Evolving Workflows of a Modern GIS

Oregon Department of Forestry

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Photo: Pacific Crest National Scenic Trail. Bob Wick, BLM. Flickr.

Photo: Oregon Forest, Brenda Dobbs. Flickr.

Evolving Workflows of a Modern GIS

- Background
  - Centralized Data and Workspace
- ArcGIS Enterprise
  - GeoEvent Server
  - Image Server \ Raster Functions
- ArcGIS Online
  - National Interagency Fire Center Collaboration
  - ODF Hub
- Goals and Challenges

Oregon Dept of Forestry

To serve the people of Oregon by protecting, managing, and promoting stewardship of Oregon's forests to enhance environmental, economic, and community sustainability.

Forest Resources

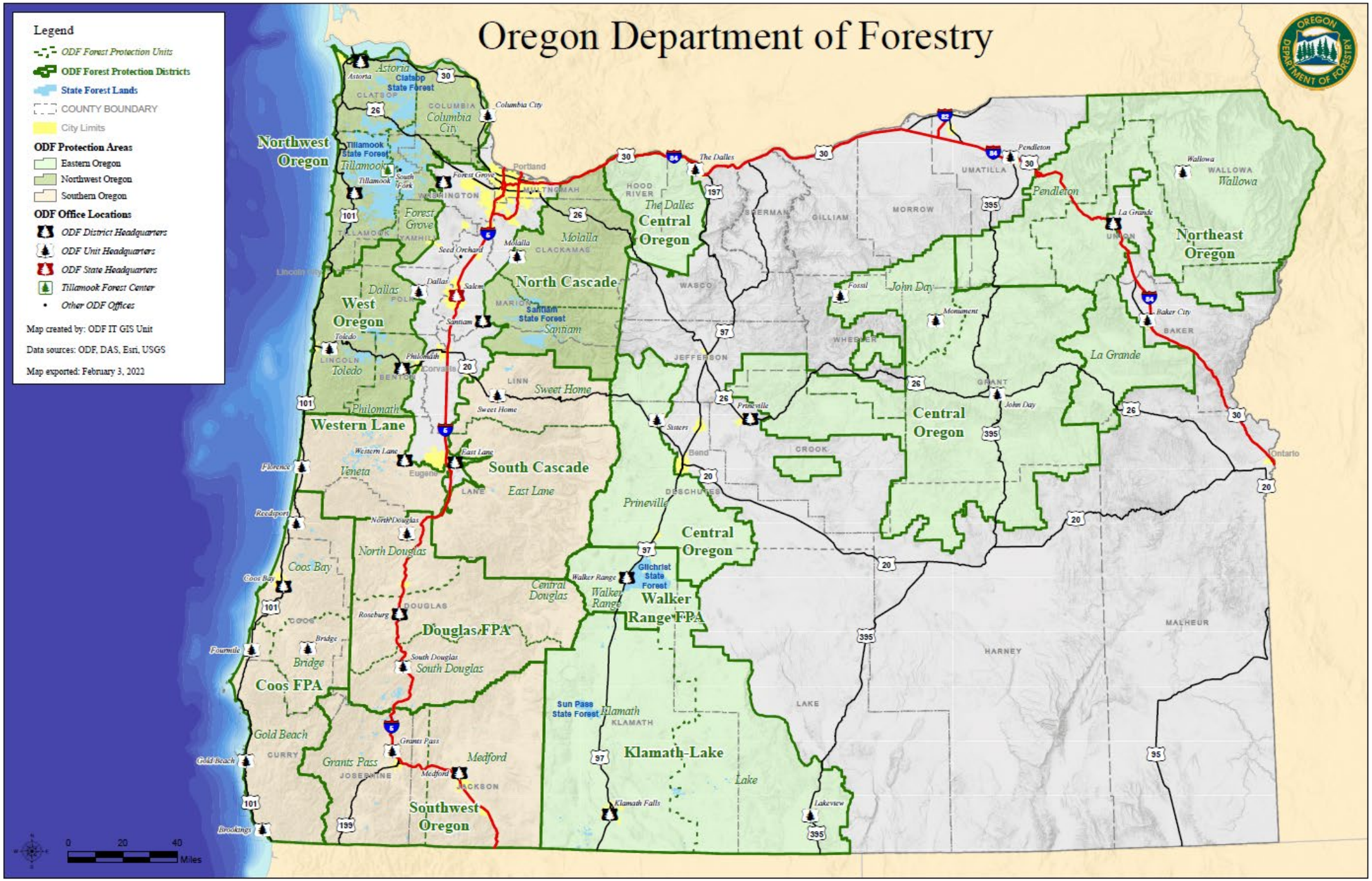
Protection from Fire

State Forests Management

Partnership and Planning

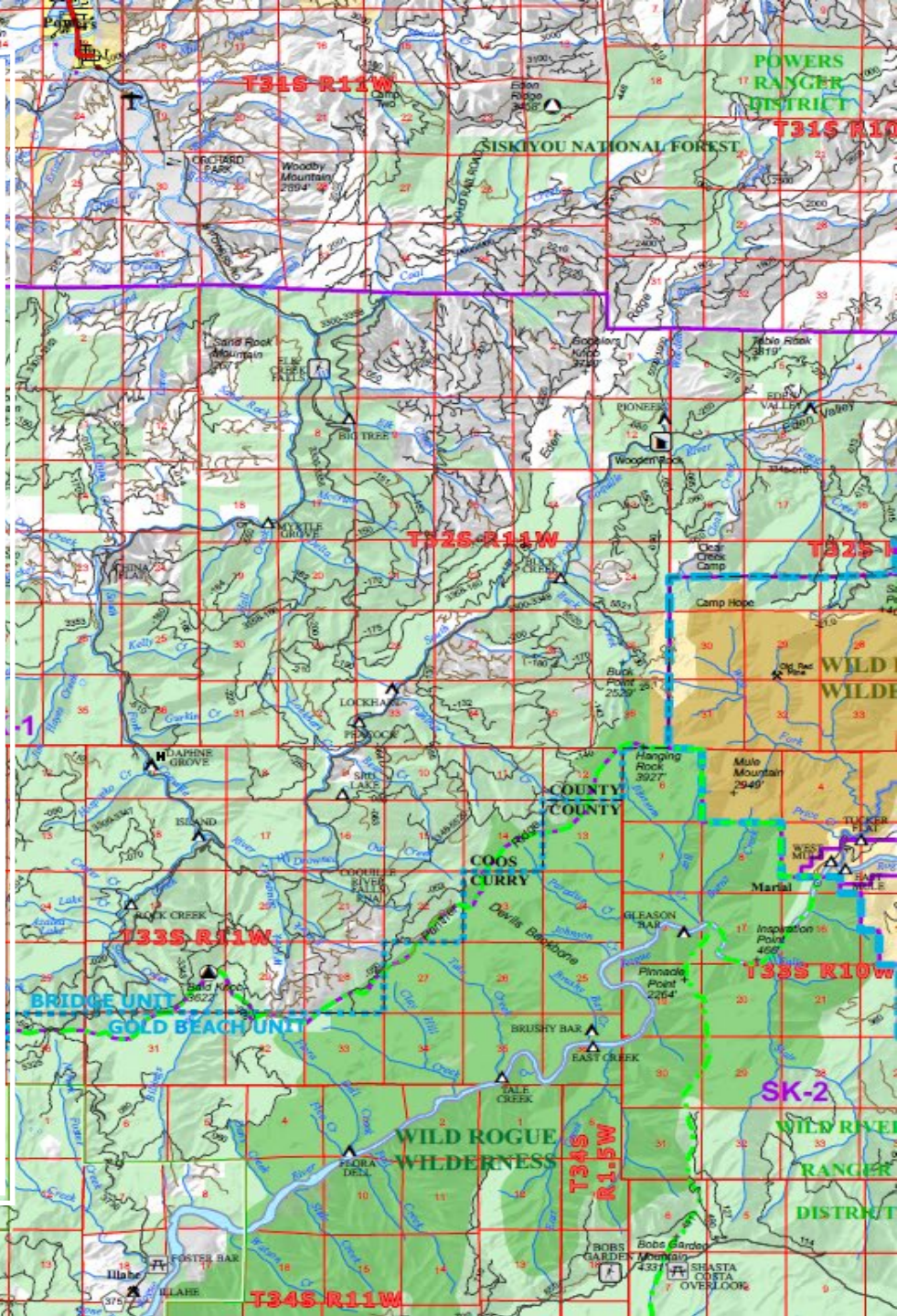
Urban and Community Forestry

Administrative Services

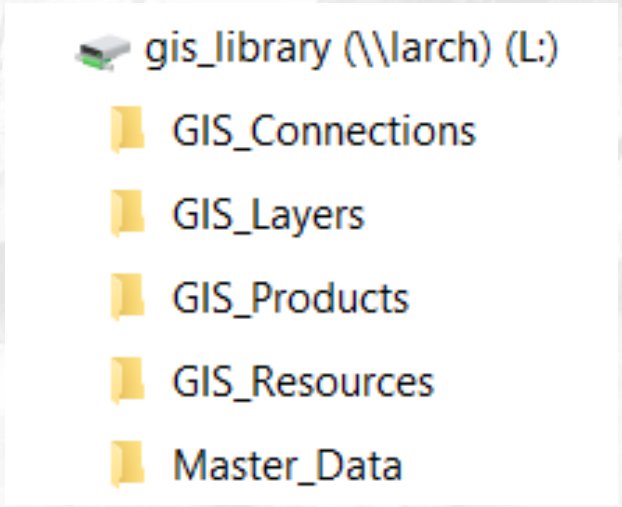

Oregon Department of Forestry
Legend
ODF Forest Protection Units
ODF Forest Protection Districts
State Forest Lands
COUNTY BOUNDARY
City Limits
ODF Protection Areas
Eastern Oregon
Northwest Oregon
Southern Oregon
ODF Office Locations
ODF District Headquarters
ODF Unit Headquarters
ODF State Headquarters
Tillamook Forest Center
Other ODF Offices
Map created by: ODF IT GIS Unit
Data sources: ODF, DAS, Esri, USGS
Map exported: February 3, 2022
Northwest Oregon
West Oregon
Western Lane
North Cascade
South Cascade
Central Oregon
Northeast Oregon
Central Oregon
Central Oregon
Central Oregon
Douglas FPA
Coos FPA
Southwest Oregon
Walker Range FPA
