* Chihuahuan desert (new mexico and texas) – grab chihuan desert image
* Grasses:
  + Blue
  + Black gramma
* Shrubs:
  + Creosote (larrea tridentate)
  + Honey mesquite

Chihuan desert has moved north

* further north grasse black and blue but no creosote and honey mesquite
* 1900s would have been all grass land
* shrubs have deep roots so they use water different, handle water differently.
* Shrubs tend to leave gaps in dirt and impacts water erosion, water flow, and wind erosion.
* Asthma due to dust storms because of sparse shrub landscape
* Also fungus due to desert dust

Here is a scientific question:

* we know desert is encroaching.
* Question: if we move to hotter climates with more variable precipitation, will we get further encroachment in the desert?
* Will we get higher flood events?
* Will we get more erosion?
* Can we model the change of vegetation in the past? Can we model to past with any kind of accuracy?
* Chichuan desert (semantics – a dynamic geographic place, defined by plant combination – water implications)
* Request: I want to model the transition from Chihuahua desert to biome X (probably steppe), particular around the 1950 (during drought – semantics: weather drought or due to plant water consumption. So drought is kind of relative. How well does plant and soil combination effect the water), in the last 100 years.

Scoping problem: must have use case before choosing ontological concepts. Need to find middle range.

USE CASE:

Use ipcc –lifemapper

Use slope/aspect/soil type from EDAC

We need to also use IPCC data from Lifemapper (IPCC data is a model and can predict the future)

PRISM – takes weather stations and interpolates missing values to get PRISM data (much finer resolution, both spatial and temporal)

Need to make sure we are using IPCC data at Lifemapper?????

Also need how to use future PRISM rather than IPCC

Time geography

Presentation Notes: