

# WORKING IN FLOOD ZONES

**HELPFUL TIPS!**  
**(WHEN TO RUN FOR HIGH GROUND!!!)**





# KRISHAN GINIGE, P.E., MS, CFM

- \* President of SEC
- \* Civil Engineer with over 20 years of experience
- \* Experience in Geotechnical, Structural, Hydraulic Engineering
- \* Certified Floodplain Manager
- \* Supervised Projects Worldwide





# Southwestern Environmental Consultants

Completed nearly 6,000 resource consulting, engineering, surveying, and project management projects throughout the United States, specializing in:

**Civil Engineering**  
**Floodplain Studies**  
**Drainage Studies**  
**Structural Eng.**  
**Water/Sewer Design**  
**Land Use Planning**  
**Land Surveying**

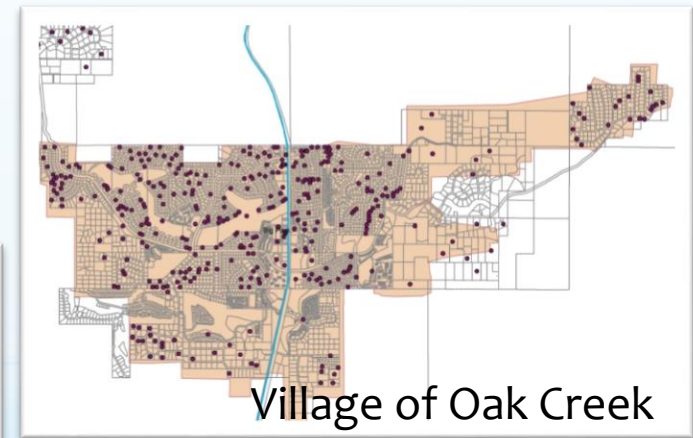
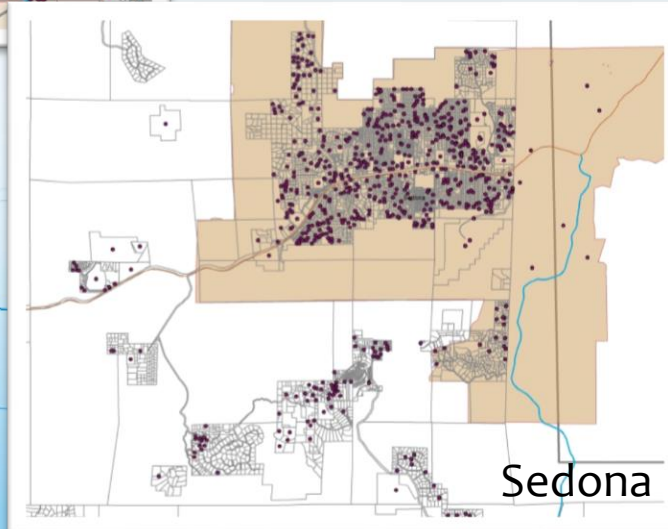
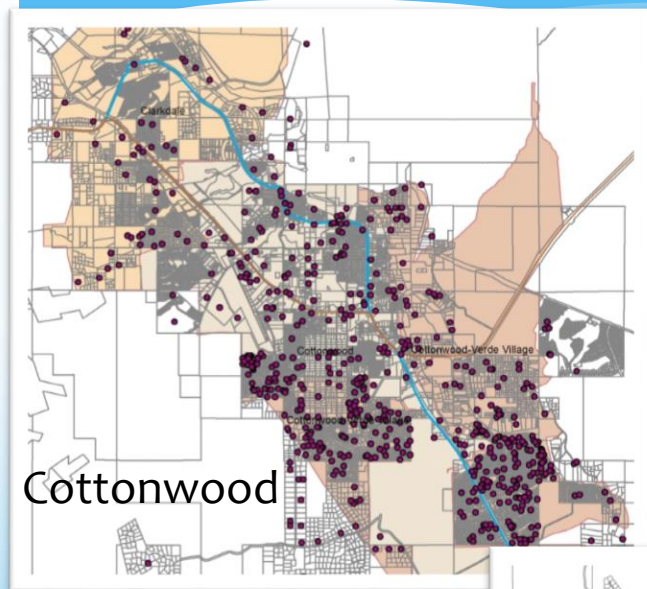
**ALTA Mapping**  
**Topography Mapping**  
**CAD/3D Modeling**  
**ESA/EIA/NEPA**  
**Water Rights**  
**Forest Land Planning**  
**GIS Mapping**