Klamath-Lake
Astoria
Clatsop State Forest
Columbia City
Tillamook State Forest
Tillamook
Forest Grove
Molalla
Dallas
Salem
Santiam State Forest
Santiam
Toledo
Philomath
Corvallis
Sweet Home
Western Lane
Veneta
Florence
Eugene
East Lane
Reedsport
North Douglas
Coos Bay
Roseburg
Bridge
Fourmile
South Douglas
Gold Beach
Grants Pass
Medford
Brookings
Portland
The Dalles
Hood River
Pendleton
Umatilla
Wallowa
La Grande
Baker City
Ontario
Fossil
John Day
Monument
Prineville
Sisters
Bend
Crook
Deschutes
Jefferson
Wasco
Sherman
Gilliam
Morrow
Wheeler
Grant
Baker
Union
Wallowa
Malheur
Harney
Lake
Klamath
Lakeview
Klamath Falls
Walker Range
Glichrist State Forest
Sun Pass State Forest
Multnomah
Washington
Clackamas
Marion
Polk
Yamhill
Tillamook
Lincoln
Benton
Linn
Lane
Douglas
Coos
Curry
Josephine
Jackson
Klamath
0 20 40
Miles

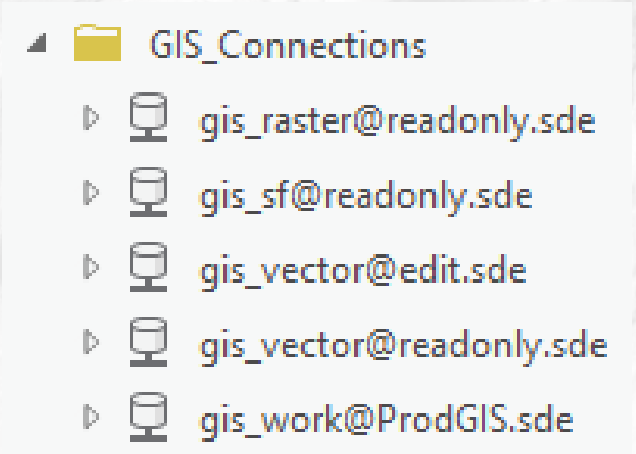
ODF GIS Personnel

- GIS Unit: Manager, Data Administrator, GIS Coordinator, 2 GIS Specialists
- GIS Coordinators: Program coordinators, Field coordinators
- GIS Power Users: Analysts, District contacts
- GIS Users: ~300 licensed users
- Stakeholders: Inter-agency, partners, public, many people and organizations



GIS Library


gis_library (\\larch) (L:)
GIS_Connections
GIS_Layers
GIS_Products
GIS_Resources
Master_Data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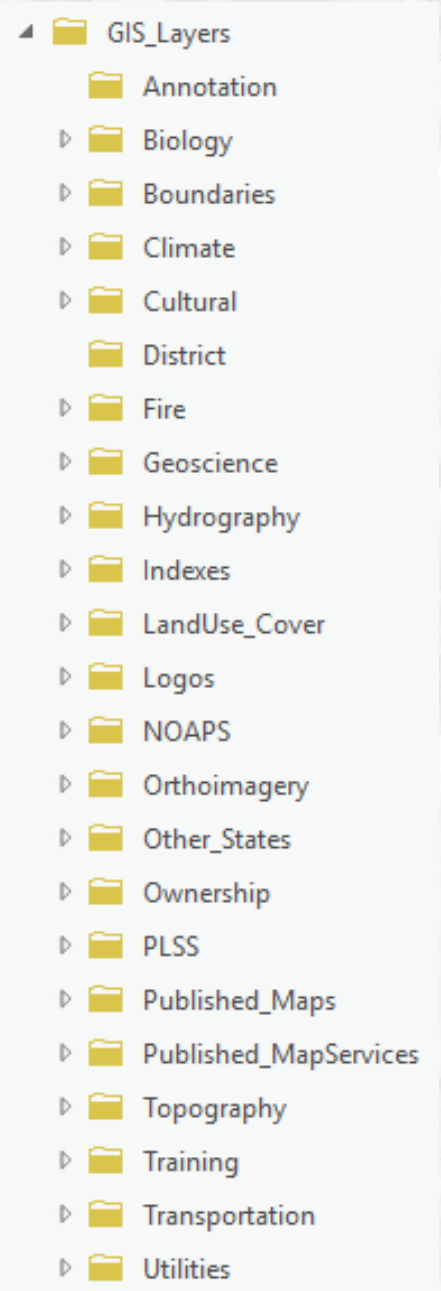
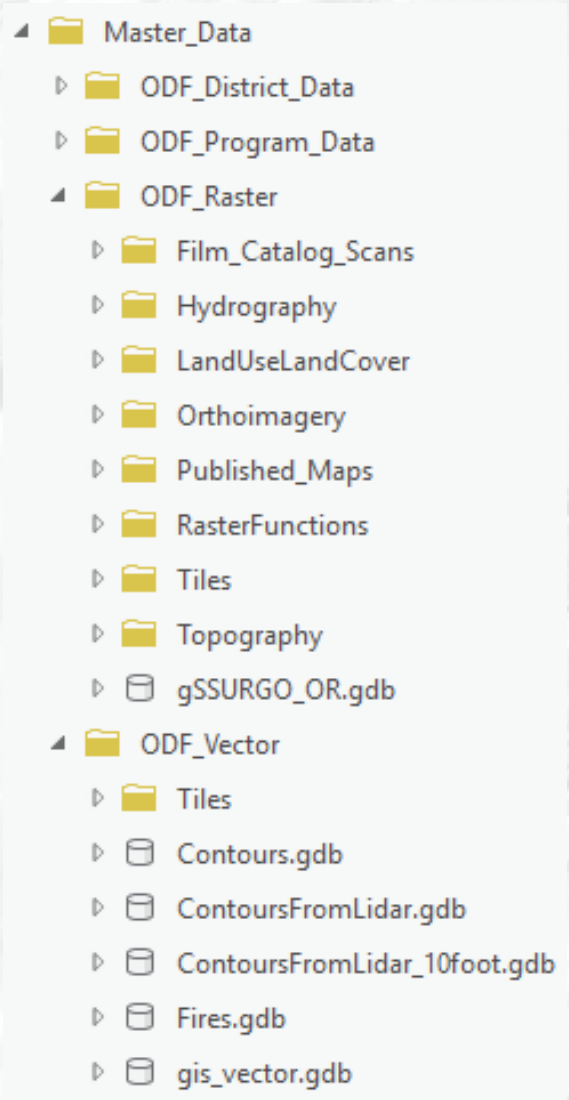
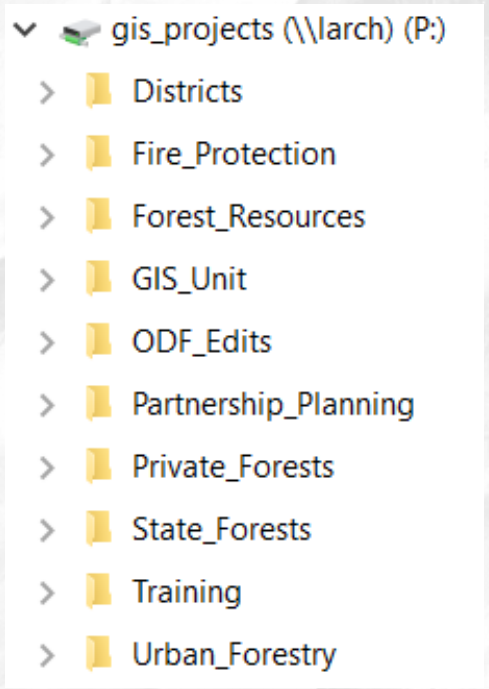
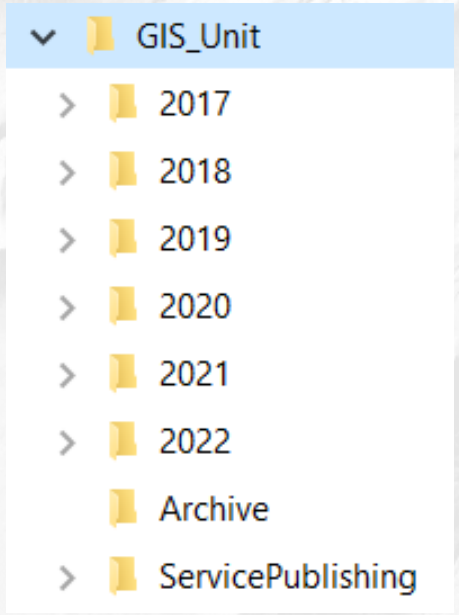
gis_sf@readonly.sde
gis_vector@edit.sde
gis_vector@readonly.sde
gis_work@ProdGIS.sde

