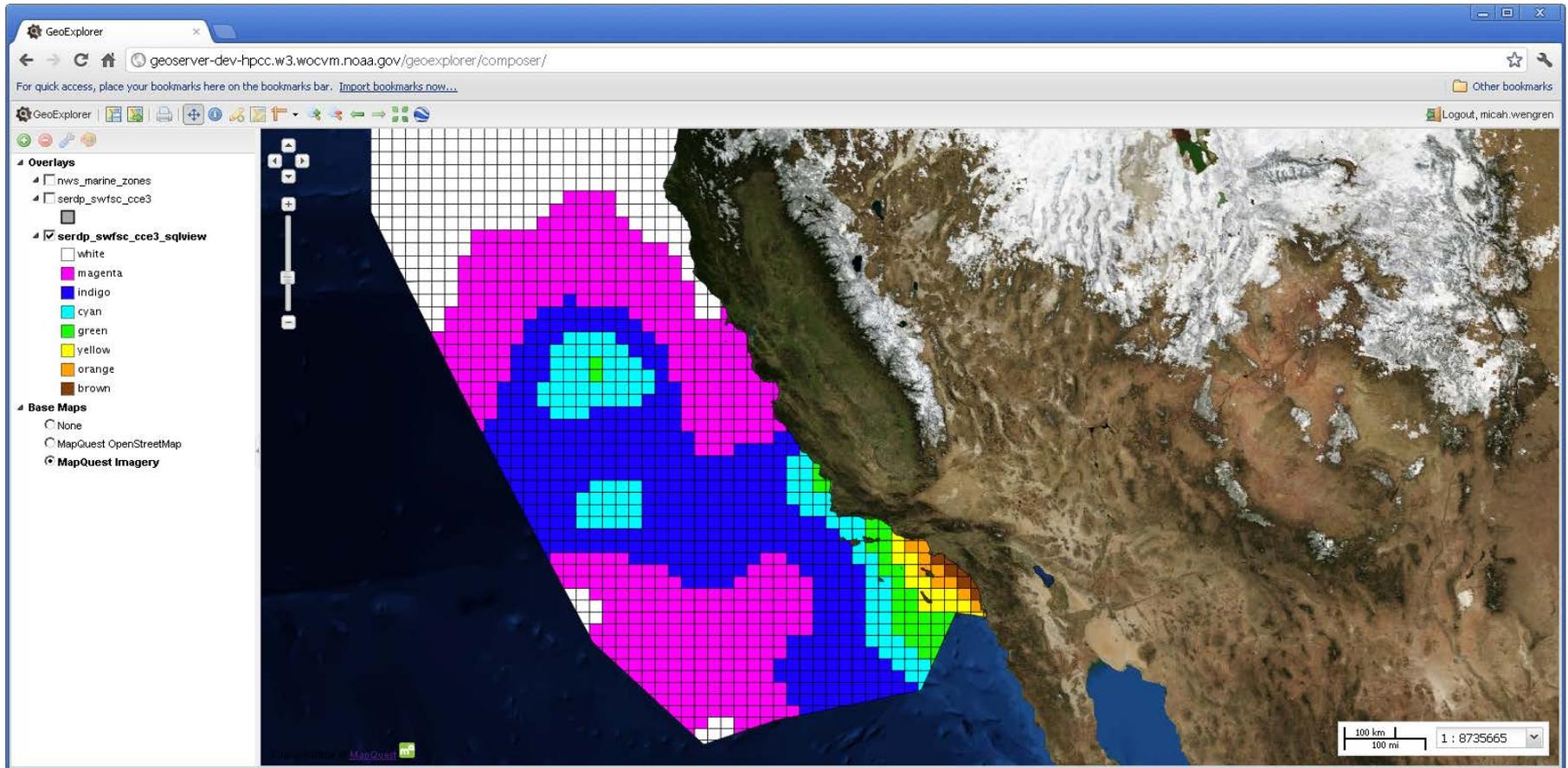
- Standards-based. Supported OGC standards:
 - Web Map Service (WMS)
 - Web Feature Service (WFS)
 - Keyhole Markup Language (KML)
- Compatible with proprietary and non-proprietary GIS systems (desktop – ArcMap, QGIS, web – ArcGIS Online, Federal GeoPlatform, GeoNode)



