

EMA

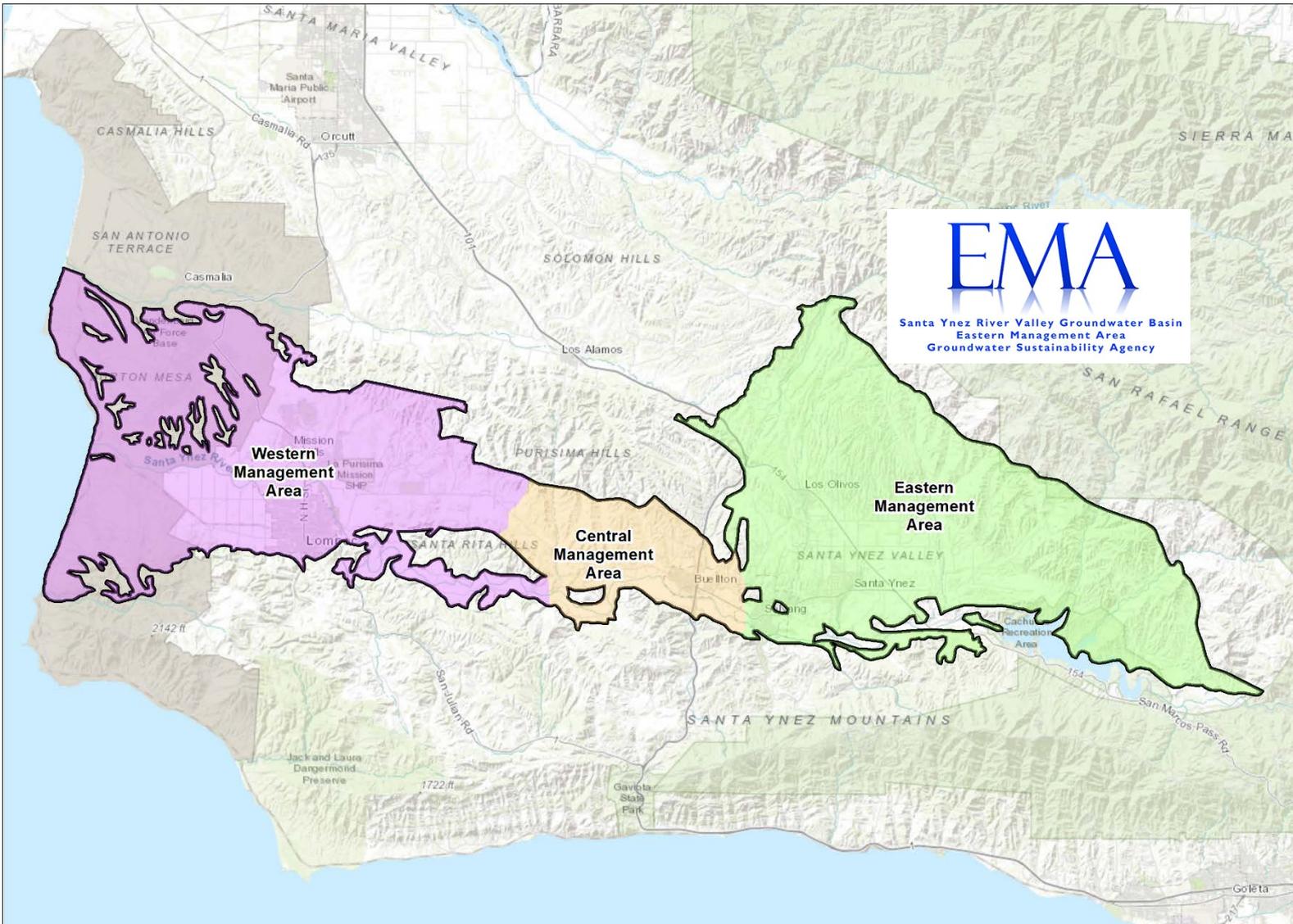
Santa Ynez River Valley Groundwater Basin
Eastern Management Area
Groundwater Sustainability Agency