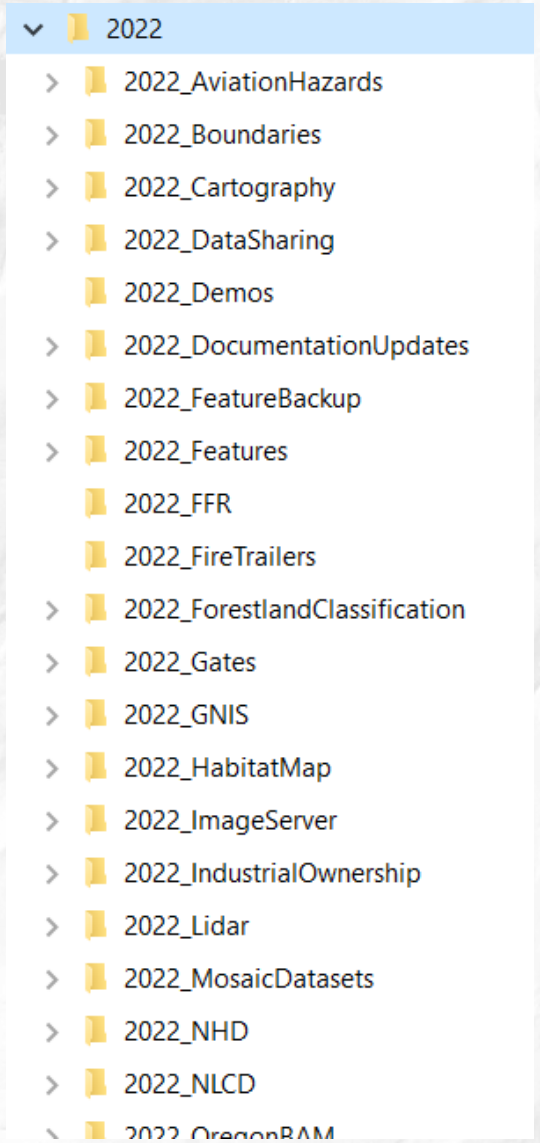

GIS_Layers
Annotation
Biology
Boundaries
Climate
Cultural
District
Fire
Geoscience
Hydrography
Indexes
LandUse_Cover
Logos
NOAPS
Orthoimagery
Other_States
Ownership
PLSS
Published_Maps
Published_MapServices
Topography
Training
Transportation
Utilities

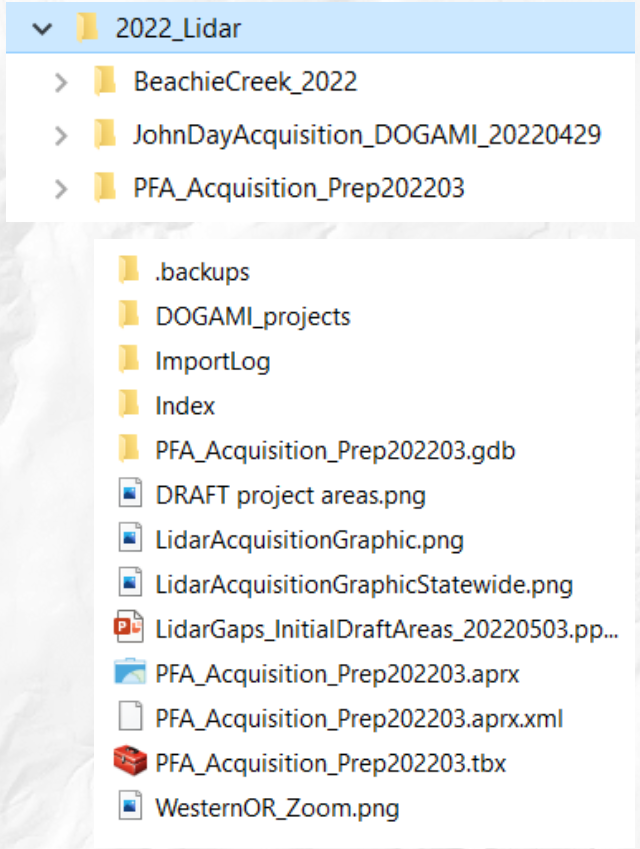

Master_Data
ODF_District_Data
ODF_Program_Data
ODF_Raster
Film_Catalog_Scans
Hydrography
LandUseLandCover
Orthoimagery
Published_Maps
RasterFunctions
Tiles
Topography
gSSURGO_OR.gdb
ODF_Vector
Tiles
Contours.gdb
ContoursFromLidar.gdb
ContoursFromLidar_10foot.gdb
Fires.gdb
gis_vector.gdb

