DIGITAL MAPPING TECHNIQUES 2014

The following was presented at DMT'14
(June 1-4, 2014 - Delaware Geological Survey,
Newark, DE)

The contents of this document are provisional

See Presentations and Proceedings
from the DMT Meetings (1997-2014)

http://ngmdb.usgs.gov/info/dmt/

USGS
science for a changing world

National Geospatial Program Office

The US Topo 2014

Program Updates and Research

National Geospatial Program Office

National Geospatial Technical Operations Center

Kristin Fishburn

June 2014

U.S. Department of the Interior
U.S. Geological Survey

Agenda

US Topo background, content, schedule

Future enhancements / ongoing research

Workflow

Change Detection

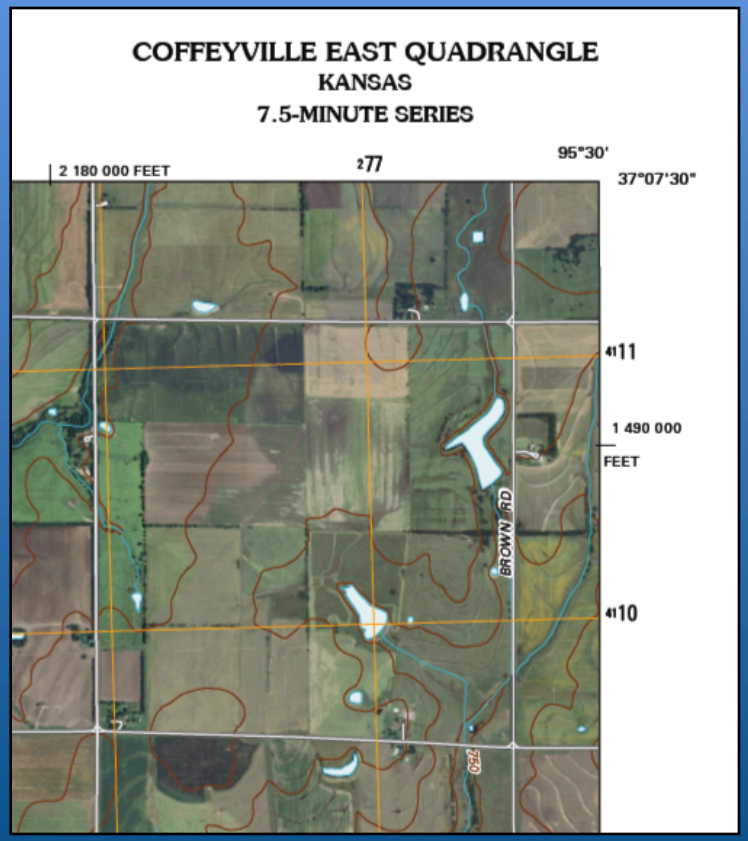
GIS Packets (map packets)

USGS

Background

Digital USGS Topographic Map Product

- Modeled on standard 7.5-min quads
- Layered GeoPDF®
- Orthoimage base
- Core feature layers
- 3-year production cycle
- Download free on the Web