Groundwater Sustainability Plan

Status Update

August 27, 2020

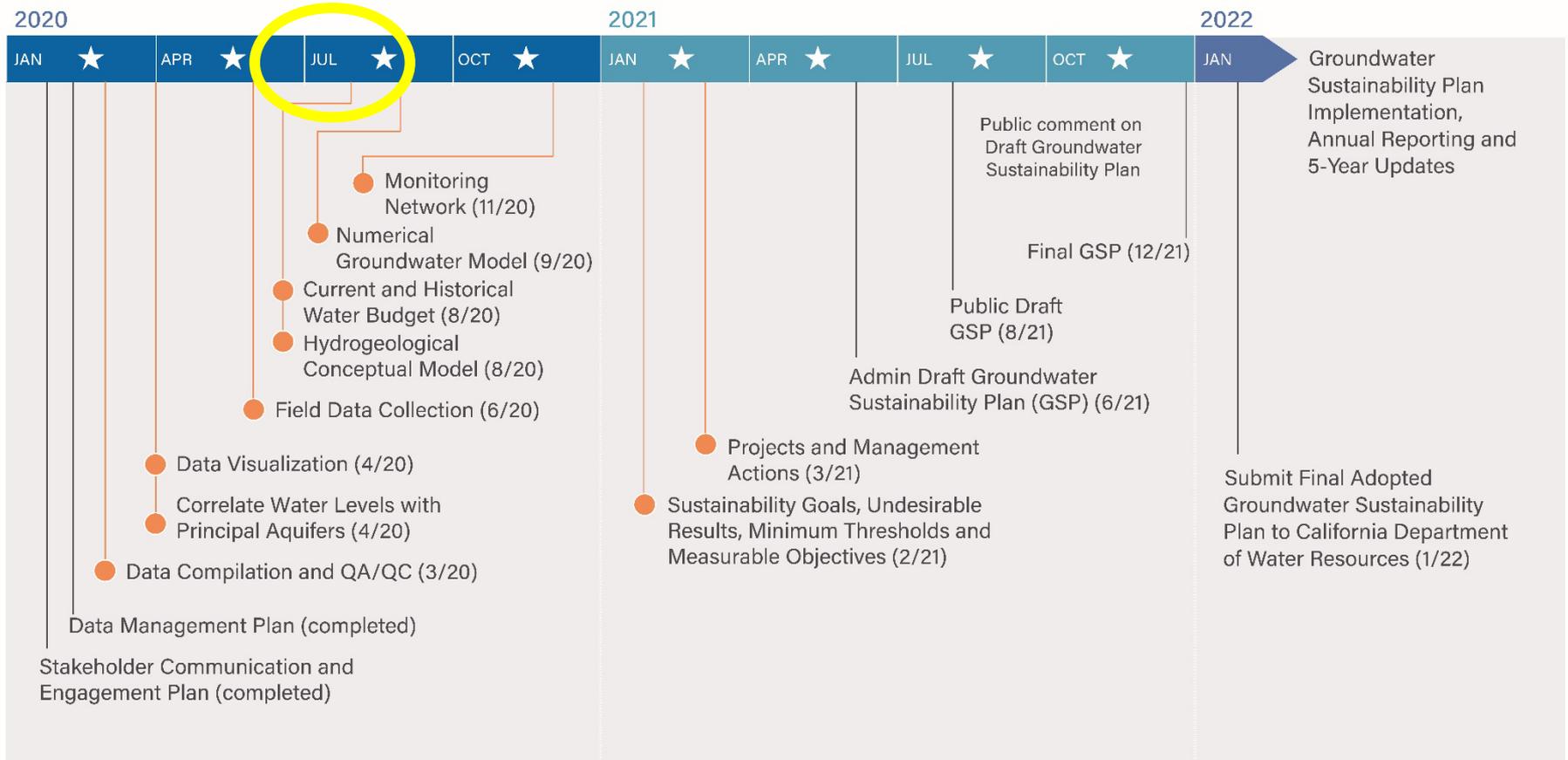




EMA
 Santa Ynez River Valley Groundwater Basin
 Eastern Management Area
 Groundwater Sustainability Agency