GIS Projects

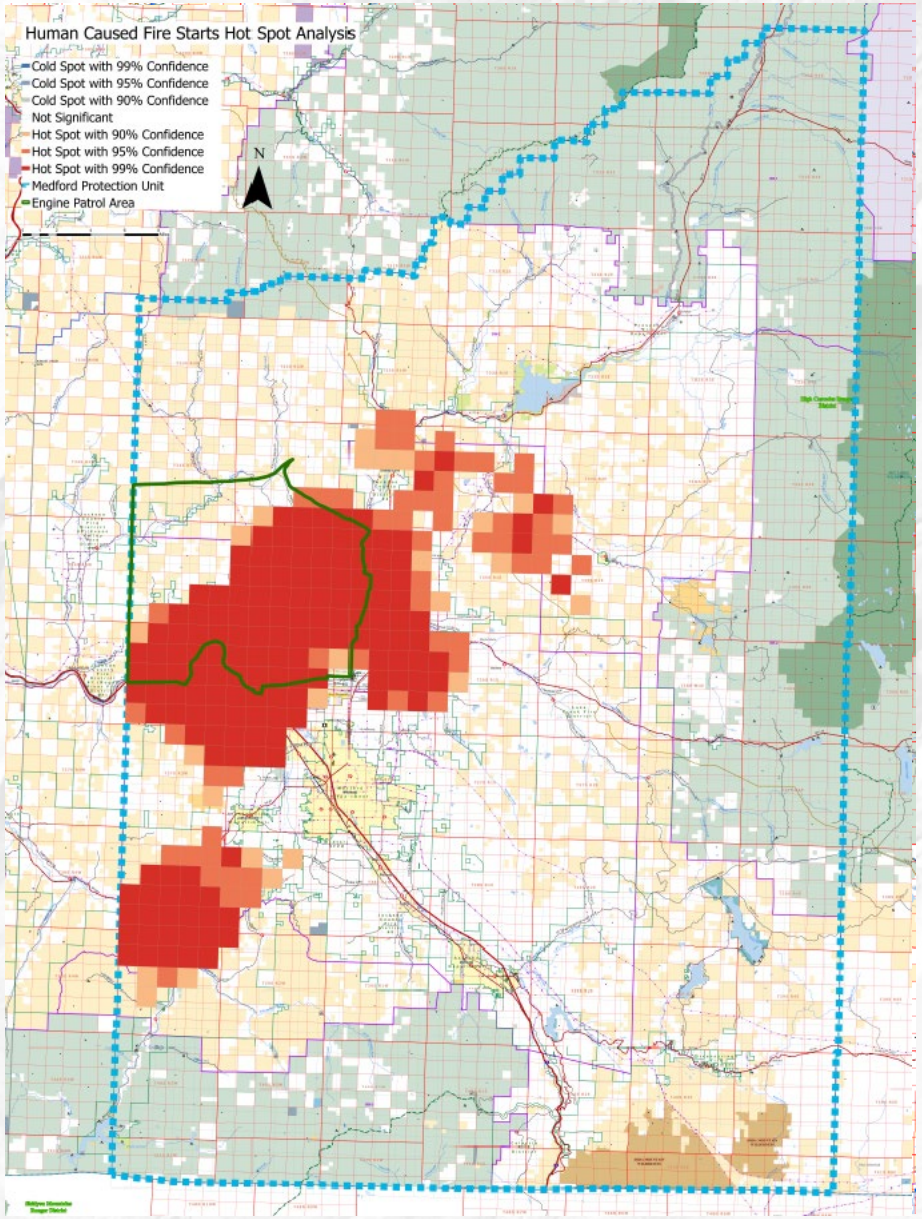


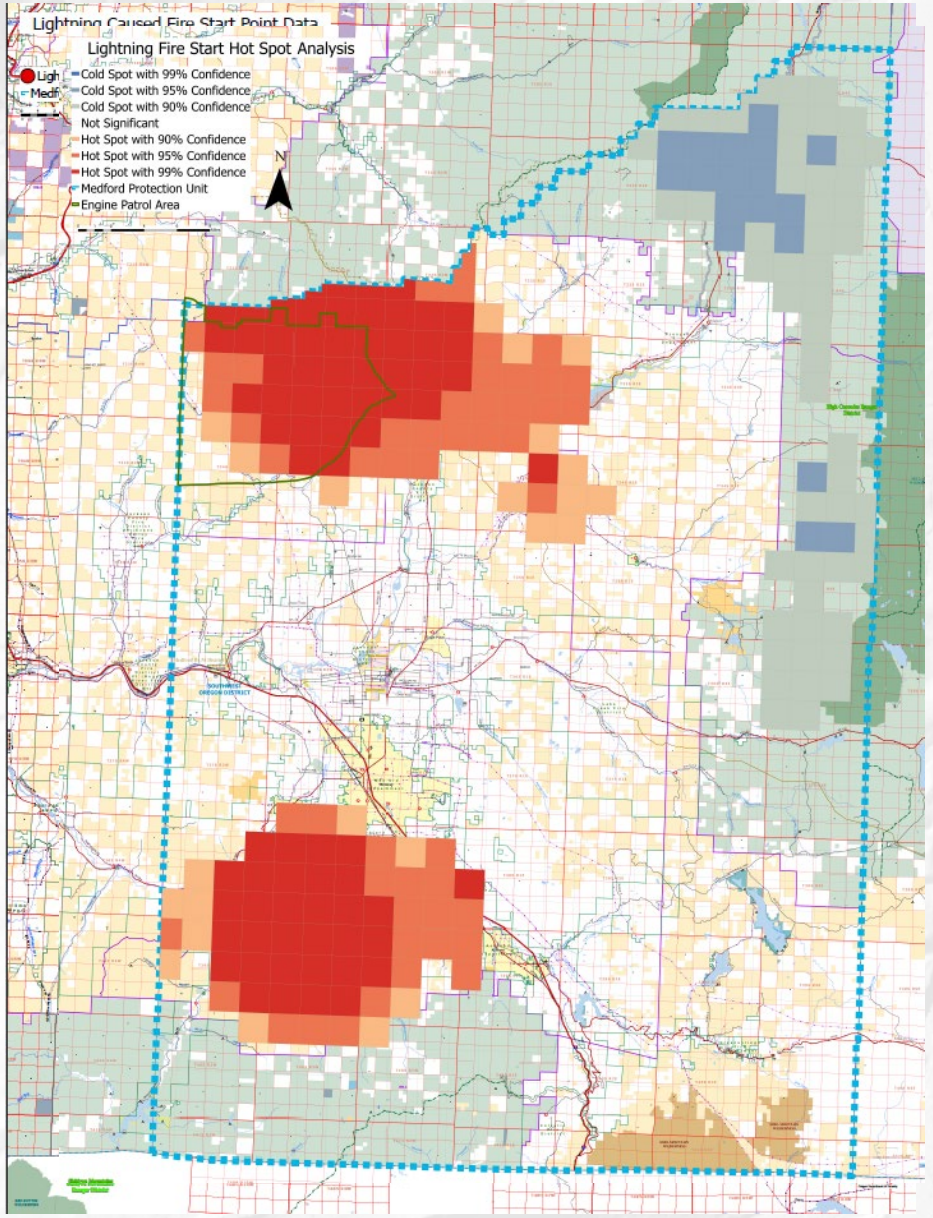






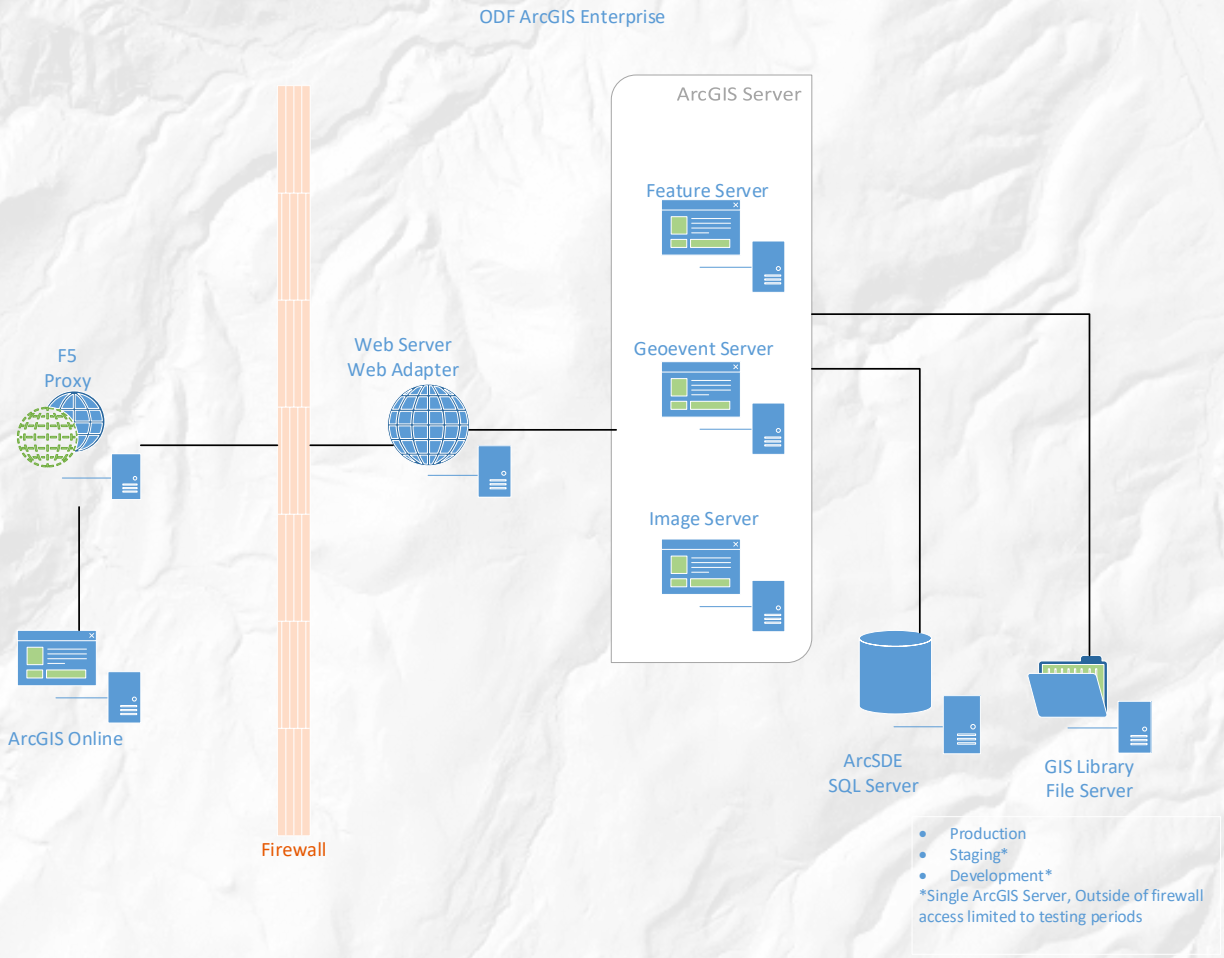
Fire Start Points (Human Caused and Lightning): 2017 – 2021





ArcGIS Enterprise

- ArcGIS Server
  - Feature Server
  - GeoEvent Server Role
  - Image Server Role
- File Server
- SQL Server
- ArcGIS Online



Geoevent Server Role Workflows

- Lightning
  - Geoevents
  - Web
  - Mobile
- Vandalism
  - Geoevents
  - Web
  - Mobile

ODF

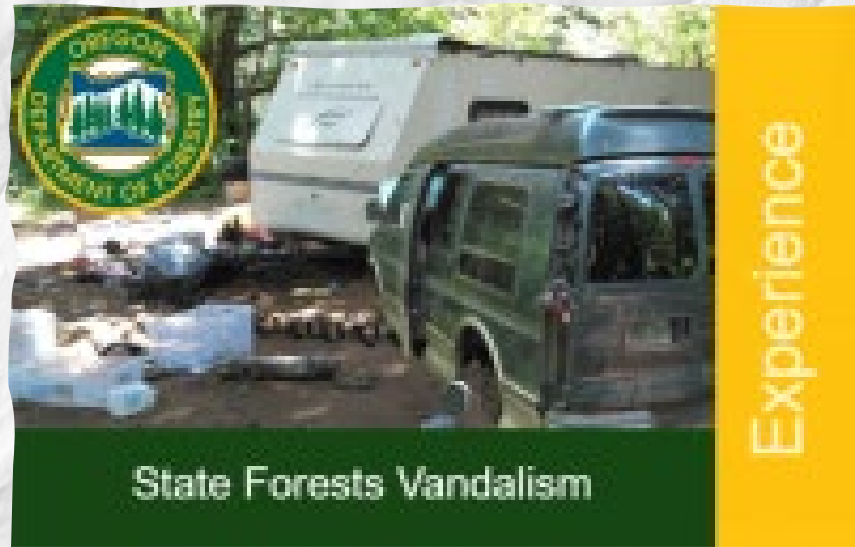
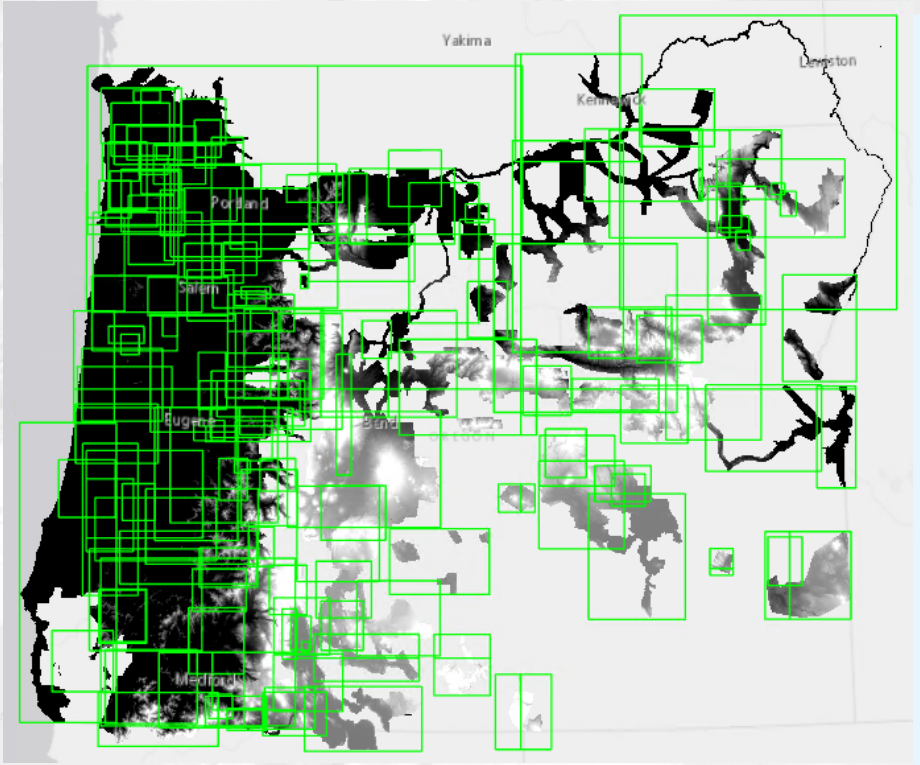
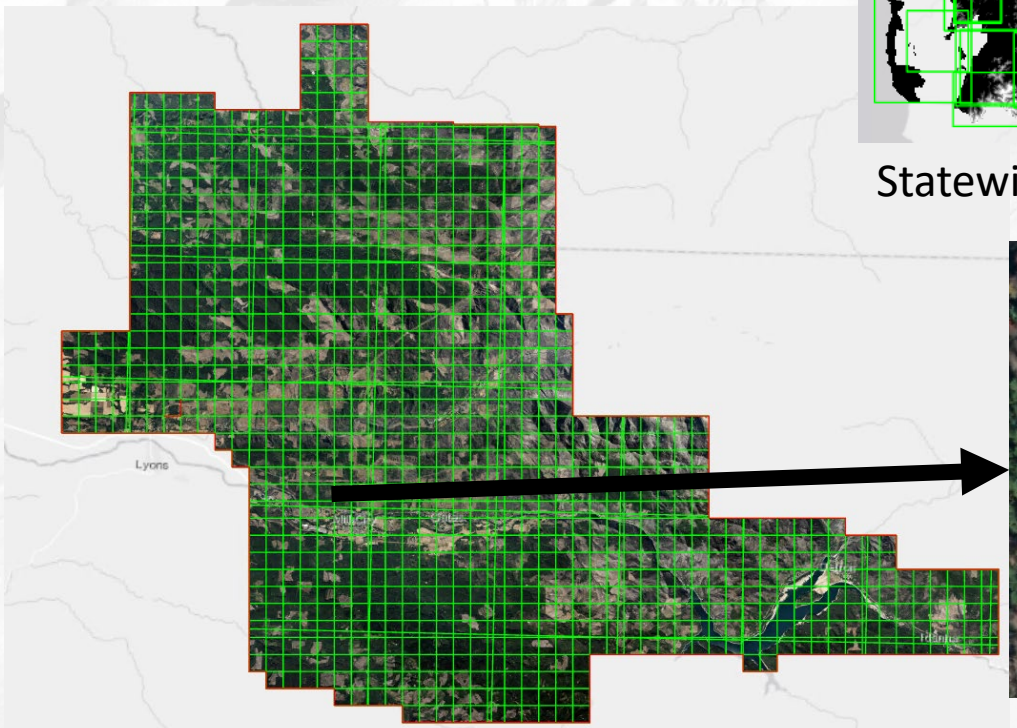