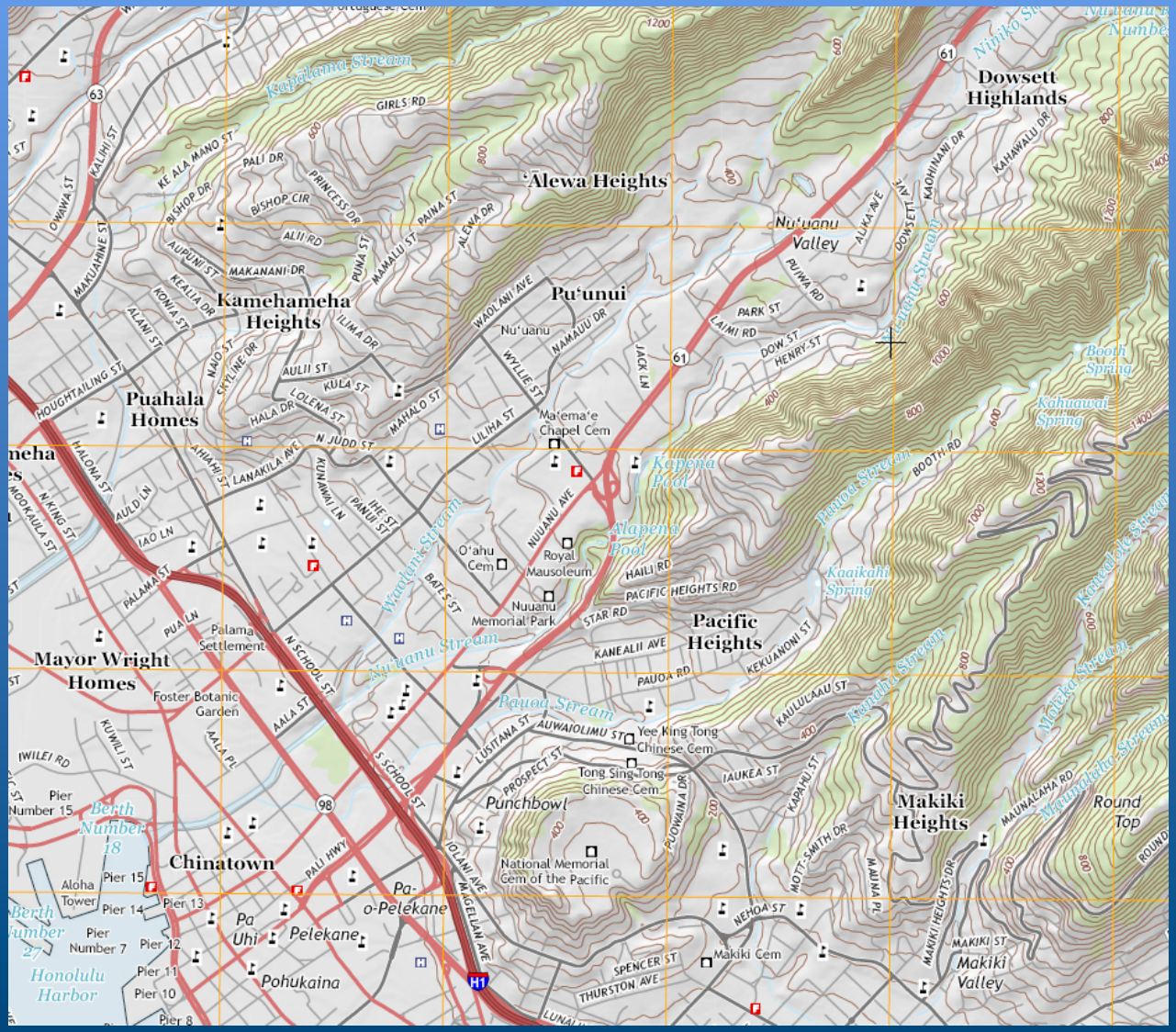


USGS

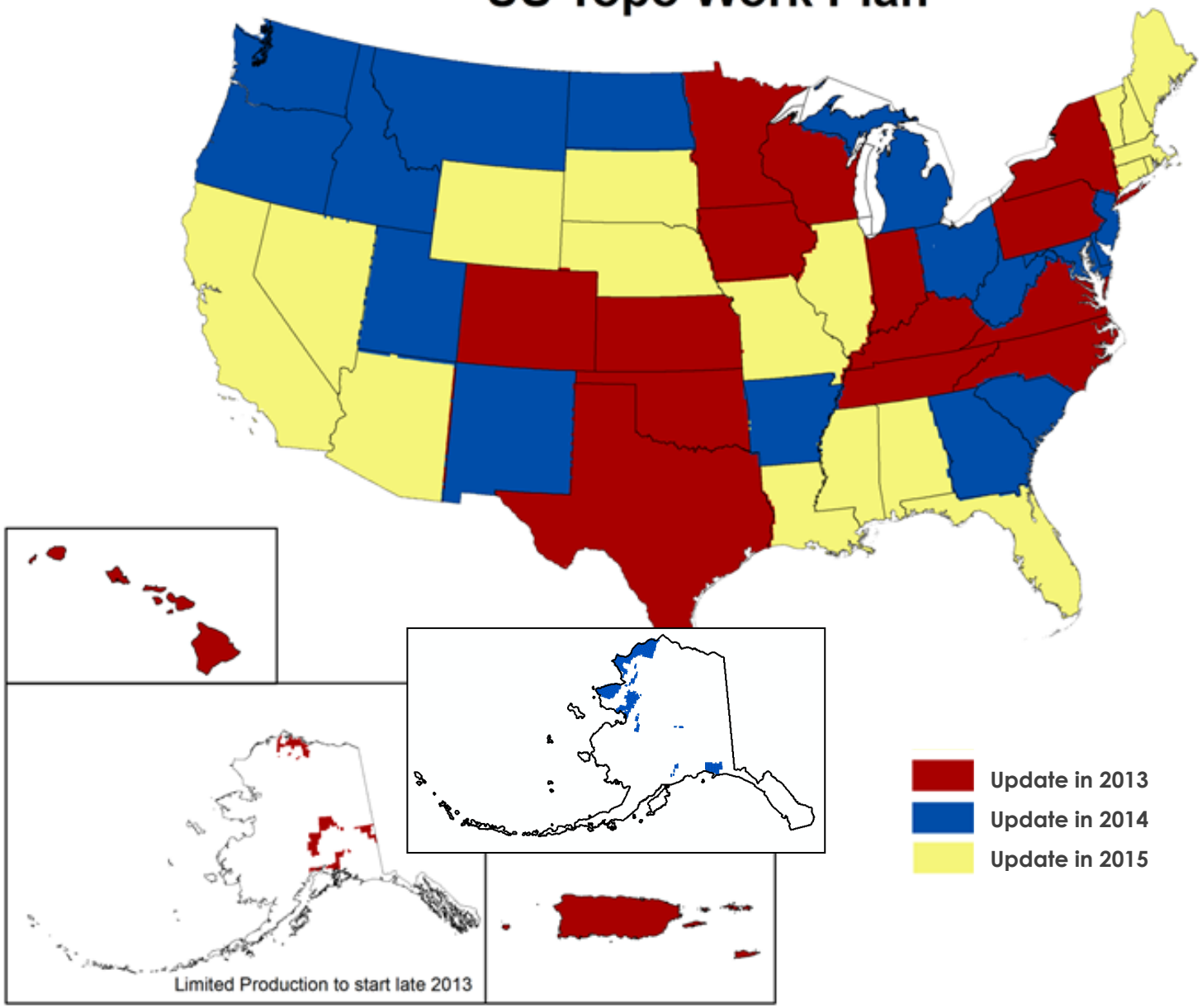
Content

2009, 2010, 2011, 2012, 2013, 2014 Feature Content

- Ortho-rectified Aerial Imagery
- Roads
- Names
- Elevation Contours
- Hydrography
- State/County/USFS Boundaries
- Runways
- Woodland
- Railroads
- PLSS
- Fire Stations
- Hospitals
- Schools
- Military Boundaries
- Cemeteries
- Post Offices
- Shaded Relief
- Trails
- FWS Boundaries
- State Capitals
- Police Stations
- Correctional Facilities

