* Data we have:
  + Point counts, transects (what is length?) lengths are not even. Some transects longer than others.
  + Questions I have about it:
    - Map or list of sites available for both? Yes, Jeremy will look for. Most sites in west, none in eastern OK.
    - Will send a missing data list (esp Randy, have NONE) later.
* Data I have downloaded
  + NRCS Conservation Easement Areas by State  
       Size: 0.40 megabytes (46 files).  Download compressed size: 0.19 megabytes (1 map).  
       <http://gws.ftw.nrcs.usda.gov/GWDL/3276698/easements_EASEAREA_ok_3276698_01.zip>  
     National Land Cover Dataset  by State  
       Size: 35.18 megabytes (7 files).  Download compressed size: 29.96 megabytes (1 map).  
       <http://gws.ftw.nrcs.usda.gov/GWDL/3276698/land_use_land_cover_NLCD_ok_3276698_02.zip>  
     Cropland Data Layer by State  
       Size: 235.53 megabytes (3 files).  Download compressed size: 235.57 megabytes (1 map).  
       <http://gws.ftw.nrcs.usda.gov/GWDL/3276698/land_use_land_cover_NASS_CDL_ok_3276698_03.zip>  
     Gridded Soil Survey Geographic (gSSURGO) by State  
       Size: 952.32 megabytes (4 files).  Download compressed size: 952.46 megabytes (1 map).  
       <http://gws.ftw.nrcs.usda.gov/GWDL/3273245/soils_GSSURGO_ok_3273245_01.zip>  
     Major Land Resource Areas by State  
       Size: 1.35 megabytes (46 files).  Download compressed size: 1.00 megabytes (1 map).  
       <http://gws.ftw.nrcs.usda.gov/GWDL/3276698/soils_MLRA_ok_3276698_05.zip>  
     Common Resource Areas by State  
       Size: 1.28 megabytes (45 files).  Download compressed size: 1.03 megabytes (1 map).  
       <http://gws.ftw.nrcs.usda.gov/GWDL/3276698/soils_CRA_ok_3276698_06.zip>
* Data we can get in future
  + eBird
  + Bioclim (current, future)
* Data I need to find if exists:
  + Forecast changes in landuse in OK
    - <http://tethys.dges.ou.edu/main/?cat=12>
* Final report
  + Methods
    - Simple density maps (using detectability from repeated surveys and distances)
      * Comparison of point count vs transect effectiveness if sample size large enough for each and geographical overlap sufficient. However, point counts go along road and transects usually walking off-road.
    - Ensemble models
      * Compares species distribution models by weighting averages of each single model prediction “with weights assigned to each modelling technique based on its discriminatory power as measured by the area under the receiver-operated characteristic curve” (Oppel et al. 2012, seabird paper). Will combine niche and other species distribution models.
      * adaSTEM/STEM models
        + Ensemble models of decision trees, used with “bagged decision trees” (a type of classification tree) as base models trees in Fink et al paper
        + Unsure if can do with multiple types of models, like in Oppel paper? They had two regular models (linear and additive) and three machine learning. I think STEM is a type of ensemble and they had different bases, did not do the spatiotemporal adaptive aspect. Not sure if
  + Objectives
    - What is current density of OK grassland birds?
      * Use PC and transect distance sampling
    - What landcover and crop use predict species, particularly declining species?
    - With predicted changes in landuse (if available, or make some estimates?) and climate variables, what will happen?
      * Population trends
      * Distribution changes
* Things I need to do meanwhile:
  + Talk to Todd about getting more detailed landcover if needed, and crop predictions
  + Do an overview of machine learning <http://cs229.stanford.edu/materials.html>, review classification tree papers from multivariate class