Image Server

- Mosaic Datasets
- Raster Functions



Statewide Lidar 1m DEM Mosaic Dataset

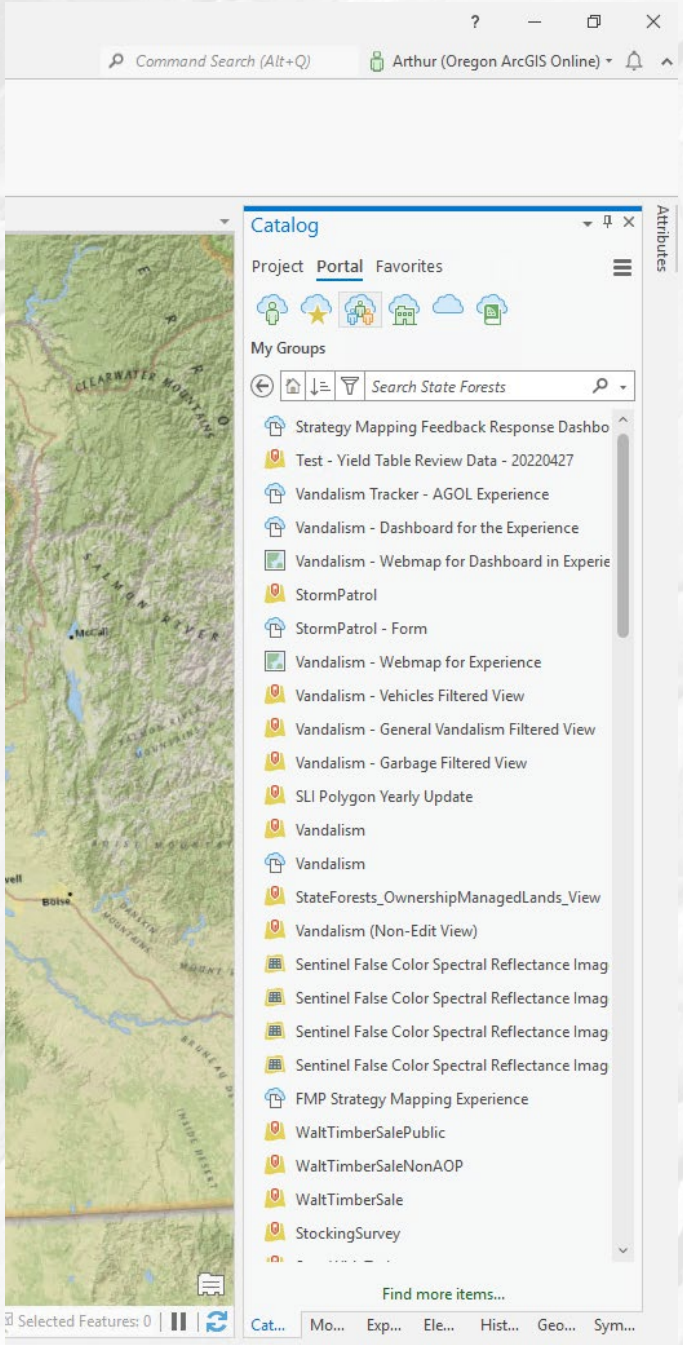


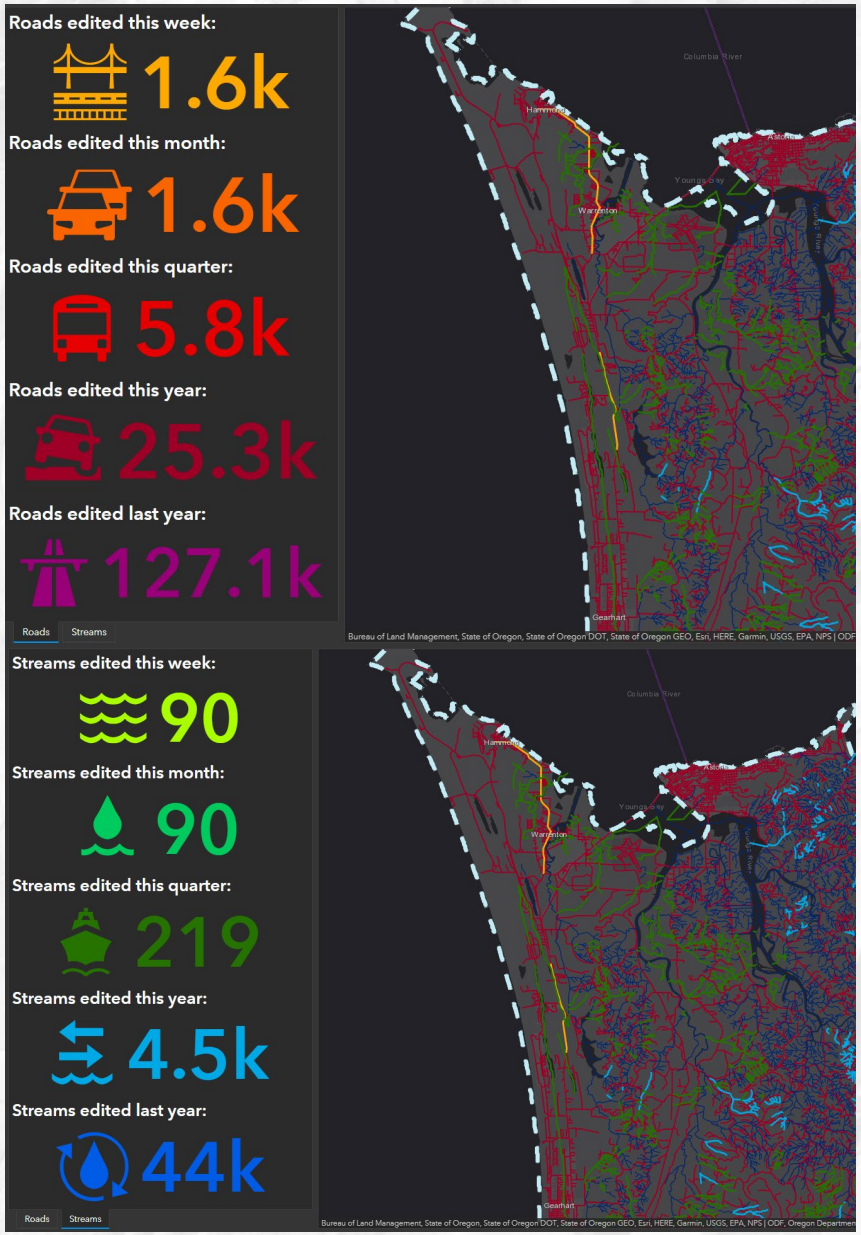
Beachie Creek Post Fire, High-res Imagery Mosaic Dataset

