

# Take the guesswork out of estimating soil conditions by leveraging advanced geospatial technologies, millions of historical exploration records, and nationwide soil mapping

## Exploring Beyond the Surface: Virtual Soil Profile for De-risking Projects

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### Intro

Virtual Soil Profile (VSP) combines millions of subsurface exploration records with the expertise of thousands of geotechnical experts and the nationwide coverage of the federal soil survey database using advanced geospatial analysis.

### Methods

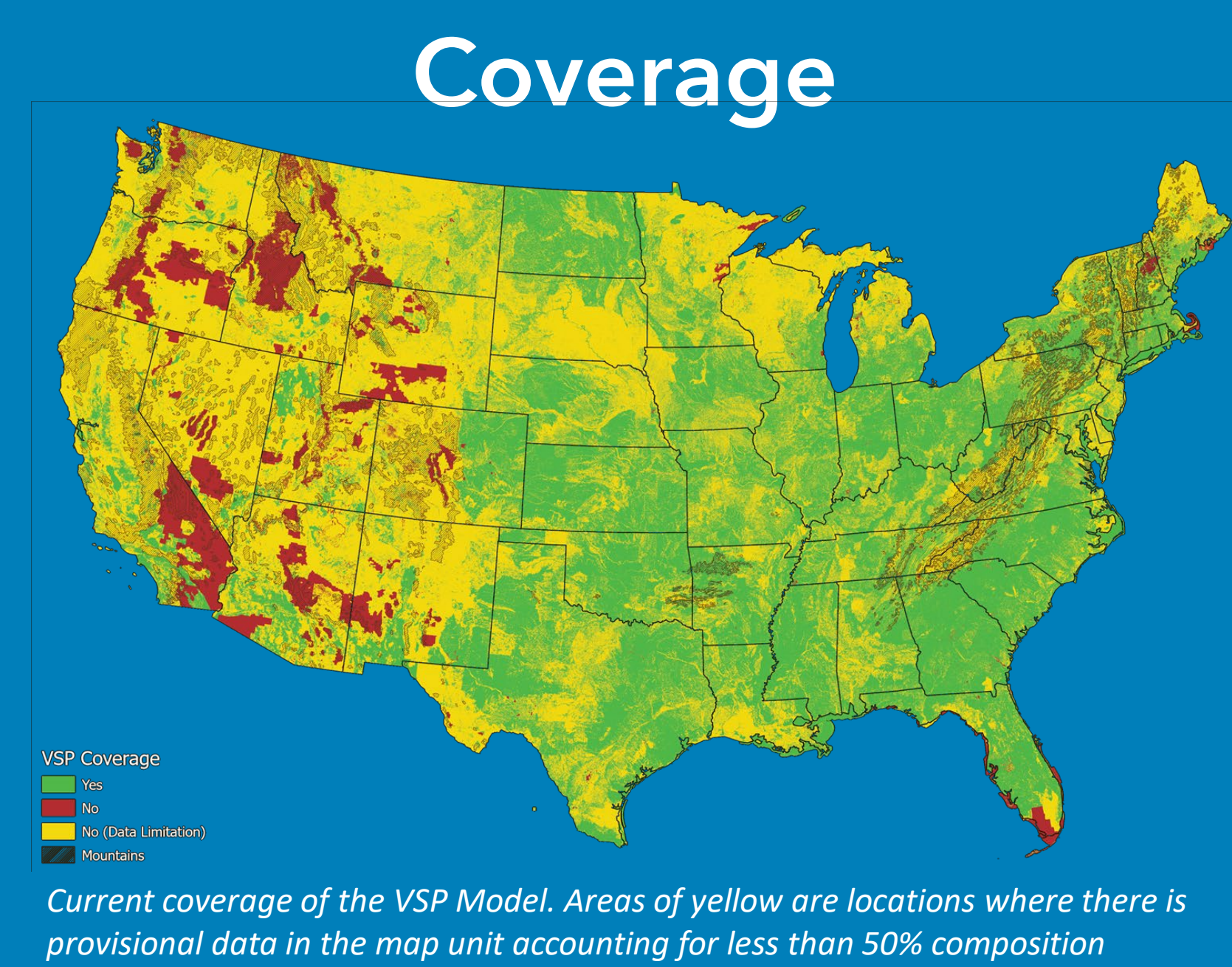
1. Identify soil map units on site
2. Locate similar map units
3. Locate boreholes in those map units
4. Boreholes means deeper data
5. Average grouped borings
6. Apply average conditions to site

### Results

- Variogram analysis shows VSP is more effective than just using the closest borings
- VSP provides real engineering parameters to the average depth of prior exploration
- VSP aligns with real borings most of the time in blind comparisons

### Discussion

- Better desktop geotechnical consulting
- Less contingency in early-stage
- Derive thematic maps like Depth to Restrictive Layer
- Identify showstopper conditions deeper than SSURGO



### Example Outputs