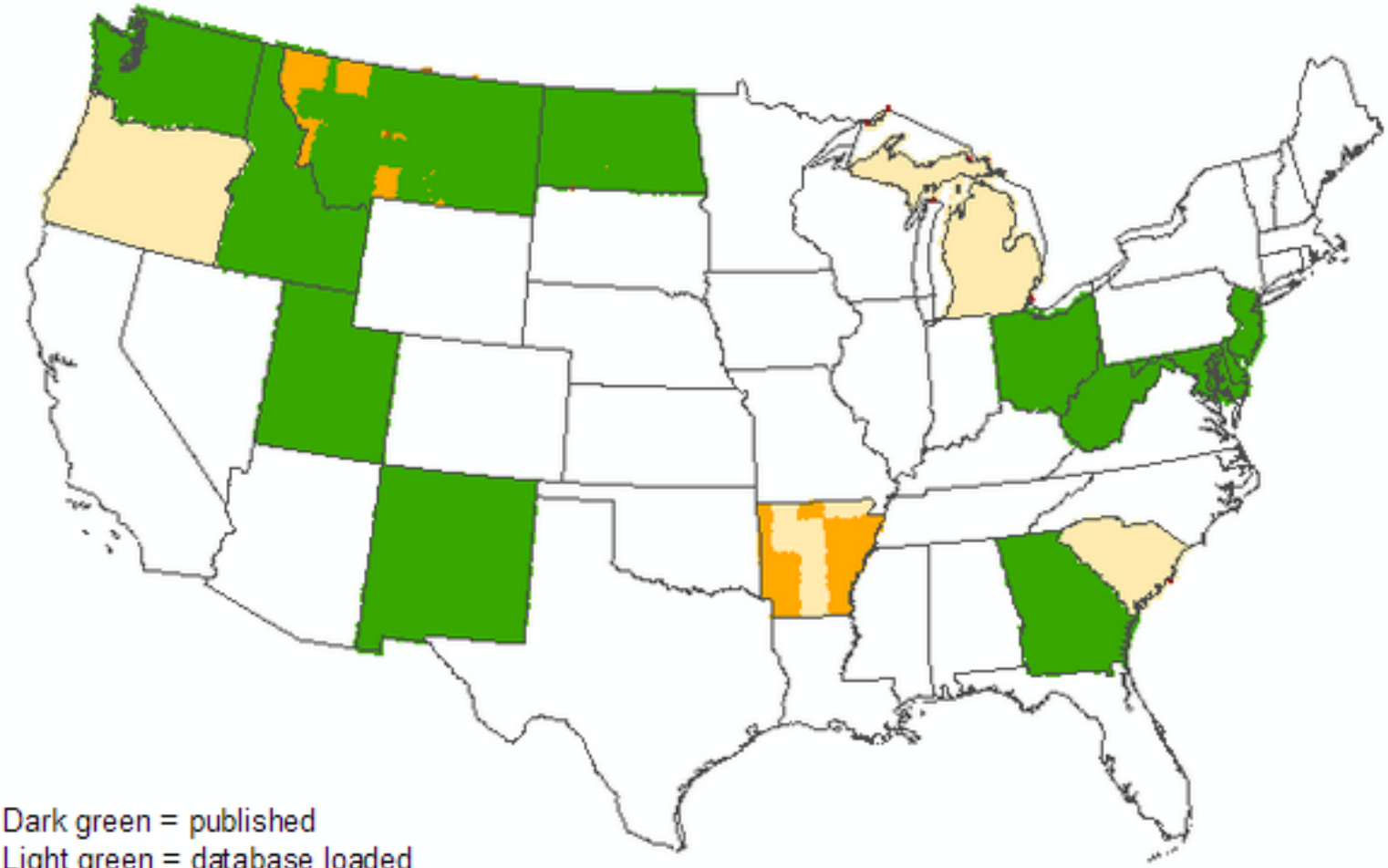


US Topo Work Plan



January 24, 2013

FY 14 US Topo Production



Dark green = published
Light green = database loaded
Orange = in work
Sand = authorized

100% -- Ohio, New Mexico, Idaho, Washington, Idaho, West Virginia, New Jersey, Georgia, Delaware, Maryland
99% -- North Dakota
85% - Montana

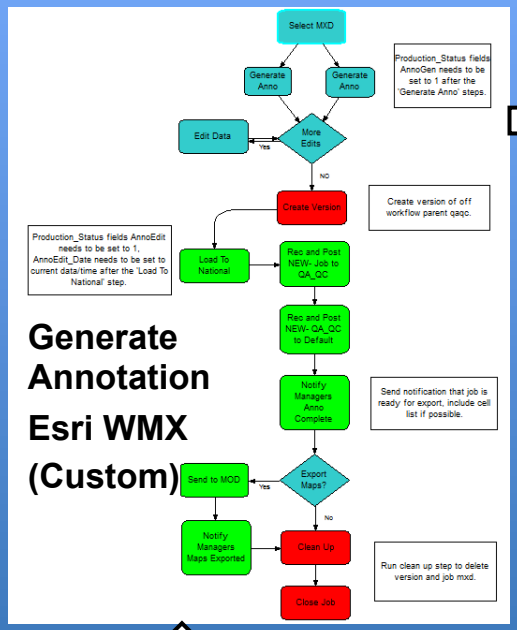
Future Enhancements….ongoing research

- Pacific Territories
- 100,000-scale product
- Custom extents
- Custom layers
- Ancillary mxd/layer files
- Dynamic Grids
- Dynamic Labeling
- Custom labeling templates
- Streamlined Workflows
- Change Detection
- US Topo GIS Packet