Sudden Oak Death Imagery

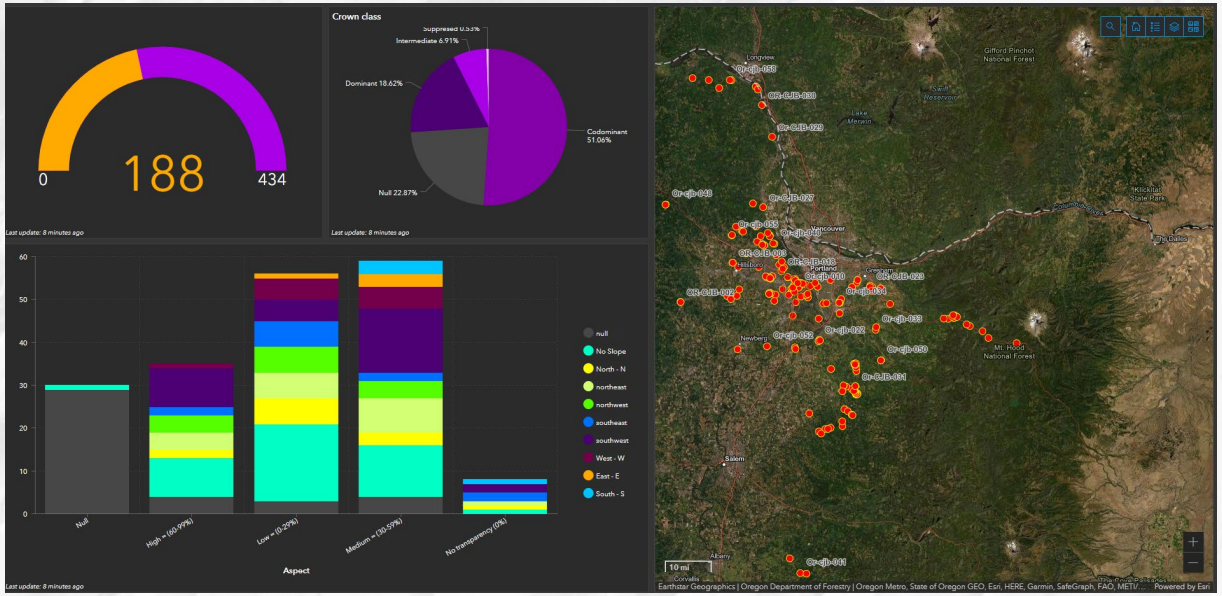
ArcGIS Online

- Content
  - Includes hosted and registered services
  - Services, Web Maps, Applications
  - Branding
- Groups
  - Agency → Program → Project
  - Collaborative decisions
  - Authoritative accounts
- Users
  - Publishers
  - Users
  - Viewers

