

Will it rain?, Will it flood?

How to know?, How to convey?

“Floods are among the Earth’s most common – and most destructive – natural hazards”



Credit: Howard Greenblatt FEMA.gov

Global Flood Partnership

27 June 2017

Global Flooding...Quite a Challenge



METCON
Meteorological Connections LLC

“Tuning Weather into Impact”

Flooding due to different phenomena

Flash Floods (thunderstorms – minutes to hours)

River flooding (more persistent rainfall – hours to days to weeks depending on basin)

Snow melt critical factor in some locations

Lots of Data to Know / Integrate / Model

Precipitation, soil moisture, terrain, vegetation, slope, etc.

GIS is a great integrator of putting together

Modeling is critical (need a matched system)

All data have weakness; key is to be consistent / put together smartly and know the basis

Satellite based information critical but needs processed / models guide search

All about context

Global Rainfall Return

Global Intensity-Duration-Frequency

Comparable forecast methodology to historical methodology

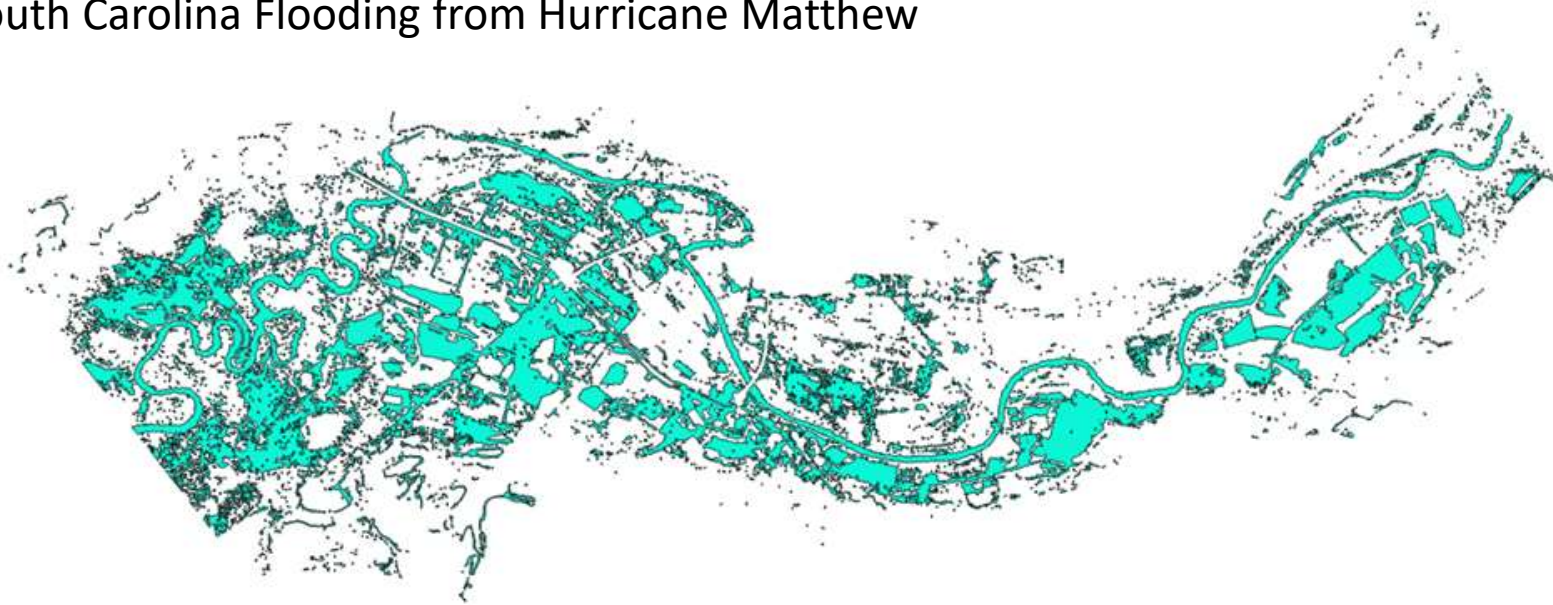
Convey Information

Timeliness is key; resolution is demanding; impact is critical

GeoVisual Search combined with **Planet** data represents the next generation in global analytics