Santa Ynez River Valley Groundwater Basin

GROUNDWATER SUSTAINABILITY PLAN DEVELOPMENT MILESTONES



★ Groundwater Sustainability Agency Committee Public Meeting

● Technical Memorandum

Completed

- ✓ Geologic model
- ✓ Data compilation
- ✓ Well elevation survey

Collaboration with
WMA and CMA throughout

In Progress

Data Management System

Hydrogeological Conceptual Model

Water Budget

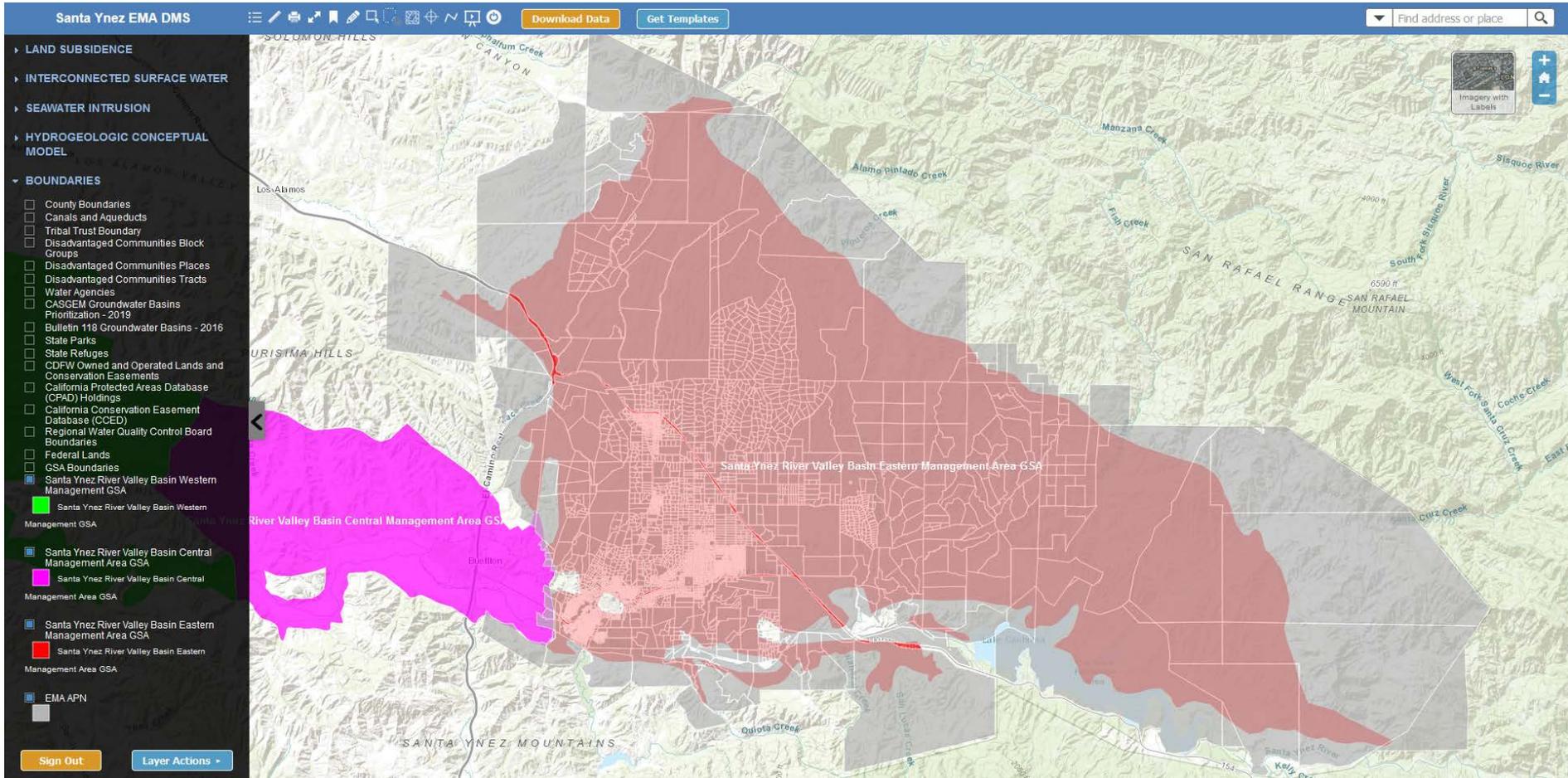
Groundwater Flow Model

Field Data Collection

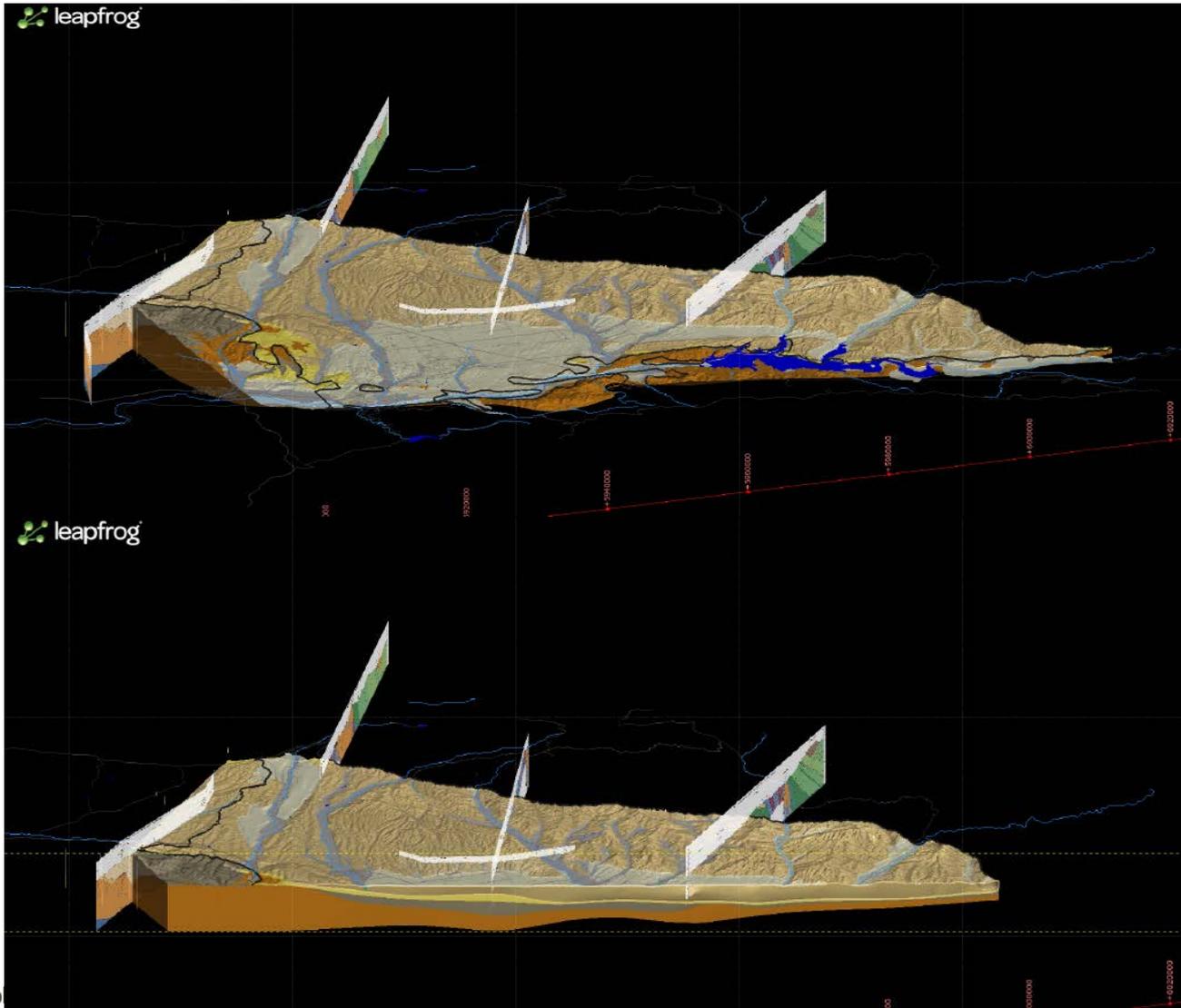
Geophysics

Aquifer testing

In progress: Data Management System



In Progress: Hydrogeological Conceptual Model



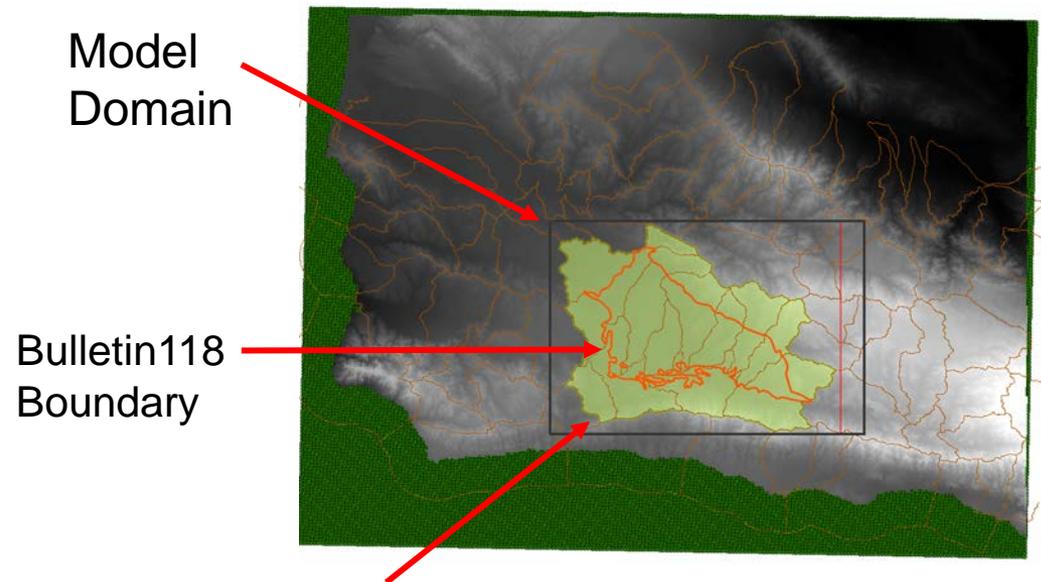
In progress: Water Budget

Data Compiled for Water Budget (inputs to groundwater model)

- Precipitation (amount and distribution)
- Land use data (crop type and acreage by year)
- Irrigation return flow (natural and imported)
- Evaporation data (crops and riparian vegetation)
- Streamflow data (inflow and outflow)
- Stream infiltration data
- Pumpage – municipal, SYRWCD, several mutual water companies, estimates from irrigated crops

In Progress: Groundwater Flow Model

- Built model grid and imported layers from Leapfrog geologic model
- Defined boundaries
- Defined recharge terms (precip distribution)
- Defined runoff and stream infiltration
- Work done in collaboration with CMA and WMA models