Offices: 20 Stutz Bearcat Dr. #6, Sedona  
825 Cove Pkwy, Cottonwood

**Celebrating 43 years of trusted excellence**

# Experience

- Boundary/Topographical Surveys
- ALTA Surveys
- Minor Land Divisions
- Subdivisions
- Water Rights
- Flood Studies





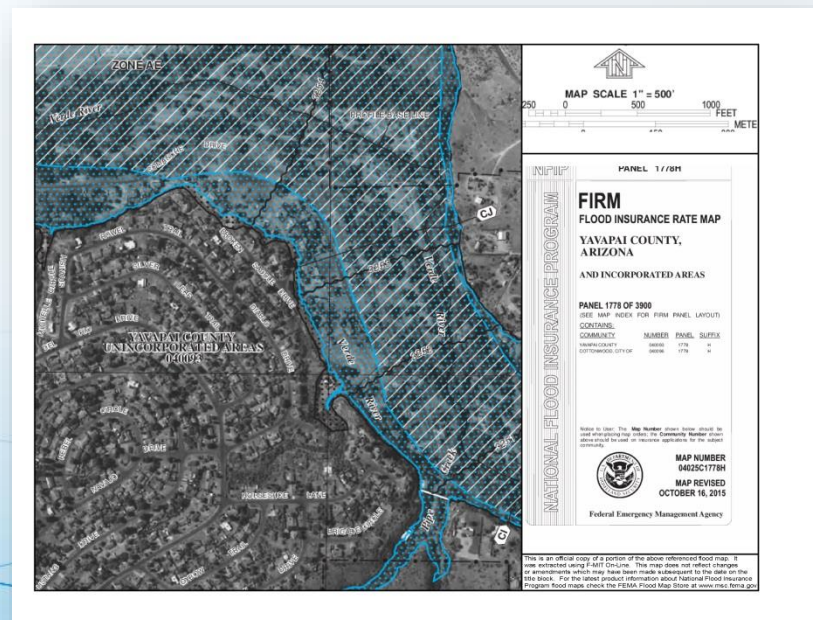
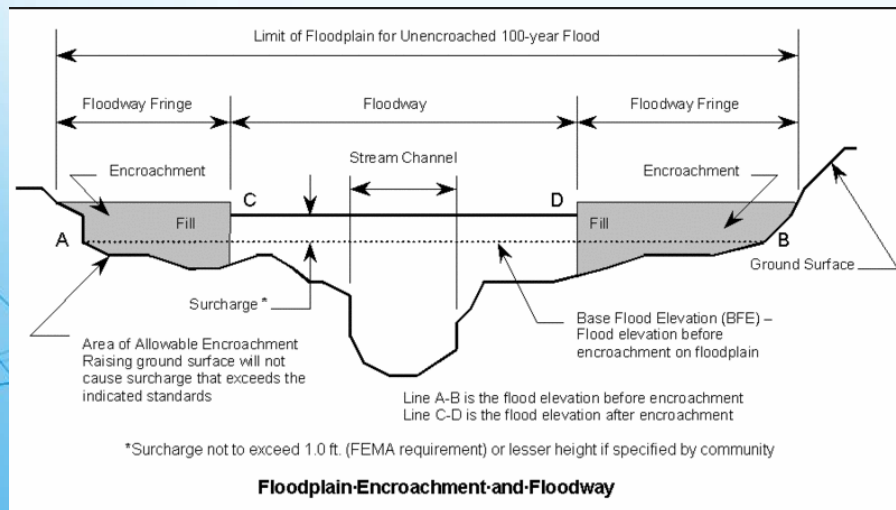
# TYPES OF FLOOD RELATED ISSUES TO KNOW

