GPL Meeting Minutes -- May 11, 2021

Attendees

Bob Harmon (WRD), Brady Callahan (OPRD), Daniel Stoelb (OEM), David Mather (GEO), Diana Walker (ODA), Don Pettit (DEQ), Emmor Nile (ODF), Laer Haider (DHS), Malavika Bishop (DEQ), Melanie Wadsworth (OSFM), Myrica McCune (INR), Paula Wills (OWEB), Phil McClellan (DOR), Phil Smith (ODOT), Rachel Smith (DLCD), Randy Sounhein (DSL), Rudy Watzig (DOGAMI), Tanya Haddad (DLCD), Thom York (DOR), Carl Swanson (ODF), Chauncey Smith (ODF), Dorothy Mortenson (OWRD), Jeff Kern (ODFW), Jacob Cruser ODA

Announcements

- The PrepFIT GIS After Action Report Meeting will be on Thursday, May 13, 2021 10:00 AM.

DAS-GEO Report -- Cy Smith/David Mather

- Continued work with the Elections office on a Geo Enabled elections project focusing on Geocoding.
- Continued work pursuing amendments for 29 interagency agreements by Cy.
- Continued work on GIS Software inventories by Josh.
- DUE DATE – for FIT Grant proposals "Grants will be due at 5pm on July 9"

ODF GIS HISTORY REPORT– Emmor Nile

Keeping GIS data accessible for our customers is critical. The history of mapping in forestry runs back to 1914. Fire mapping has always been a key part of ODF. Computer mapping started in 1969. Digitizing was done as early as 1976 via a digitizing tablet, to a card, a card reader, and finally into the computer.

In 1981 ODF acquired COMARC Design Systems software. Number of vertices in this software were limited per polygon so mapping was crude.

In 1986 OWRD was using GIS as well. The Oregon Curser newsletter was published. GIS at the time focused heavily on digitizing.

In 1991 ArcView became available and put GIS on the radar of many agencies. By 1994 ODF had over 200 copies of ArcView 3 in its various offices. In 1995 Inkjet plotter acquisition improved mapping, over the crude pen plotters.

ODF data was in at least 13 coordinate systems in 1996. In 1996 Emmor spoke with John Snyder about a sensible coordinate system for Oregon. GPL agreed a new Oregon Lambert coordinate system. All GIS data statewide was put into this new coordinate system.

Today ODF has GIS coordinators every program and district, and over 300 GIS users.

In 1997 ODF created the Lightning Tracker application. This actually helped fire crews in the field put out fires immediately after strikes. In 1997 airborne "Laser Mapping" Lidar data was first acquired by ODF to map flooding. Also in 1997 Trailers were purchased to enable GIS for fire mapping. This program is still going strong in newly designed trailers.

In 1998 an ODF employee, Mike DeLaune developed XTools for ArcView. It became an extremely popular extension to ArcView. In 1999 ArcGIS was adopted. In 2002, web based applications were begun.

Today in 2021, ODF is taking advantage of ArcGIS Online Hub Sites.

Emmor stated that the most important change in GIS is contributions made by people rather than technology. Ready data access is critical. Complete Lidar coverage will be very important.

District Fire Protection Maps using ArcGIS Pro-Carl Swanson and Chauncey Smith
ODF Protection District maps require extensive work. There are 53 to cover the entire state.

ArcMap projects limit the ability to map District Maps. The John Day map requires 10 MXDs.

Thousands of individual pieces of annotation.

In 2018 ODF started transitioning to ArcPro with the Coos Protection District.   Many Layouts can be combined in a single Pro project, meaning changes affect all layouts.

Labeling engines are improved, so most labeling is done via auto label rules rather than annotation. This has saved a lot of work.

Using Pro ODF developed a unique style for all symbols and symbology. And set labels and other symbology to be scale dependent. "From these Protection District Map Standards we made a Style (.Stylx) in ArcGIS Pro- It stores all the text symbols for the labels, the points, the lines and the polygon fills. Once added to the project, the style symbology shows up in the symbology gallery just like in ArcMap."

Maps were exported to Vector Tile Packages and uploaded to AGOL. They respond very fast in AGOL and in Collector in the field. The files are very small due to the vector tile sizes.

