

GIS Basics: Getting started with DFIRMs

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FEMA Base Map Standards: GIS Terminology

- Vector reference features are generally preferred (due to size) over raster
- USGS orthophotos are second choice
- Desired raster resolution: ≥ 1 meter
- Horizontal accuracy: Radial RMSE 22 feet
- Vertical accuracy: hilly terrain 1.2 foot RMSE; flat terrain 0.6 foot RMSE
- Spatial Reference System must be included and accompanied by metadata (FGDC standards)
- Aerial photos must be orthorectified
- Vector files compiled at scales smaller than 1:20K are unacceptable

Where to get Montana GIS data

- State Library, Natural Resources Information System (NRIS)
 - Montana Geographic Information Clearinghouse
 - <http://nris.mt.gov/gis>
 - Montana GIS Portal
 - <http://gisportal.mt.gov/Portal>

Aerial Photos

- Go to NRIS to download individual tiles
- Or go to USDA Geospatial Data Gateway to download entire counties
- <http://datagateway.nrcs.usda.gov/>

Cadastral

(parcel ownership information)

- NRIS Allcad layer (may not be most up to date)
- or go direct to the source <http://gis.doa.mt.gov>

Projections

(What you need to know without the nitty gritty)

- Most DFIRM data for Montana is delivered in UTM, NAD83, zone 11
- But most NRIS data and other downloaded Montana data is in NAD 83 Montana State Plane meters

ESRI software price estimates

ArcInfo (concurrent) \$9,900

ArcEditor (concurrent/singleuse) \$6,300/6,300

ArcView (concurrent/singleuse) \$2,800/1,200

Extensions (concurrent/singleuse) ~\$2,000/2000 each

Annual maintenance ~\$1000-2000/400

Free alternative

- ArcGIS Explorer is free software that looks and feels much like Google Earth
 - Plus you can add your own GIS data and served data
- Good option for viewing DFIRM data and performing visual analysis
(demonstration)
- ArcGIS Explorer 900 is due for release soon. Great new features.

Free online training

- www.training.esri.com
- An Introduction to ArcGIS Explorer
- GIS for Managers
- Working with ArcPad7
- Migrating from ArcView 3.x to ArcGIS Desktop