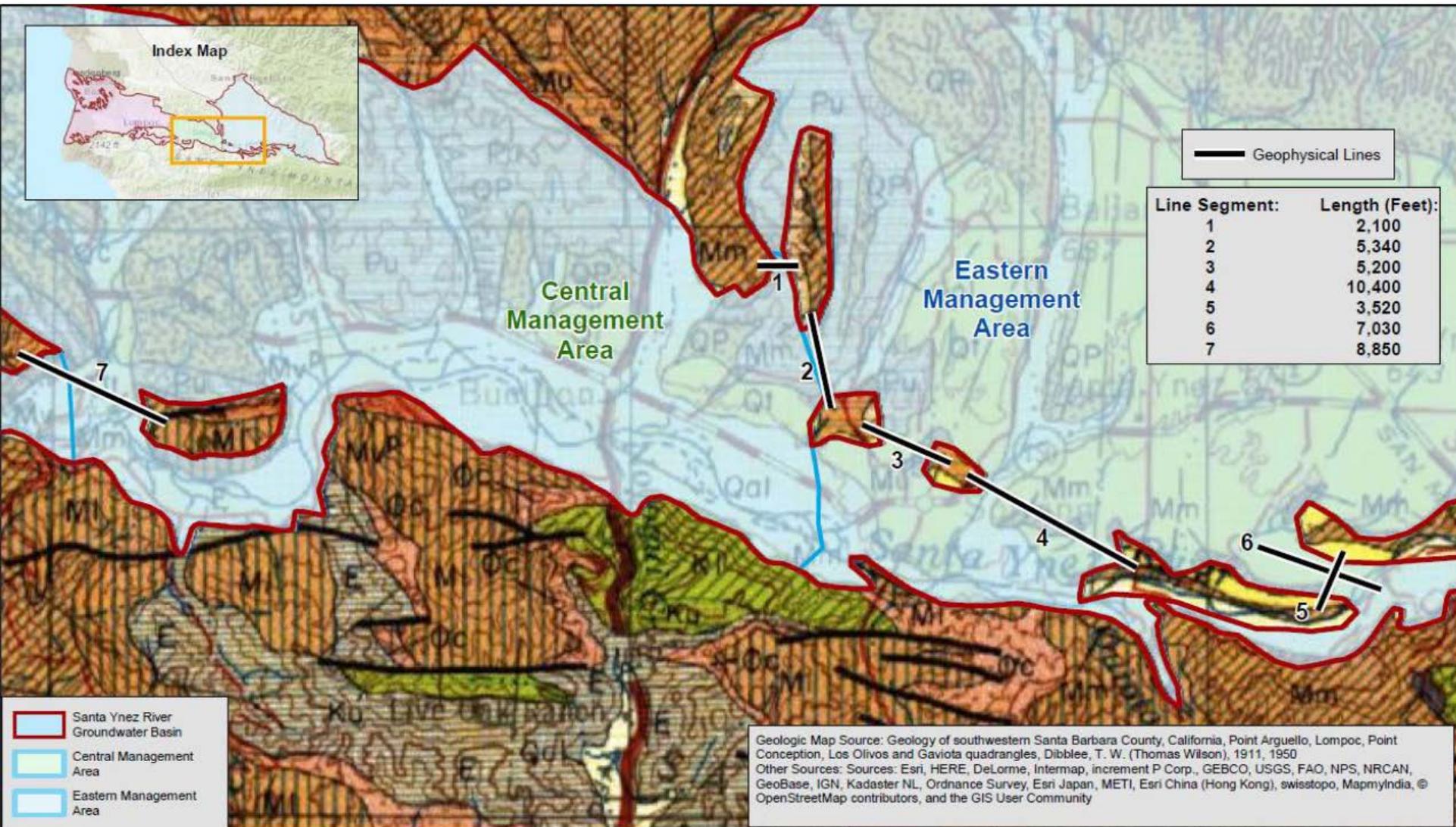
Green shading shows contributing watershed to be assigned Active Model Cells, everything else* within black rectangular domain extent assign inactive cells

* Except San Antonio Creek Basin

In Progress: Field Data Collection

- **Seismic Refraction Survey** – characterize the connection between the EMA and CMA
- **Electric Survey (tTEM)** – characterize thickness, geometry, and permeability of tributaries to the Santa Ynez River
- **SkyTEM – Helicopter Survey** – characterize large areas that lack well information and geologic data (September-October)
- **Aquifer Tests** – measure permeability of aquifer materials for use in groundwater model and collect groundwater samples

Geophysics – Seismic Refraction

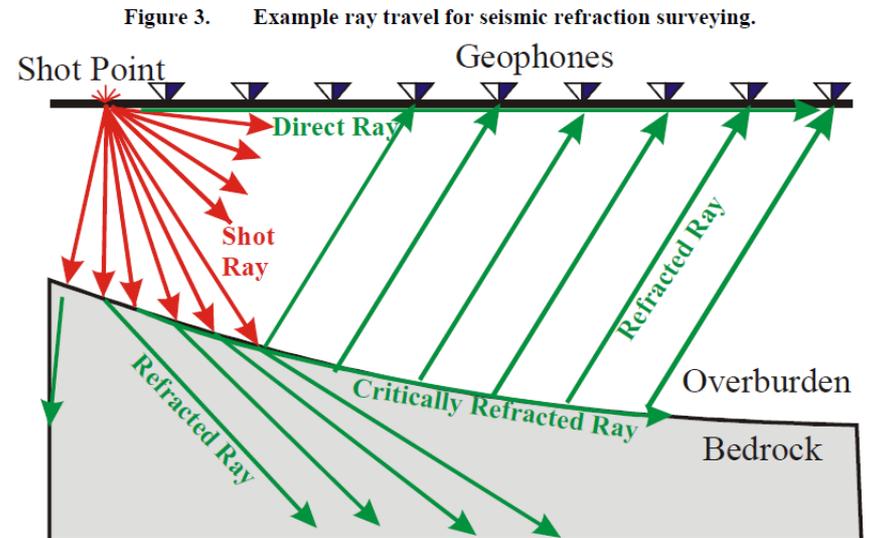
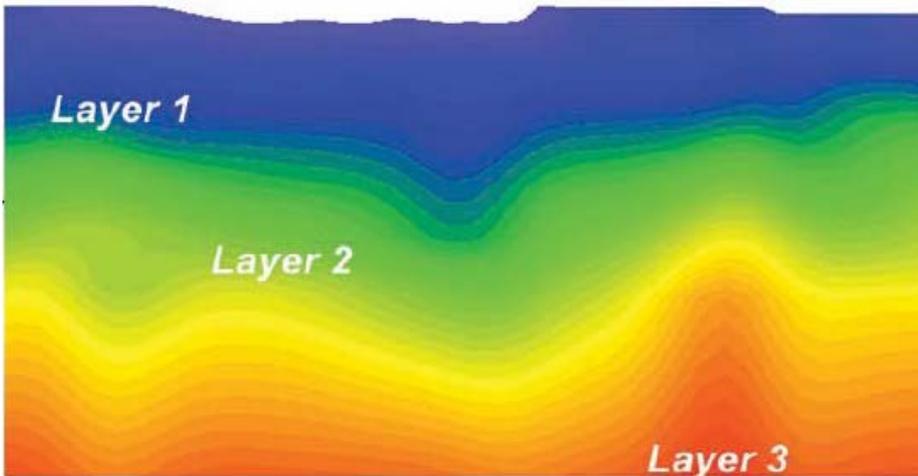