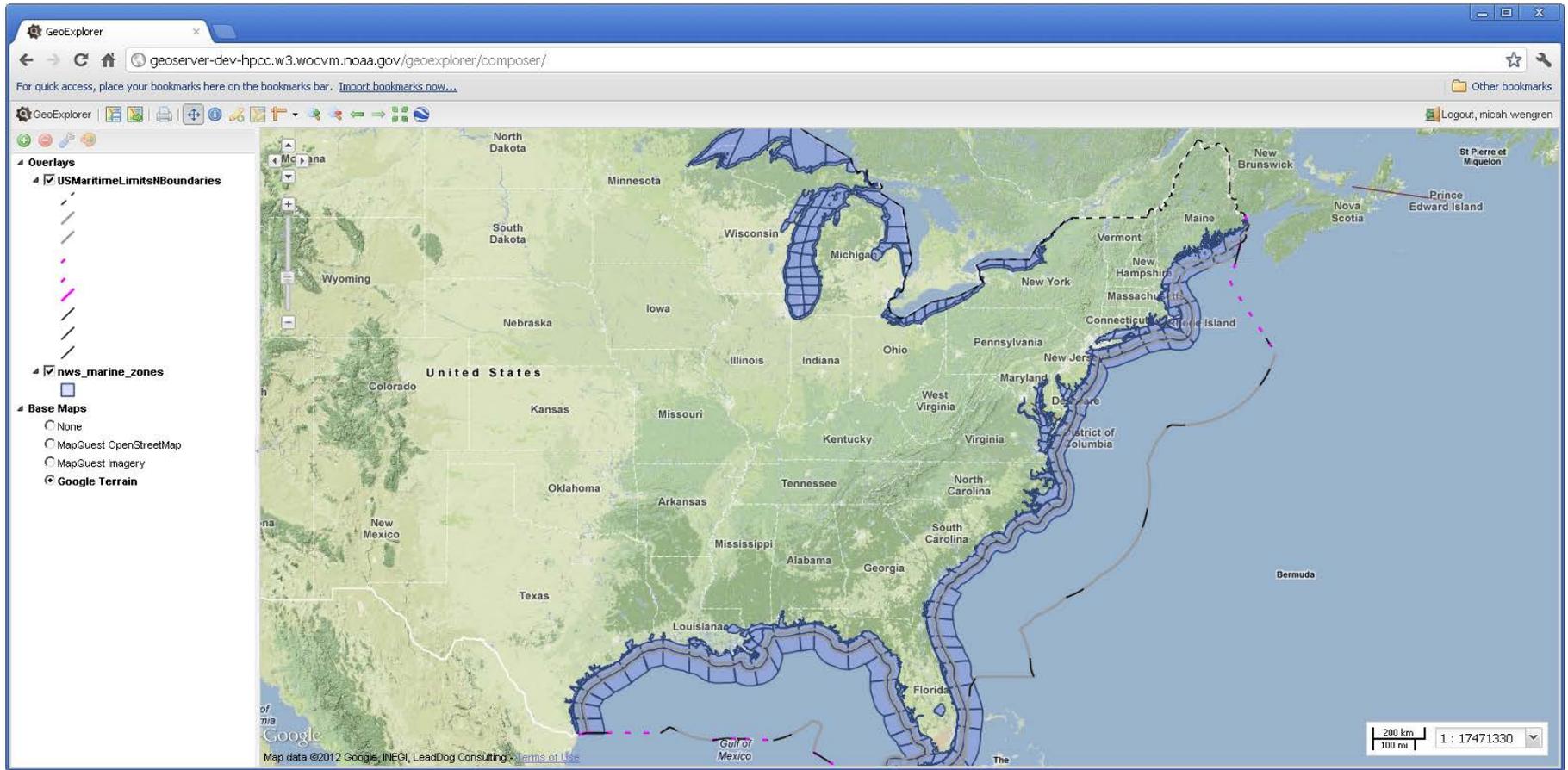
NWS Advanced Hydrological Prediction Service (AHPS) River Stage Forecasts



NGS Continuously Updated Shoreline Product (CUSP) (LIDAR-derived shoreline)



NOAA Cetacean Density and Distribution Mapping (grid cells of short-beaked common dolphin summer population density)



NWS Marine Forecast Zones

Office of Coast Survey Maritime Boundaries