- New content
  - Census Roads
  - Ambulance Services
  - Wetlands
  - Control points / spot elevations
  - Bathymetry
  - NPS boundaries
  - BLM boundaries
  - BIA boundaries
  - National cemetery boundaries
  - Raster land cover / urban layer

USGS

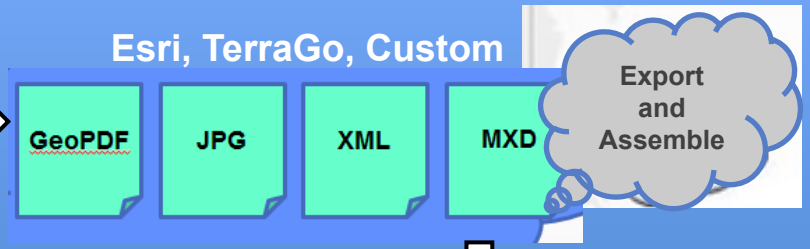
US Topo Workflow

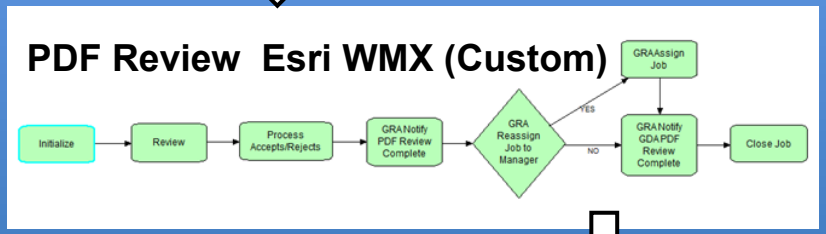


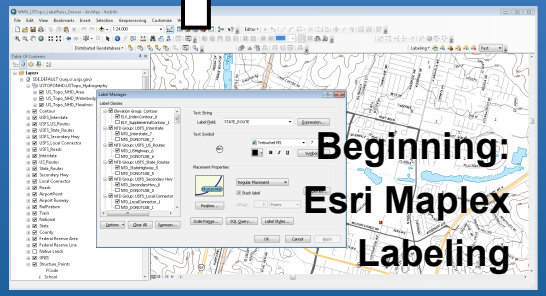
Generate Annotation Esri WMX (Custom)

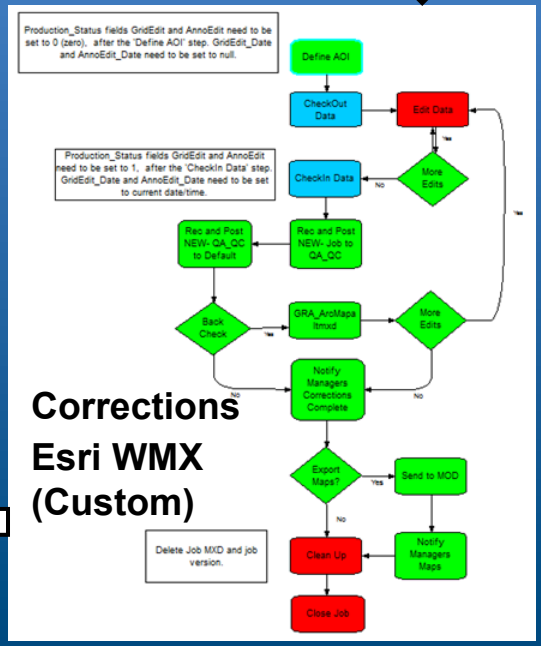
MOD:

Esri, TerraGo, Custom



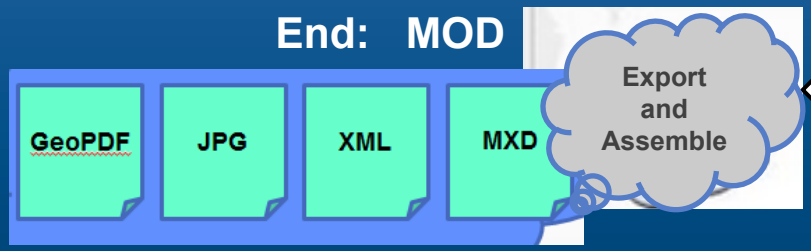






Corrections Esri WMX (Custom)