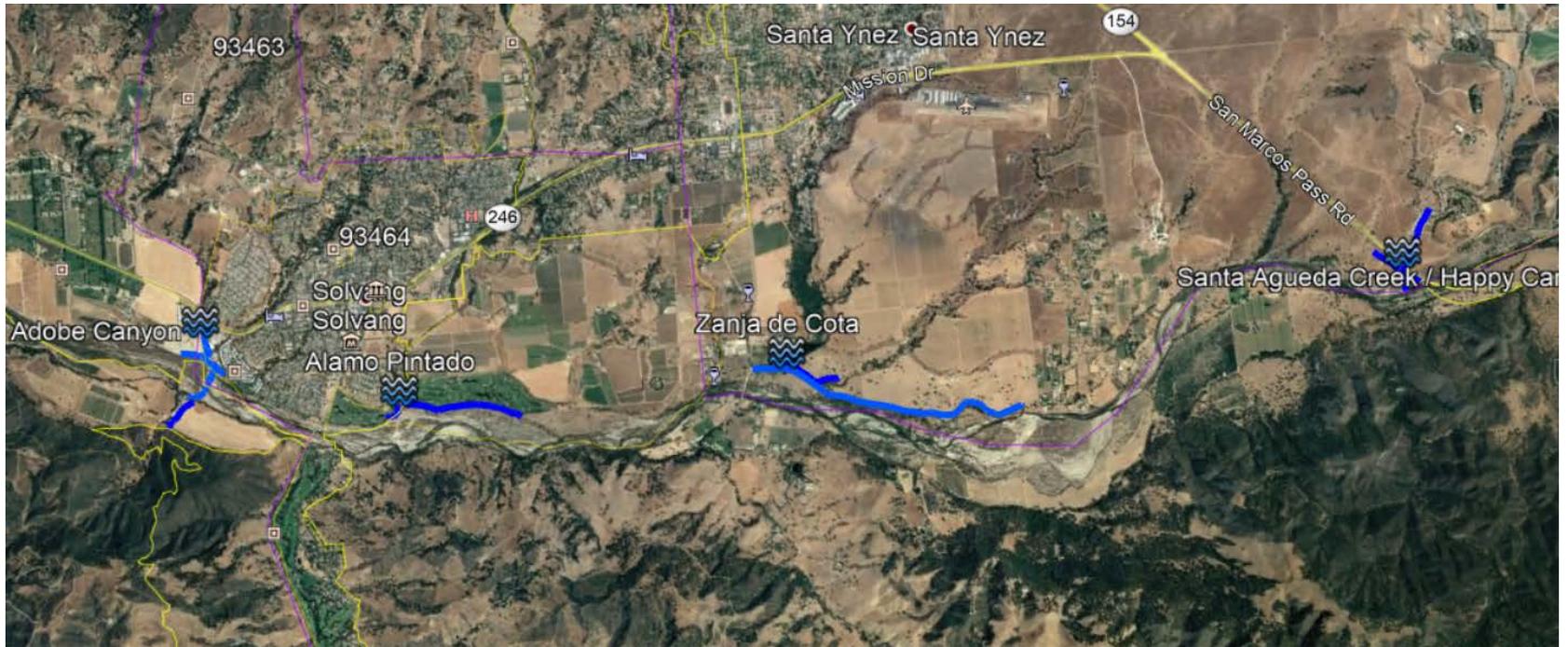
Geophysics (seismic refraction)



