

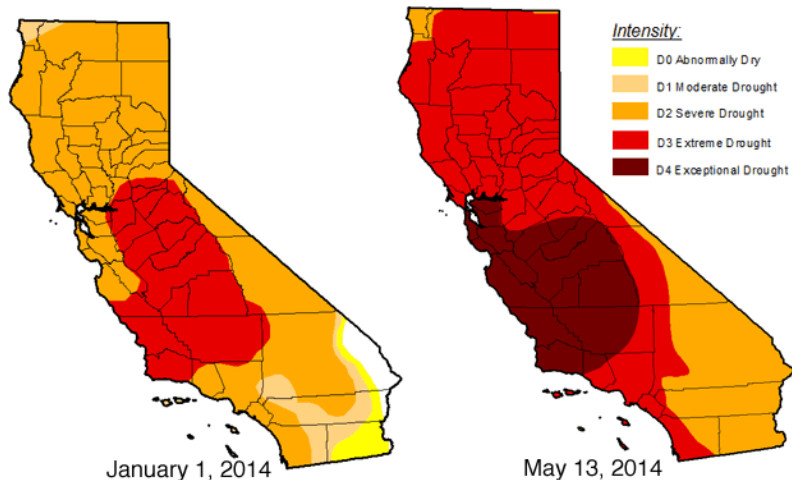
California drought - How bad is it?

Drought Group

Thursday, July 31, 2014

Introduction

Progression of California Drought in 2014



Objectives

- ▶ 1 What are the spatial and temporal dynamics of the current drought?
- ▶ 2 How much has the carbon sink strength been reduced by the current drought?
- ▶ 3 Are natural systems more resilient than agricultural systems to drought?
- ▶ 4 What are the impacts of drought on ecosystem services?

1 What are the spatial and temporal dynamics of the current drought?

- ▶ How bad is the current drought?
- ▶ Data: scPDSI
- ▶ Data: workflow

2 How much has the carbon sink strength been reduced by the current drought?

Data: - Amareiflux Data (NEE, GEE, Reco) - Modis (EVI, LST)

Objective: Examine changes in CO₂ sequestration (NEE) for the entire state of CA and determine how drought impacts CO₂ dynamics in natural and agricultural ecosystems

Reco estimation validate Modis derived GPP

3 Are natural systems more resilient than agricultural systems to drought?

- ▶ Modis derived NPP,
- ▶ Rainfall (PRISM),
- ▶ CROP map (cdl)
- ▶ Objectives: Comparing (map) resilience (differences in C_g /rain mm) in natural and Agricultural systems

4 What are the impacts of drought on ecosystem services?

- ▶ Carbon sink?
- ▶ Crop yield?
- ▶ Water?

thank you very much!