- \* FEMA Regulated Flood Zone
- \* Local Jurisdiction
- \* General Flooding



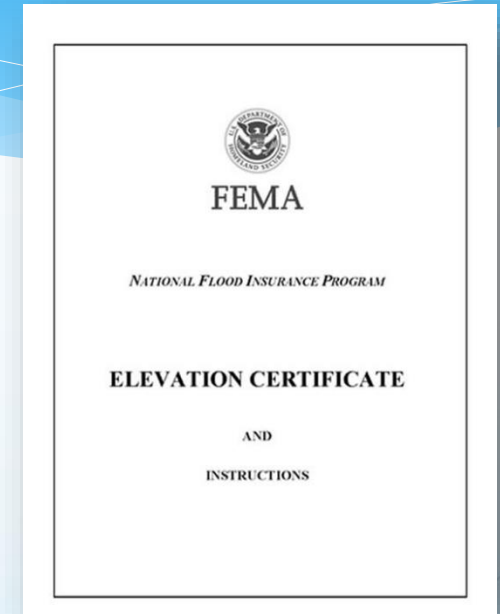
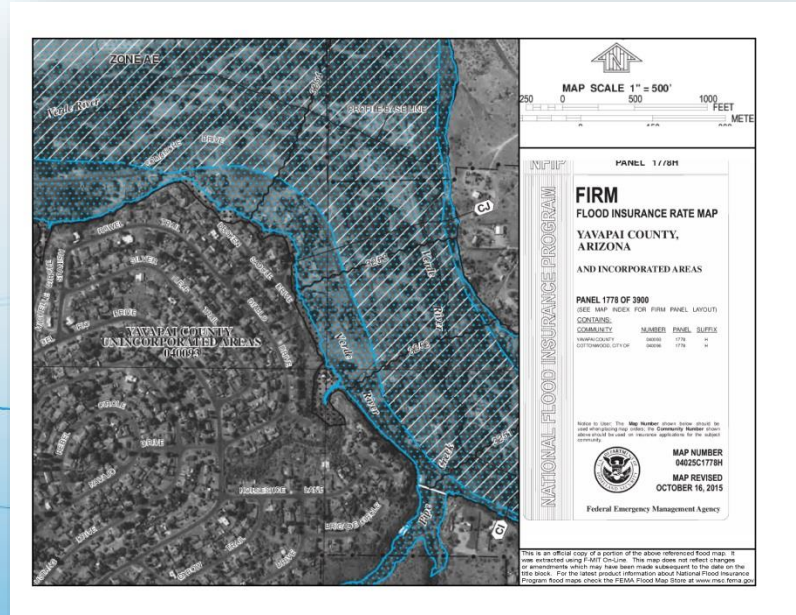
# FEMA REGULATED FLOOD ZONE

- \* Are you in a flood zone
- \* Is the structure above Base Flood Elevation (BFE)/RFE
- \* How can I provide seller/buyer assurance
- \* How can I prove Insurability