End: MOD



US Topo Workflow

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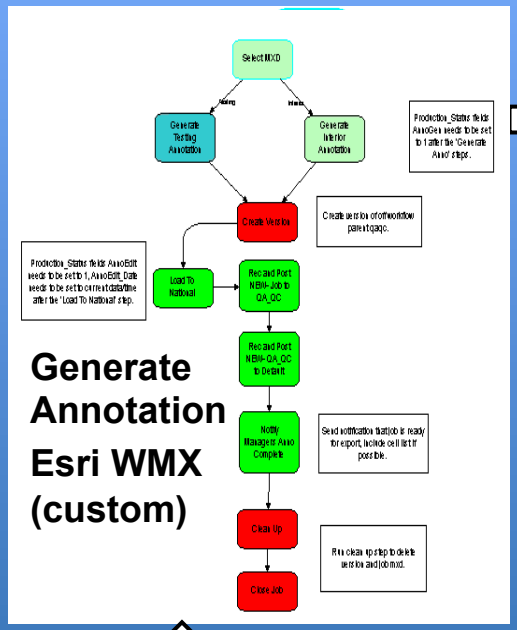
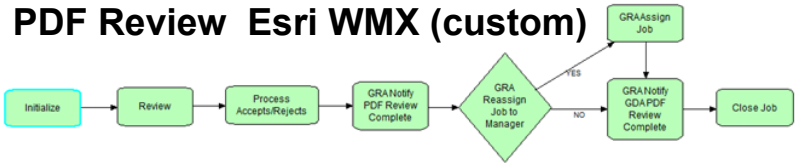


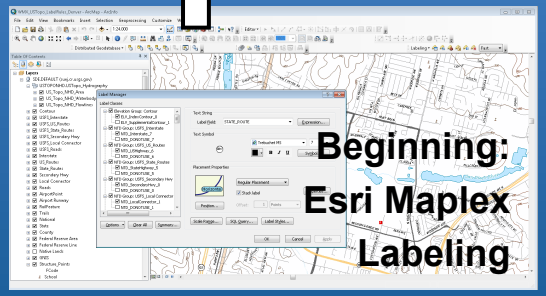
Generate Annotation Esri WMX (custom)

GeoPDF JPG XML MXD

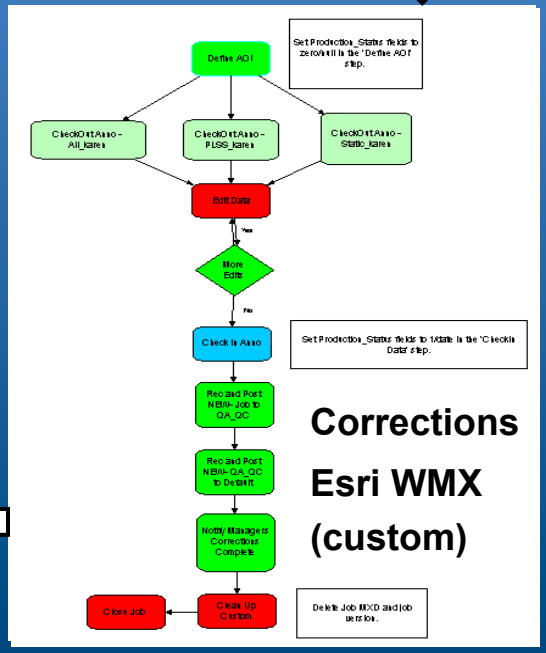
Export and Assemble

PDF Review Esri WMX (custom)





Beginning: Esri Maplex Labeling



Corrections Esri WMX (custom)