Seismic refraction surveying

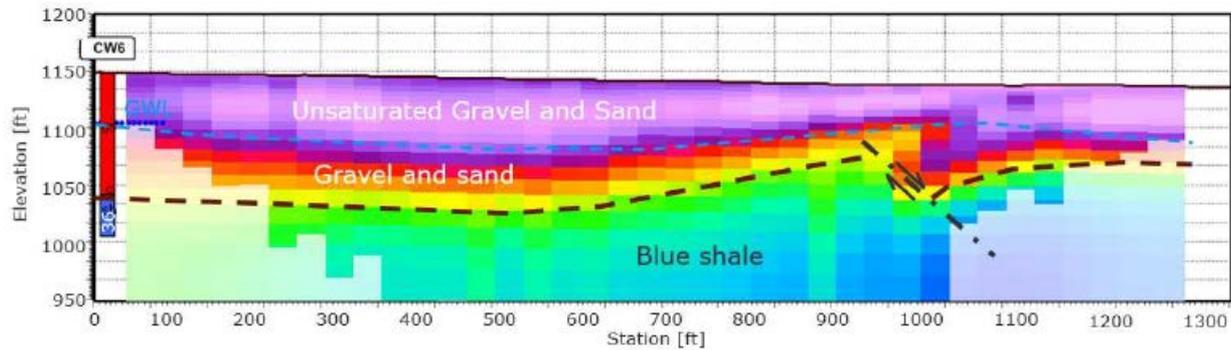


Geophysics – Electric Survey





Geophysics – Electric Survey (tTEM)



Geophysics – Electric Survey (tTEM)