Congratulations to Emmor – Malavika Bishop

There will be a going away party for Emmor – At Bush Park in Salem, on the corner of High St. and Laffelle St SE, on Friday May 28th at 4 pm.

Dense Image Matching (DIM), aka Phodar – Brady Callahan
Phodar (Photogrammetric detection and ranging) has also been called Structure From Motion, and Semi Global Mapping.

Parks used 2018 Imagery to produce a DSM Digital Surface Model. Phodar cannot and does not penetrate to the ground. The photo gives only "highest hit."

In the Parks study area, DIM is very comparable to Lidar. And gives much more detail than USGS 10m DEM. Brady was able to process about half the state in about 4 weeks. The data have been published on the OPRD ArcGIS Server as REST Services.

TIN artifacts, seamline issues, holes, shadow and poor detail for non-homogeneous areas were some of the problems encountered.

An accuracy check shows the DIM results not too far removed from standard Lidar.

DIM may be a good interim replacement for elevation until Lidar can be acquired for the entire state. The DIM data from the vendor for state data only cost $50,000.   So DIM is a low cost interim solution for areas that do not have Lidar. The DIM point cloud that came from the vendor is about 20 TB.

Roundtable AGENCY REPORTS:

ODA–Diana Walker

- Japanese beetle spray is still using Collector
- International shipping of plant seeds will use field apps

ODA-Jacob Cruser

- We are using the new ArcGIS Field Maps App for water quality monitoring projects, and we have been liking it.
- An addition I did not mention is there was a bug keeping attribute edits from being submitted if geometry editing was turned off in ArcGIS Field Maps. That is gone now, fixed in the last ESRI update.

INR-Myrica McCune

- No update

OWEB-Paula Wills

- No update

DLCD-Tanya Haddad

- New Aquaculture app will soon be available.

OWRD-Bob Harmon

- Busy processing drought permits for emergency use of water in those counties where a drought declaration has been issued and approved by the Governor.
- Updating dam safety inspection form, maintained in Survey 123
- Trying to get ArcGIS Enterprise running. Need to reinstall after the first attempt.

OEM-Daniel Stoelb

- Ongoing efforts with PrepFIT (GIS after action) as well as other statewide initiatives for emergency preparedness and response
- Continued work with the [damage assessment project](#) utilizing QuickCapture and Survey123 to have a statewide template used to gather damage assessment data consistently for home and business impacts
- Continued coordination and work with state recovery function partners as a part of the ongoing wildfire recovery (organization of content for our state recovery functions)
- Production of the state of the state capability assessment – taking the output of data from local/tribal partners to show degrees of preparedness statewide
- Meeting later today with state wireless interoperability coordinator and others on the OR-Alert project (statewide everbridge system) and integration of GIS into that solution
- Efforts preparing for the Cascadia Rising 22 exercise
- Preparing for fire season starting soon

ODFW-Jeff Kern

- Working getting better equipment in the hands of GIS field staff.

DOR-Thom York

- Working on a statewide taxing districts layer. Things are going well. Over 1300 individual districts. Districts have been combined across county boundaries. Many district improvements.

OPRD–Brady Callahan

- Project with USFS on potential for shared recreation stewardship
- Dense Image Matching from statewide imagery
- Archaeological sensitivity model for the Oregon Coast Trail
- Moving from Collector to ArcGIS Field Maps

ODOT-Phil Smith

- Many agency leadership and technology changes. Updating data governance procedures to meet these changes.

OHA-Laer Haider

- No update

DSL-Randall Sounhein

- Looking at rearranging data structure.
- Busy maintaining test and prod versions of Enterprise. Takes a lot time.
- Updating lots of web maps.
- Switching to ArcGIS Field Maps from Collector

DEQ-Malavika Bishop

- The new DEQ online system (Your DEQ Online) is up and running. It has two programs Greenhouse Gases and Gasoline Tanker Program. More programs will be added in the coming months.

- Replacement for Brian Fulfrost is a new drinking water GIS Person was hired

DEQ-Don Petit

- Wrapping up wildfire work, now starting to work on oil spills. Crisis de jour is an abandoned vessel in the Columbia River, and another vessel recently ran around.