End: MOD

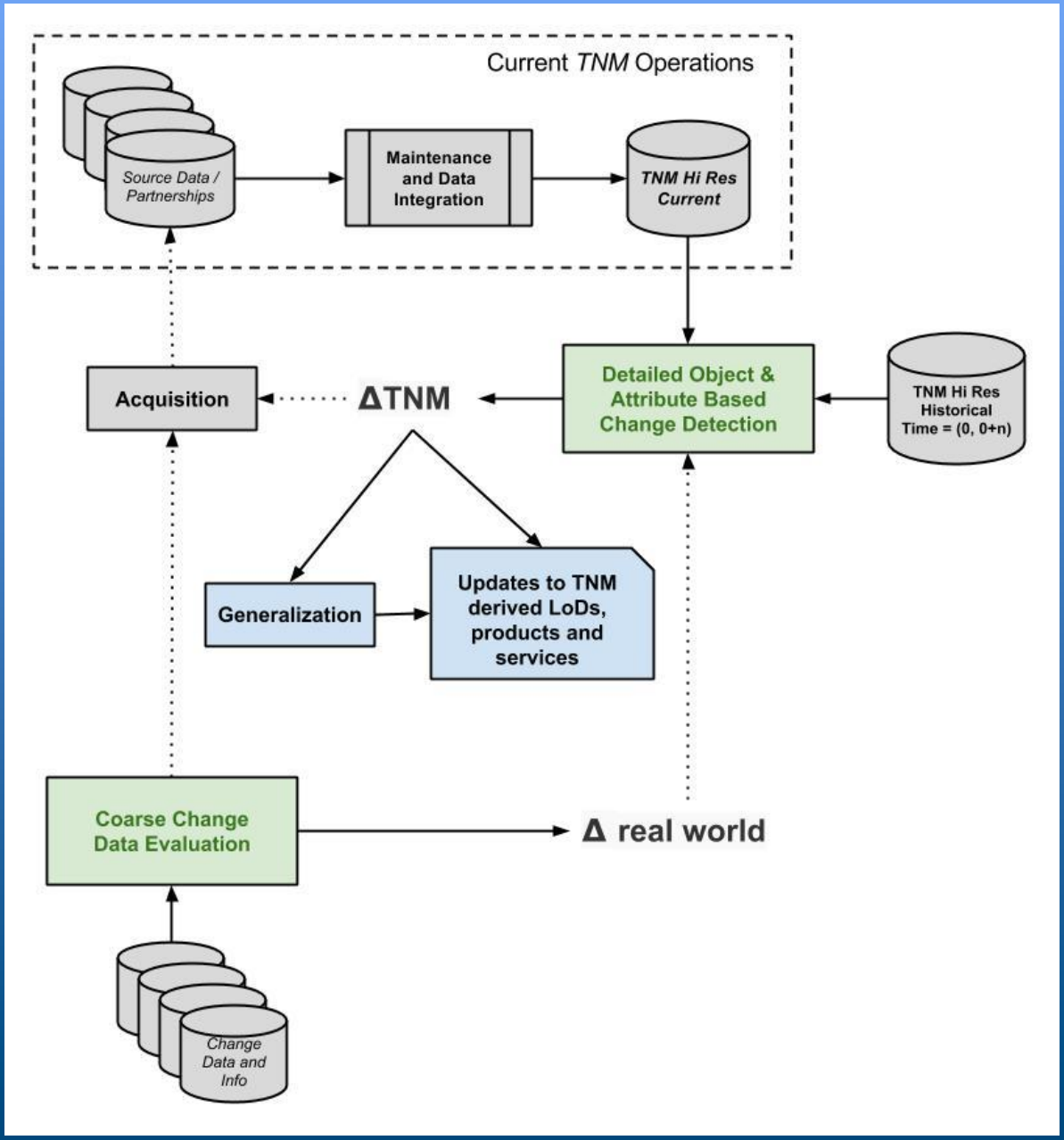
GeoPDF JPG XML MXD

Export and Assemble

Change Detection

Goal:

Reduce maintenance resources



USGS

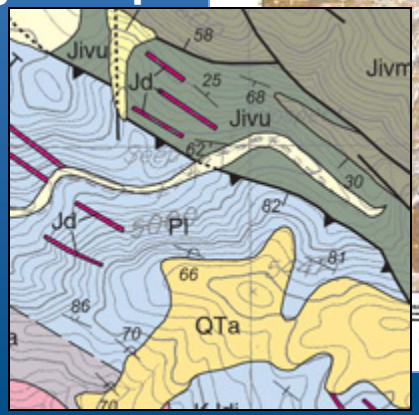
US Topo GIS Packet

- Goal: Use US Topo as base map input for Geologic mapping

- Requirement: Deliver the US Topo distributable layers to the Geologic Mapping Community that can be readily ingested into an ArcGIS system
  - US Topo distributable layers: Transportation, Boundaries, Contours, Hydrography, Structures, Woodland, Annotation
- Map packet content
  - Metadata
  - Vector data
  - Annotation
  - ArcMap document
    - Layout
    - Map layers
    - Feature content filters
    - Cartographic symbols