Search Guided by flood inundation modeling / forecasts

South Carolina Flooding from Hurricane Matthew

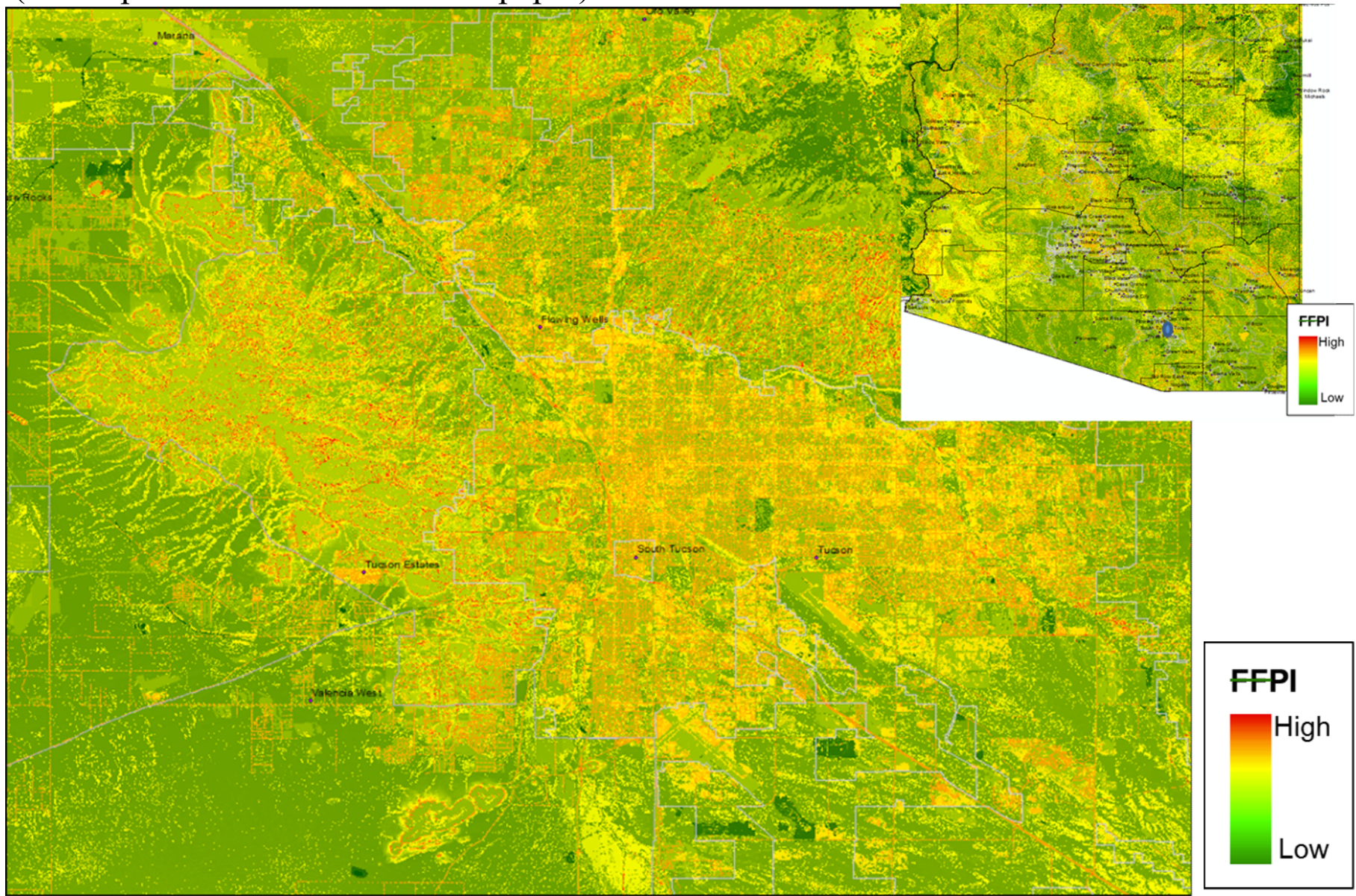


Global Capability (Pioneer Satellite)

GIS shape file developed from band processing (3 meter resolution allows house analysis)

Tucson, Arizona Flash Flood Potential Index

(developed from NOAA research paper)



Develop globally / make interactive with statistical / dynamic using GIS based modeling