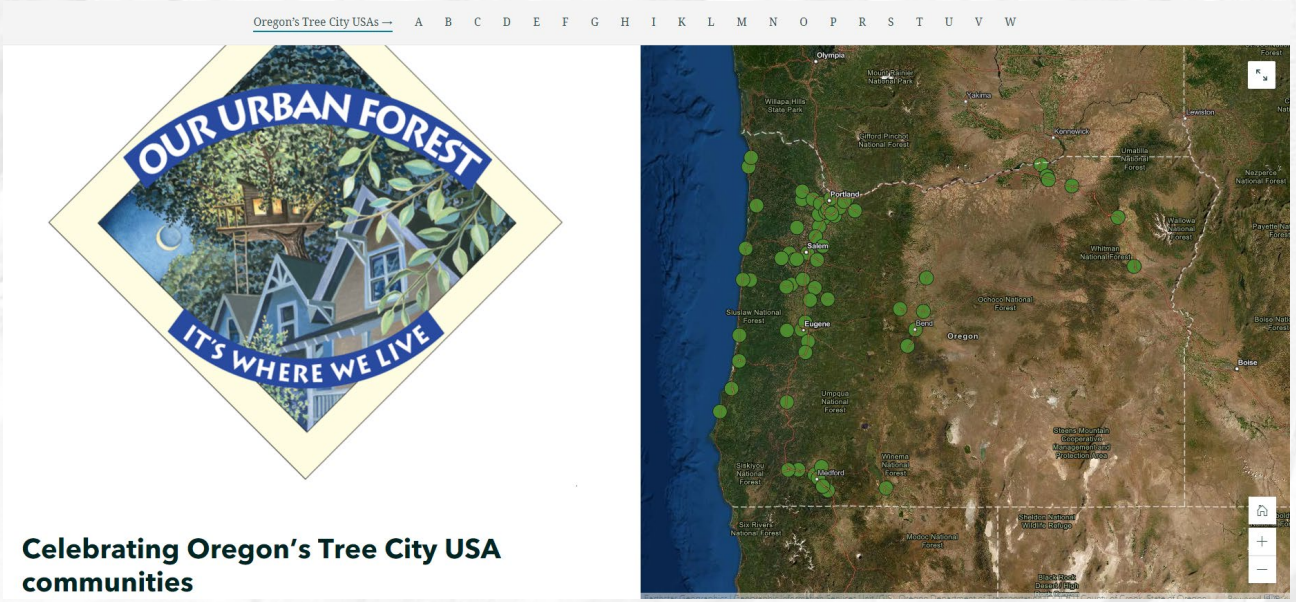




Edit Tracking Dashboards

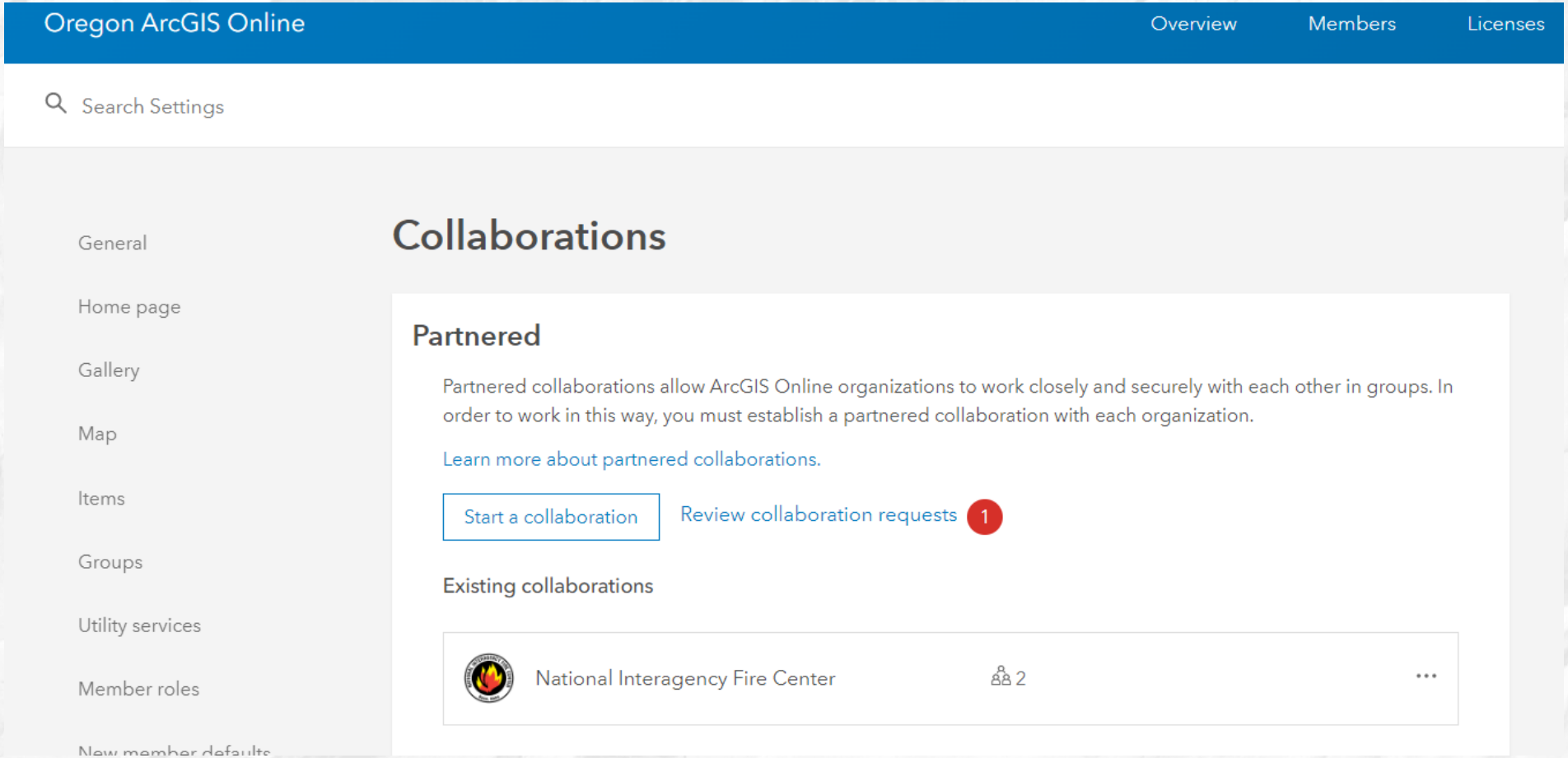


Western Redcedar Dieback Dashboard

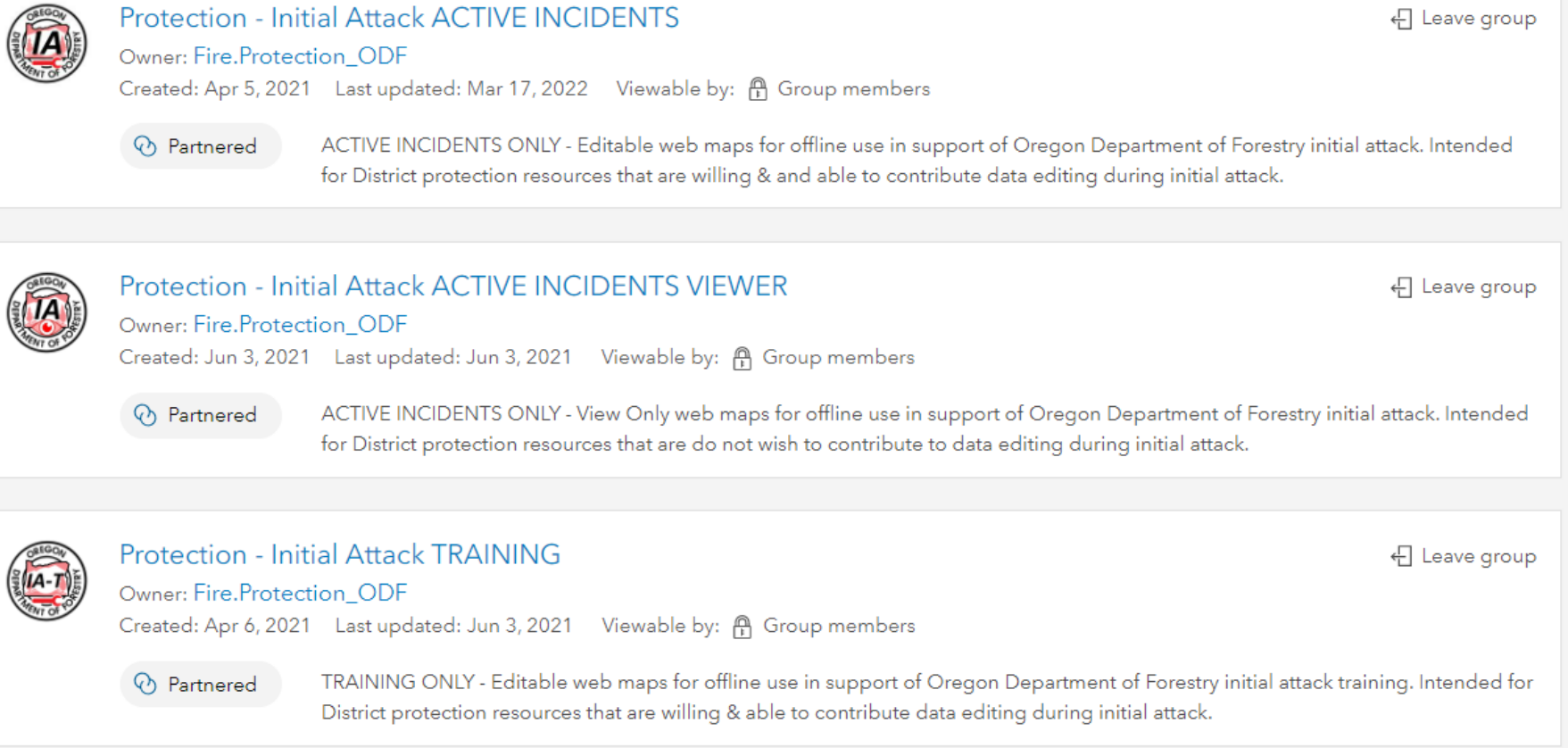


Oregon's Tree City USA Communities Story Map

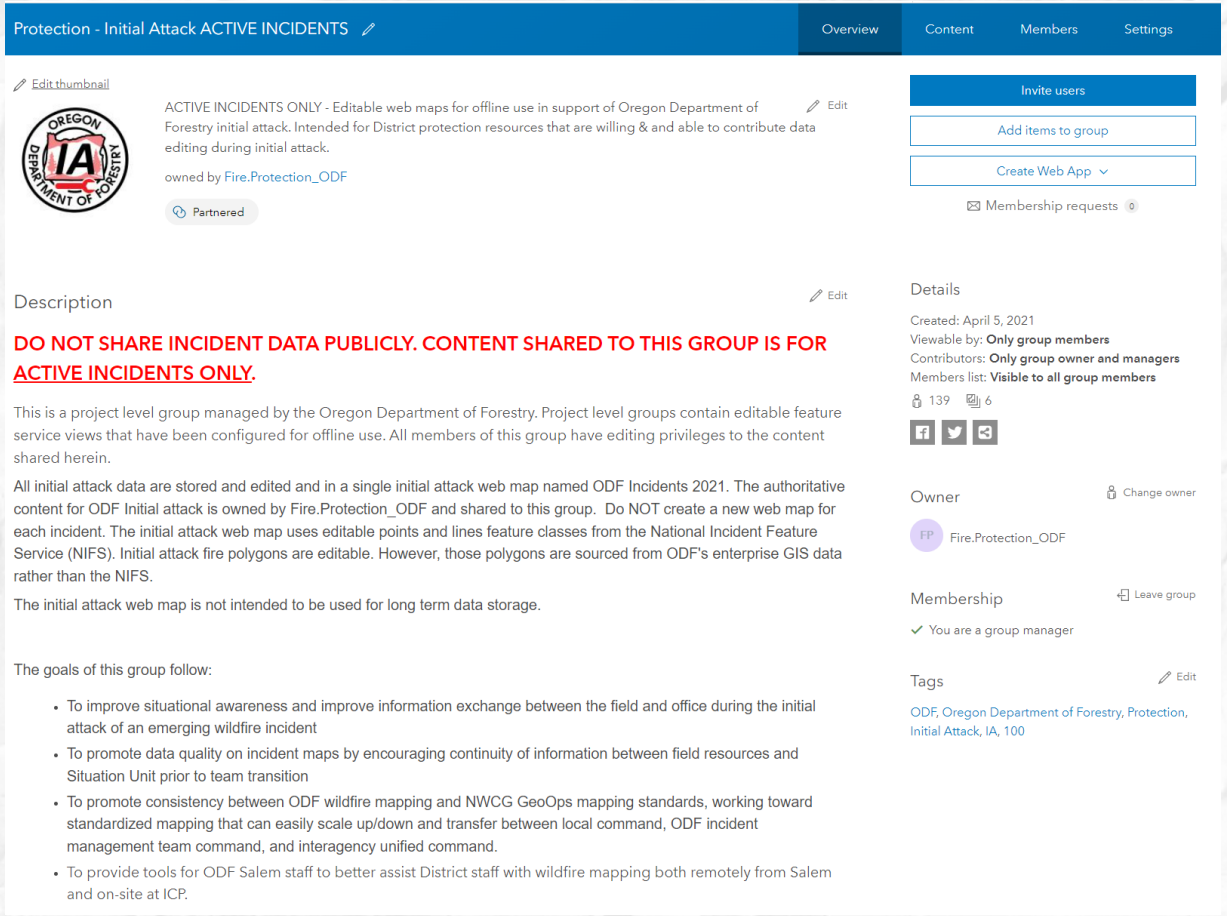
NIFC ArcGIS Online Collaboration



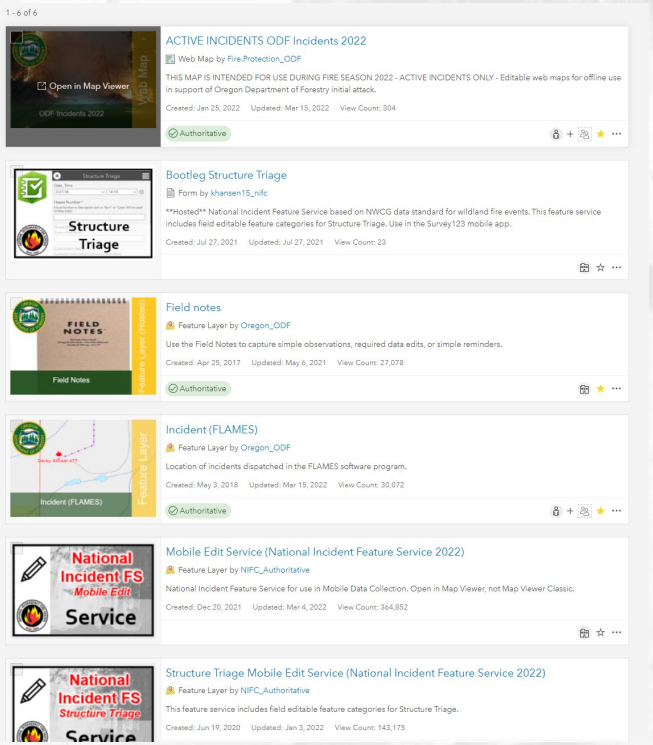
NIFC ArcGIS Online Collaboration

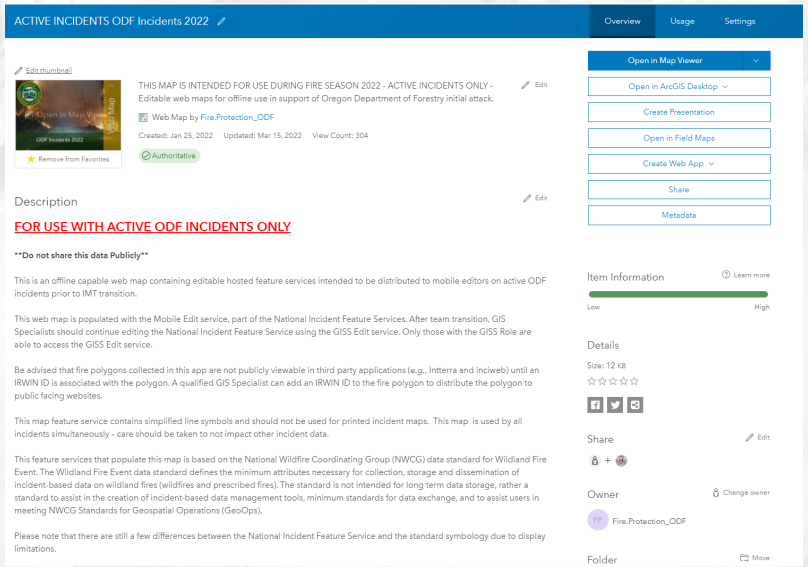


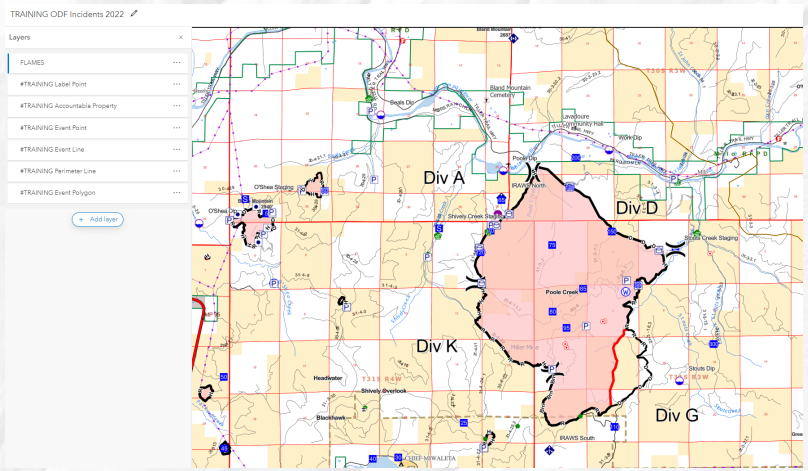
NIFC ArcGIS Online Collaboration



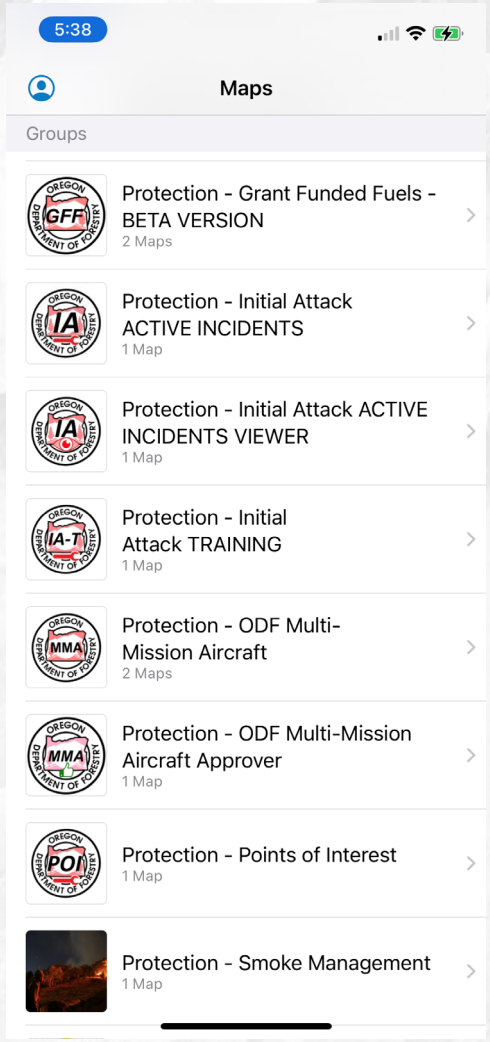
NIFC ArcGIS Online Collaboration

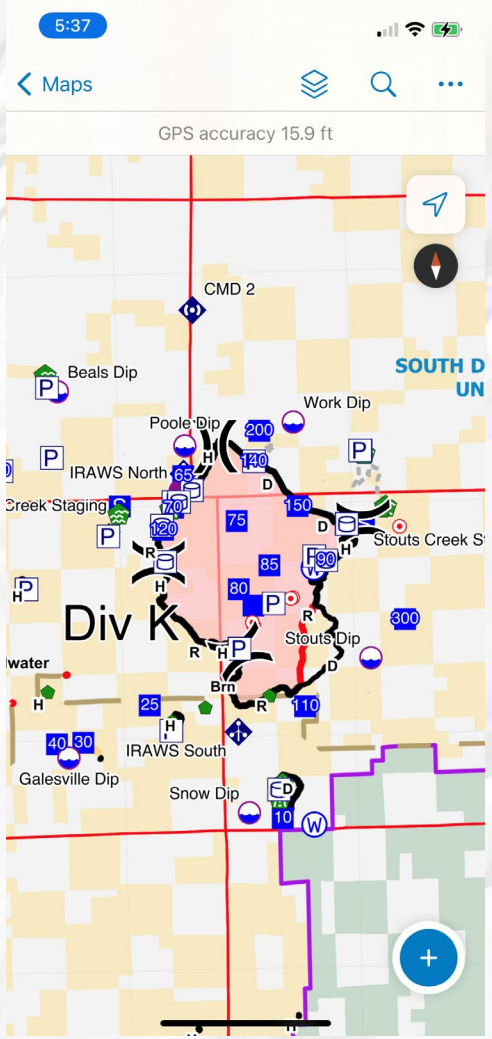




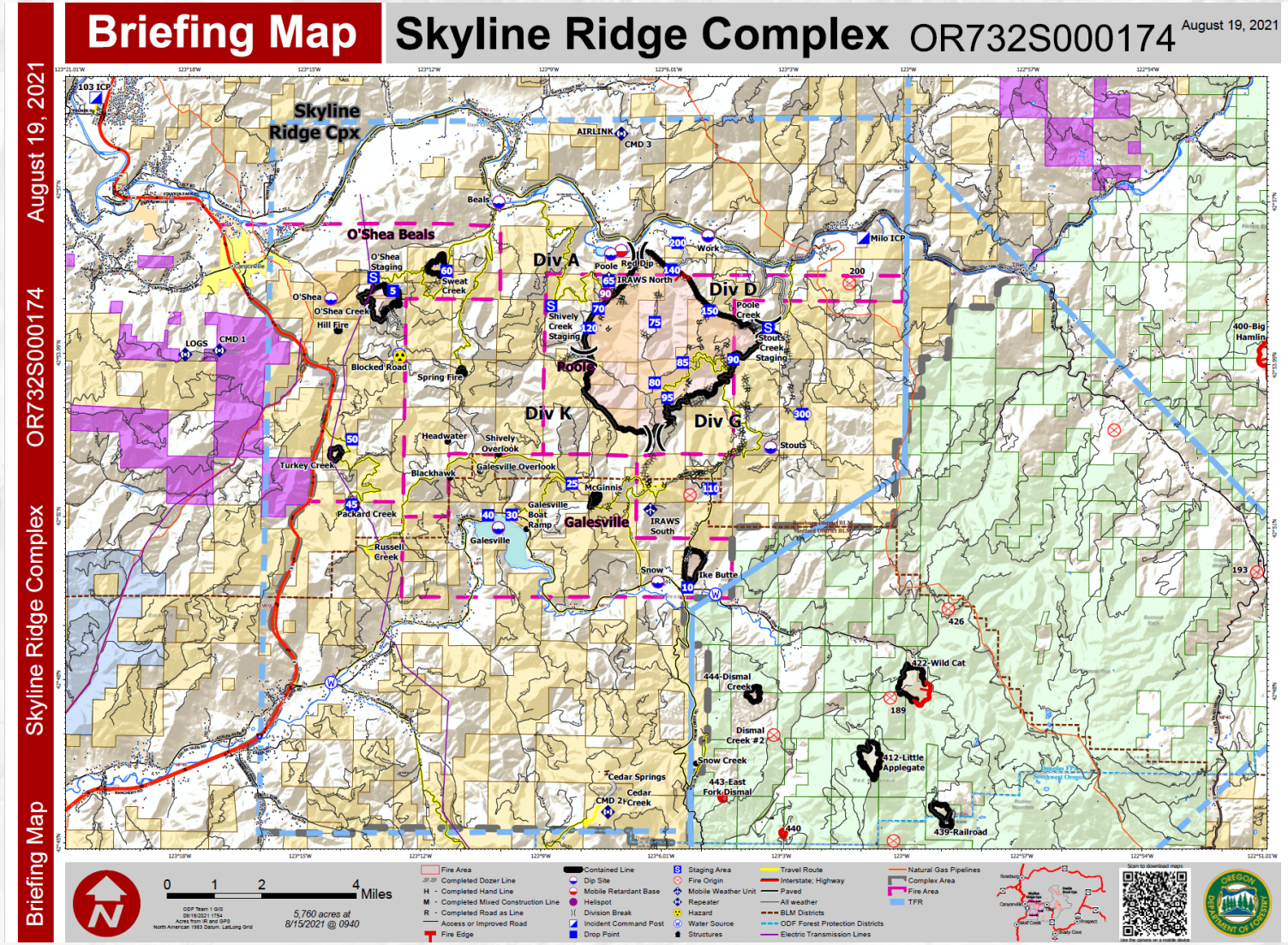


NIFC ArcGIS Online Collaboration





NIFC ArcGIS Online Collaboration



ODF Hub

- ODF Hub

Goals and Challenges

- Implementing new technology while maintaining existing systems
- Maintaining clear documentation and streamlined workflows
- Dynamically respond to requests and reduce duplication of efforts
- Working towards ODF Portal

Photo: Sun through trees at Table Rock Wilderness, BLM. Flickr.

Thank you….

- GIS Unit:

  Brent Grimsrud, Carl Swanson, Chauncey Smith
- Brian Locke, ODF GIS Application Developer
- Blake McKinley, State Forests GIS Coordinator
- Chloe Lindgren, Southwestern Oregon GIS Coordinator

Photo: Sun through trees at Table Rock Wilderness, BLM. Flickr.