US Topo

Geologic Map



USGS

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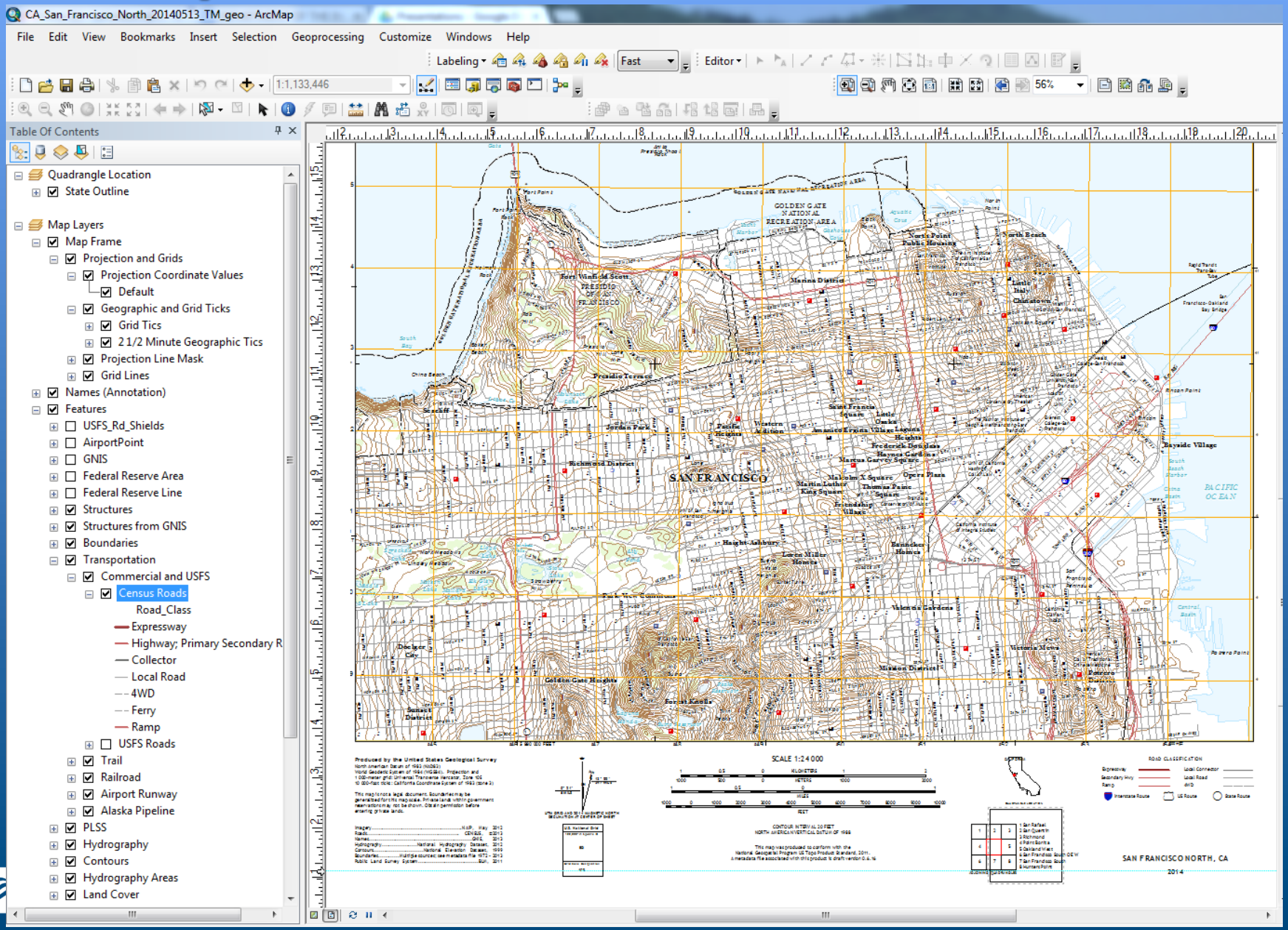

Questions

Contact Info

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USGS