# FEMA REGULATED FLOOD ZONE

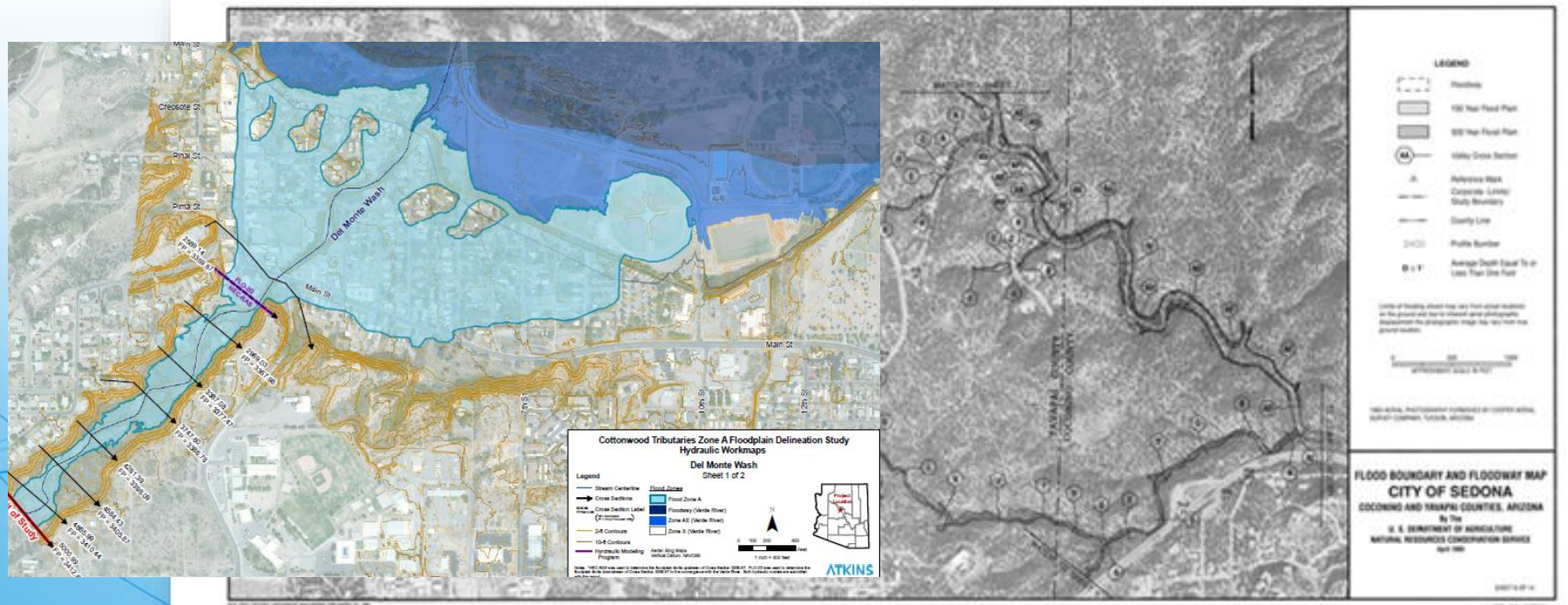
- \* EC (Elevation Certificate)
  - \* Check for latest studies
  - \* Check for datum
  - \* Check for modifications/upgrades
- \* LOMA





# LOCAL JURISDICTION

- \* Flood Maps produced by local Government Agencies
- \* Not FEMA regulated but Locally Regulated





# GENERAL FLOODING

- \* Washes
- \* Concentrated Flows
- \* Sheet Flows

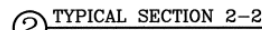




# BUILDING IN FLOOD HAZARD AREAS

- \* Set Backs/Lateral Migration of Washes & Rivers
- \* Bank Stability

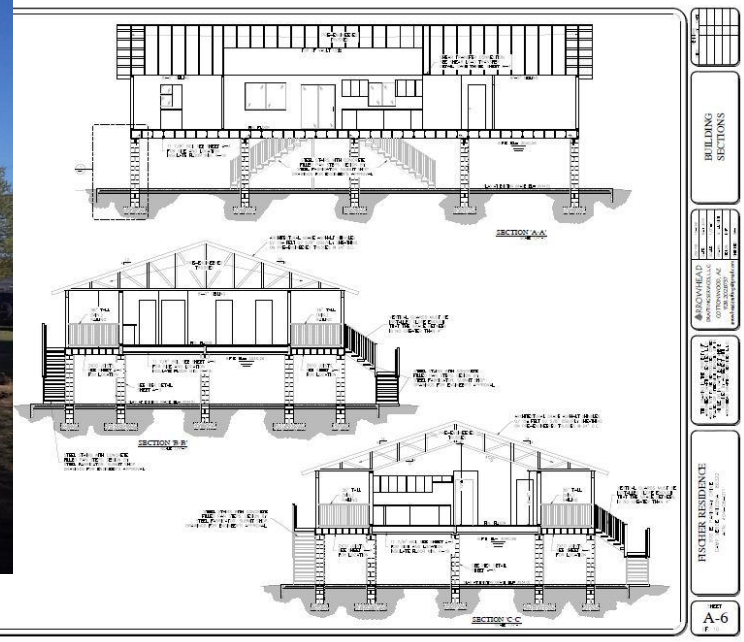






# BUILDING IN FLOOD HAZARD AREAS

- \* Structural Considerations
- \* Scour/Erosion
- \* Utility Construction
- \* No-Rise Condition



# Questions ?

