Status Update
Oak Creek Low Water Crossing

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Topics from Last Week

- Geomorphology
- Sedona Gage

Progress Report

- **Modeling** (2-12)
- 1) ~~Land Survey~~
- 2) HEC-RAS
- 3) ~~USGS Data~~
- 4) ~~HEC-HMS~~
- New Flood Frequency Analysis

Analysis (3-7)

1) AutoCAD
2) ~~Culvert Master~~
3) ~~Hydraflow Express~~
4) ~~Bentley Water Gems~~

- **Impacts** (2-12)
- 1) ~~Political~~
- 2) ~~Social~~

Website (Ongoing)

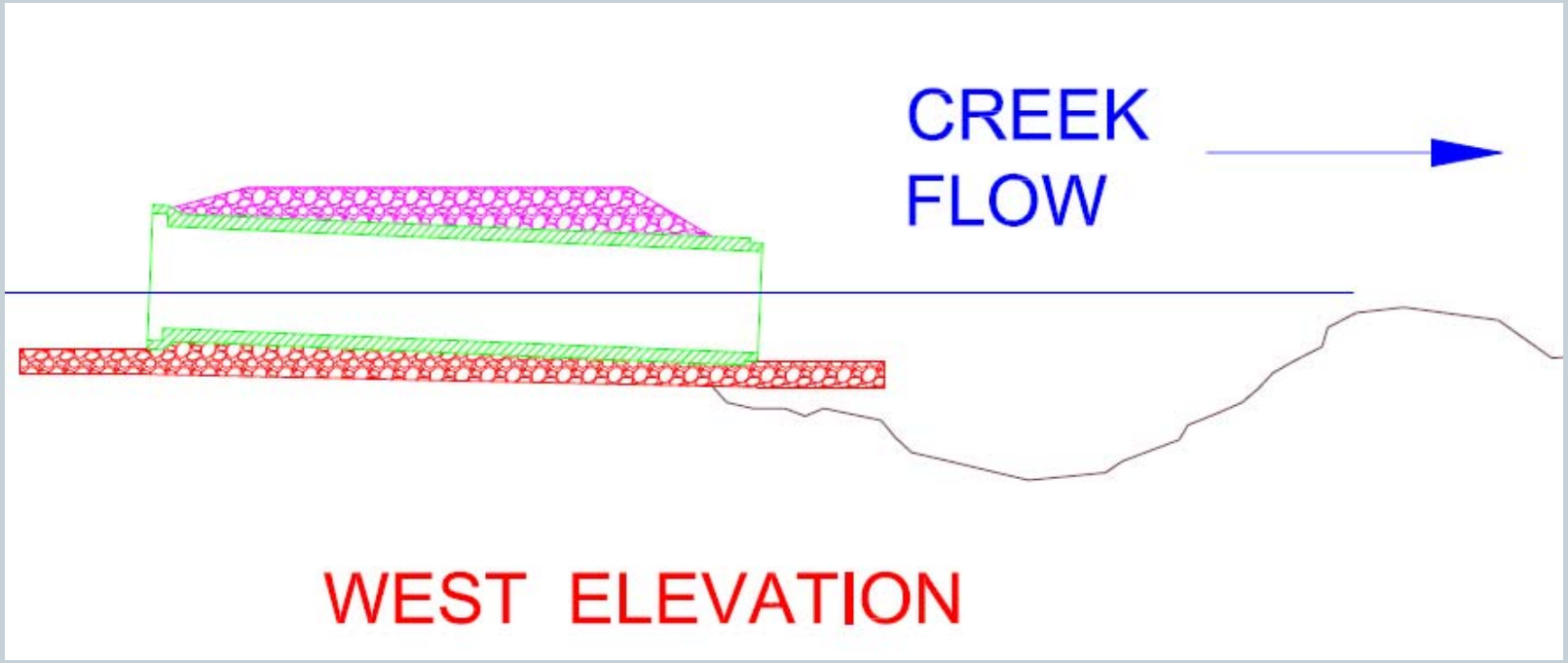
50% Design Report

Submerged Culverts

- Culvert Master/ Hydraflow Express/ WaterGEMs
- Software does not model submerged culvert
- Rely Exclusively on HEC-RAS for modeling

Scour Hole Hydraulics

- Tailwater developed from Scour Hole Deposits



Replacing HEC-HMS with Flood Frequency

- HEC-HMS uses historical weather data
- Must use judgment to approximate variables such as soil type, slope, time of concentration, infiltration, etc.
- Methods available to predict flood frequency