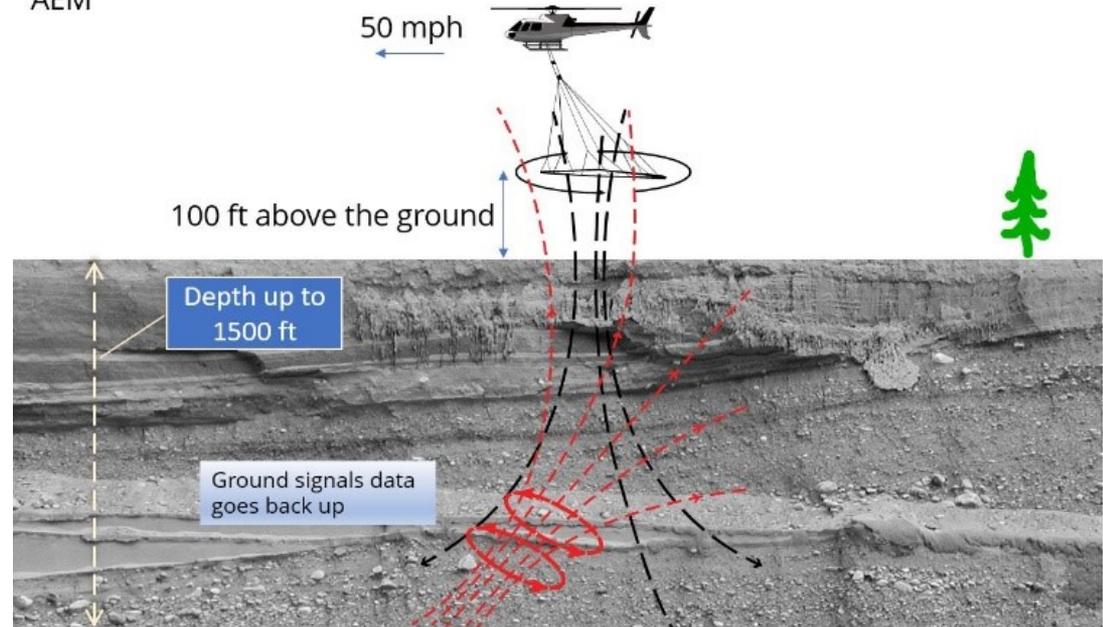
Geophysics - SkyTEM

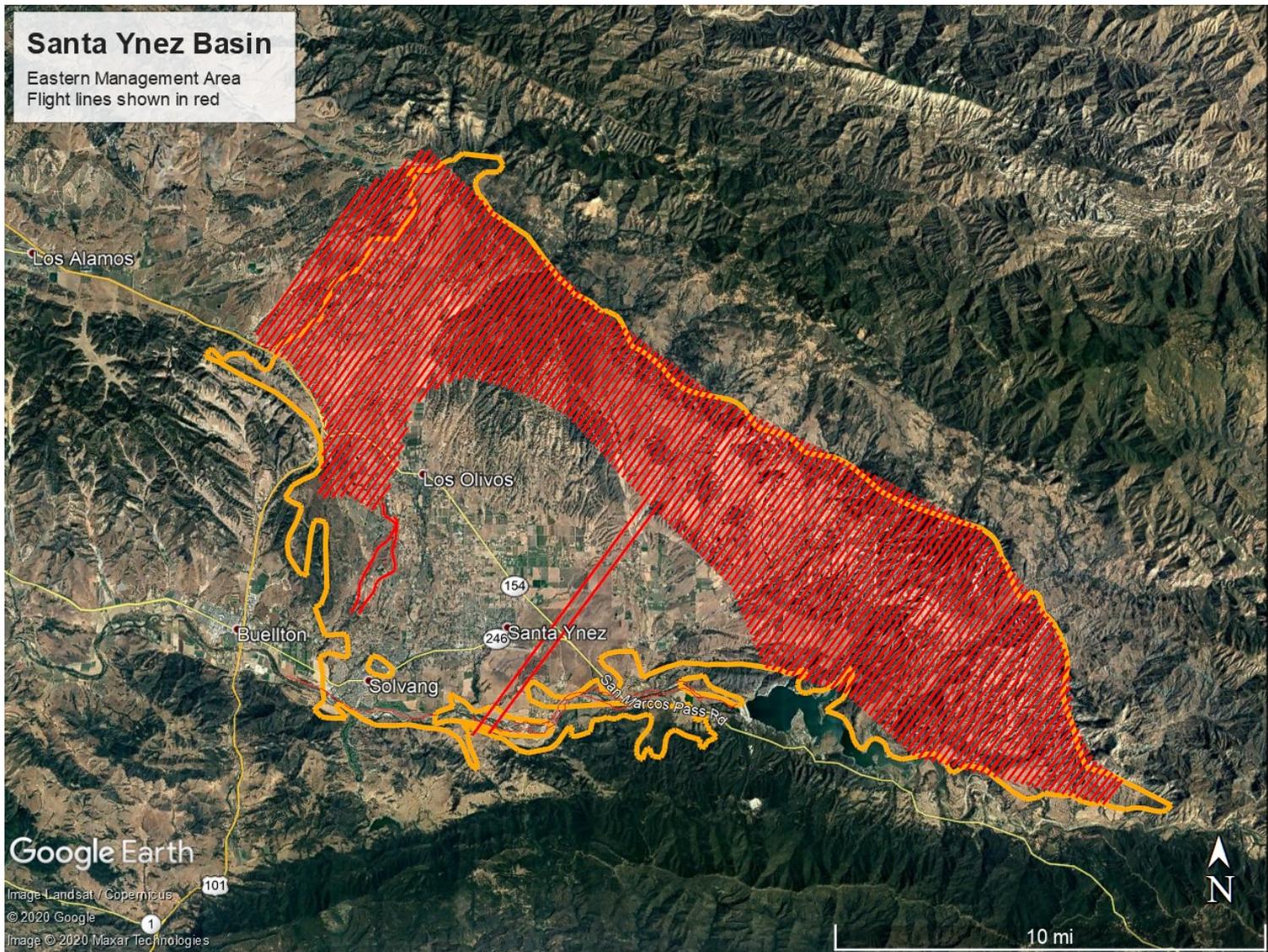
Scheduled Sept. – Oct. 2020



Description of Technology

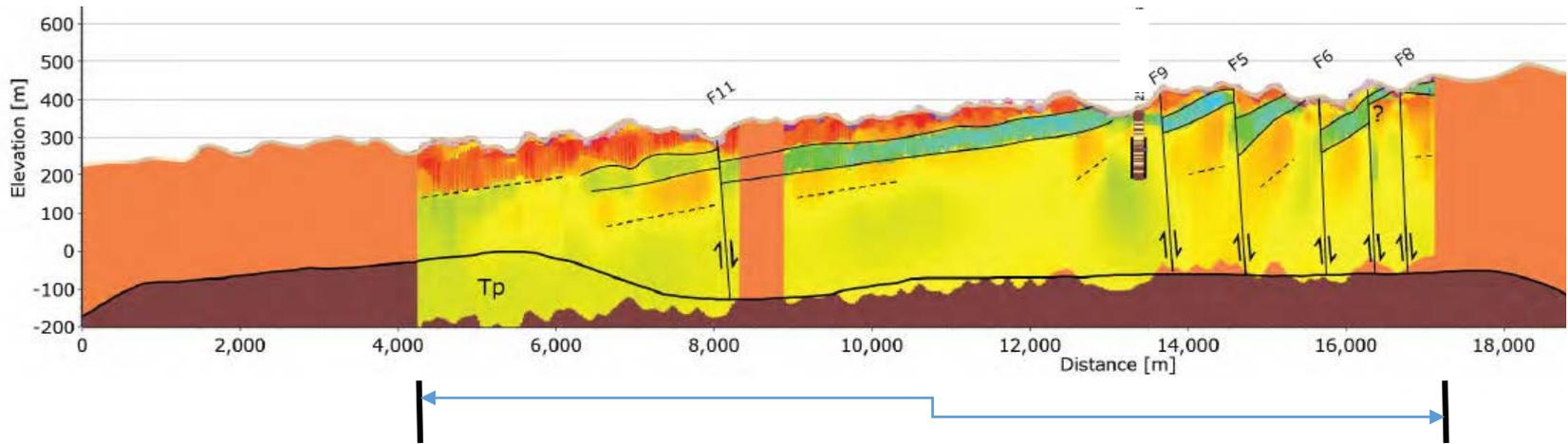
AEM





In progress: Geophysics - SkyTEM

SkyTEM Example



Red = high permeability
Green = low permeability

Sustainability Plan Pyramid



Questions?