  A) USGS Flood Frequency available @ Cornville

  B) ADOT Used USGS data from Sedona

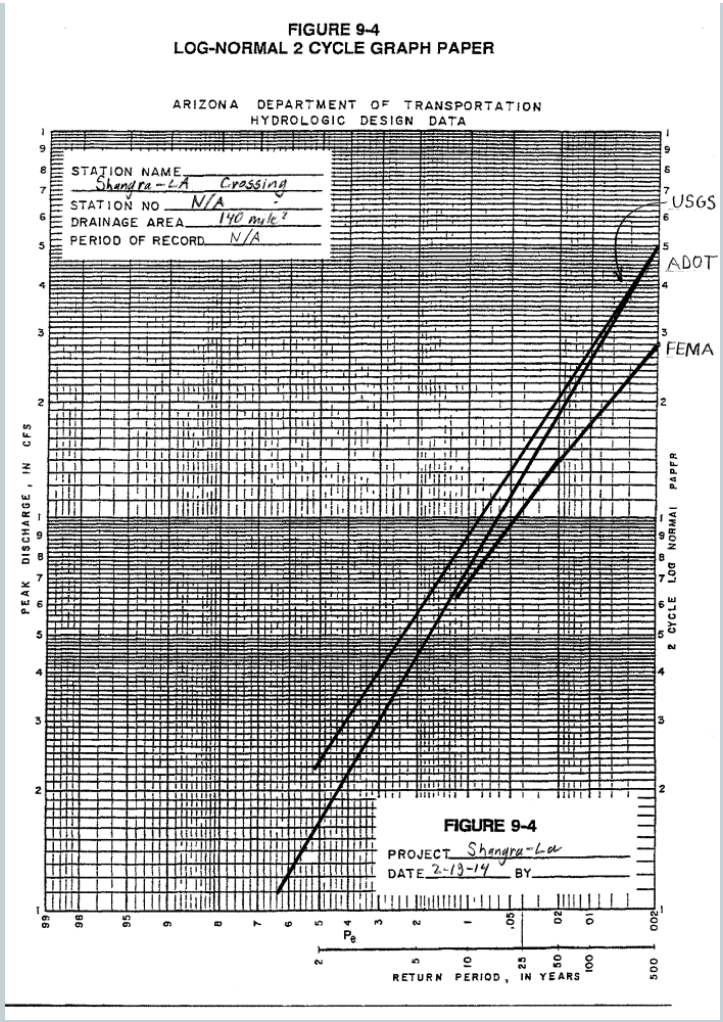
  C) FEMA Published very near site (Flood Ins. Study)

Flood Frequency

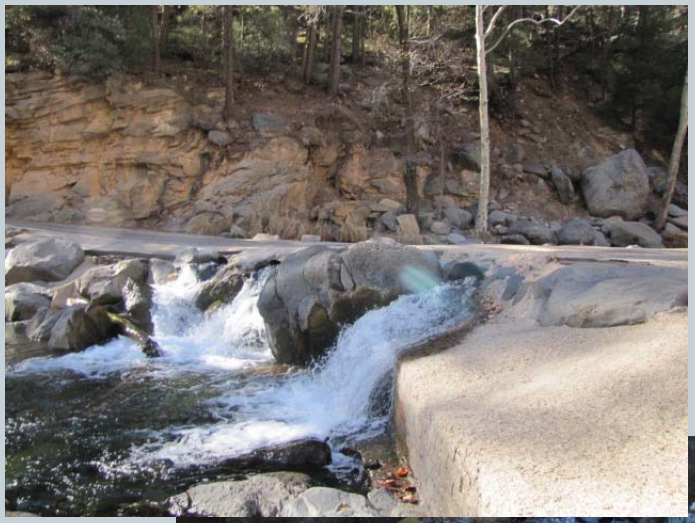
- Flood Frequency predicts risk
- FEMA is best estimate
- Climate Change will influence future flooding

<u>FEMA FLOOD FREQUENCY</u>

10%	7,050 CFS
2%	13,980 CFS
1%	17,140 CFS
0.2%	28,000 CFS

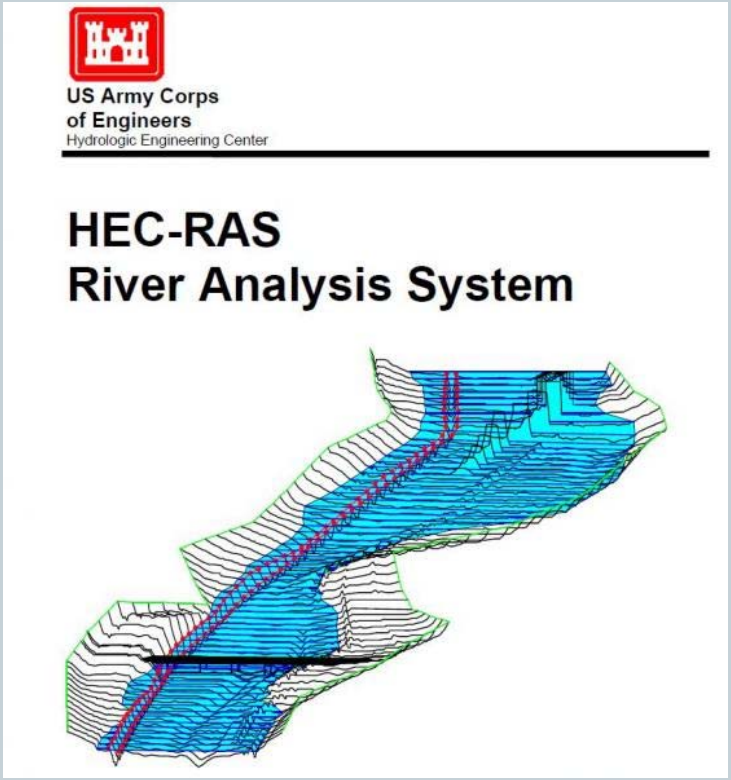


Field Study of Existing Low Water Crossings



Next Two Weeks

- Complete HEC-RAS
- Continue work on AutoCAD drawings
- Continue with Impact Studies
- Set Stage for Design (March 7)



Questions