Planning restoration efforts: how do we determine the desired endpoint

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You've got to know where you're going

- **Prior plants and conditions**

- **Influences on plant community composition**

- **Current vs past site characteristics**

- **Long-term climate**

- **Management goals**

- **Likely future disturbance**

- **No restoration?**

- **Constructing "best guess" scenerios**

Prior plants and conditions

Native

Plants and microbes

Invaded

Soil depth and texture

Texture = water
depth = water/nutrients
chemistry = nutrients

Herbivores can change!

Climate

- **Timing**
- **Type**
- **Intensity**
- **Amount**

Water pulses in arid systems
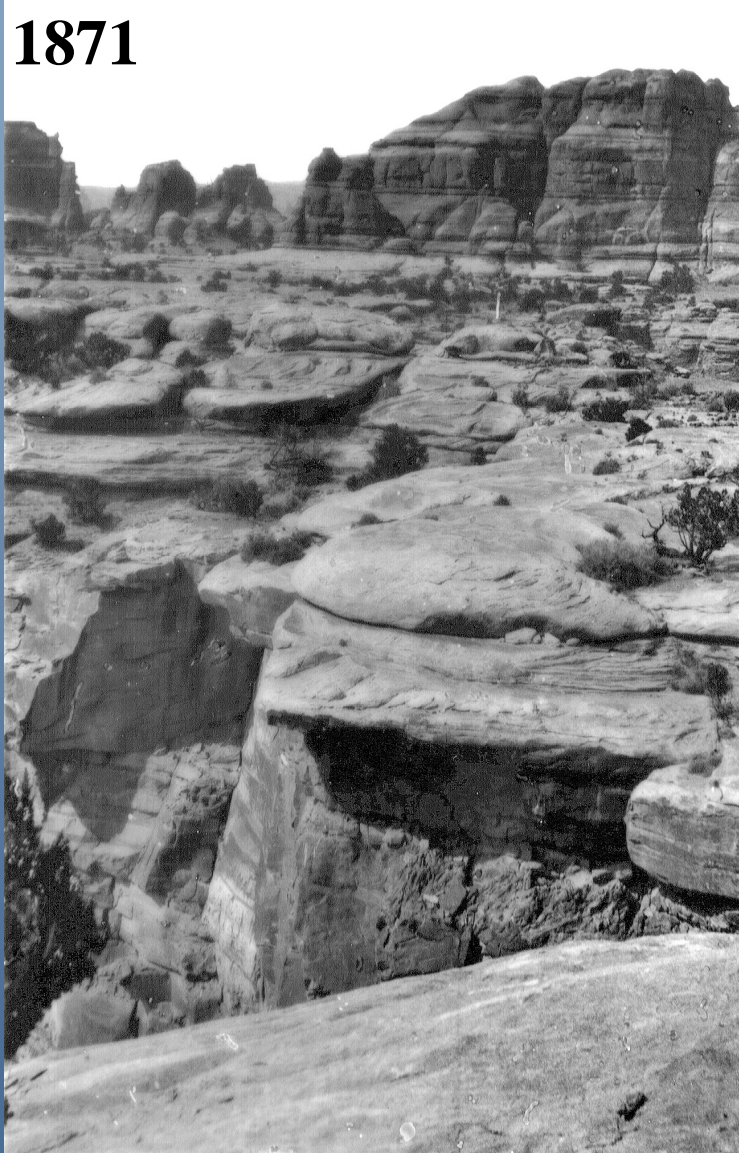

- **Regional**

- **Landscape**
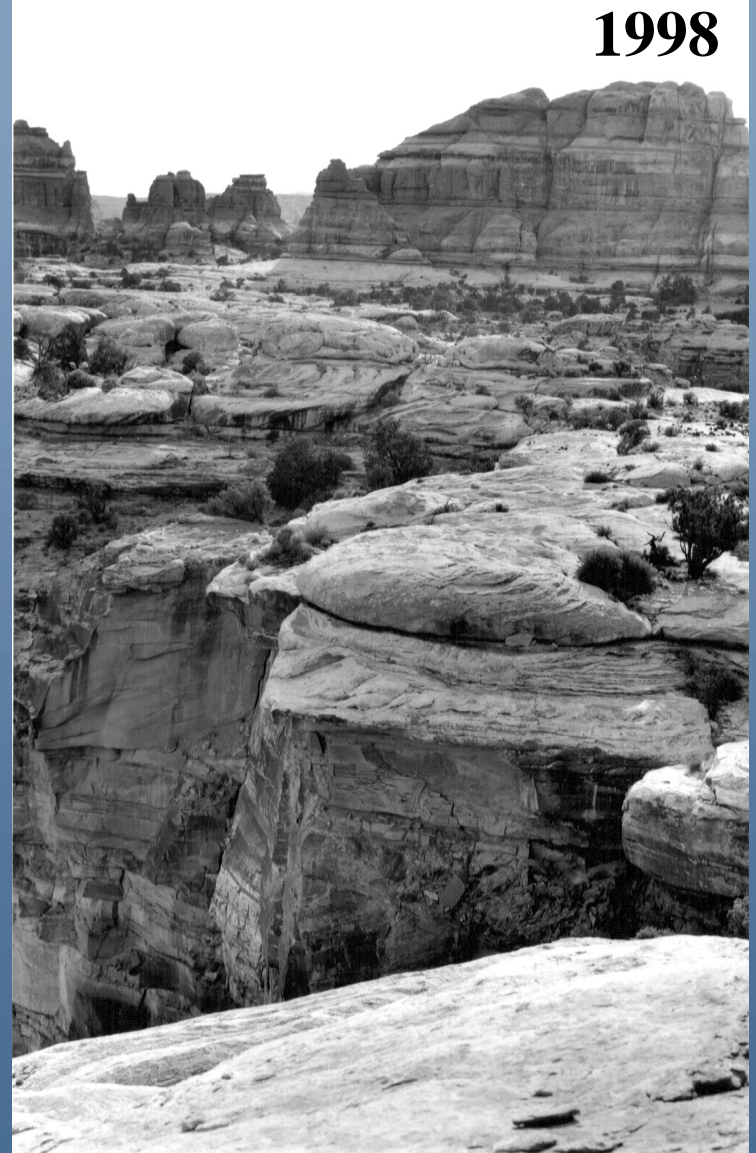
- **Catena**

- **Plant interspaces**

Lots of questions, few answers
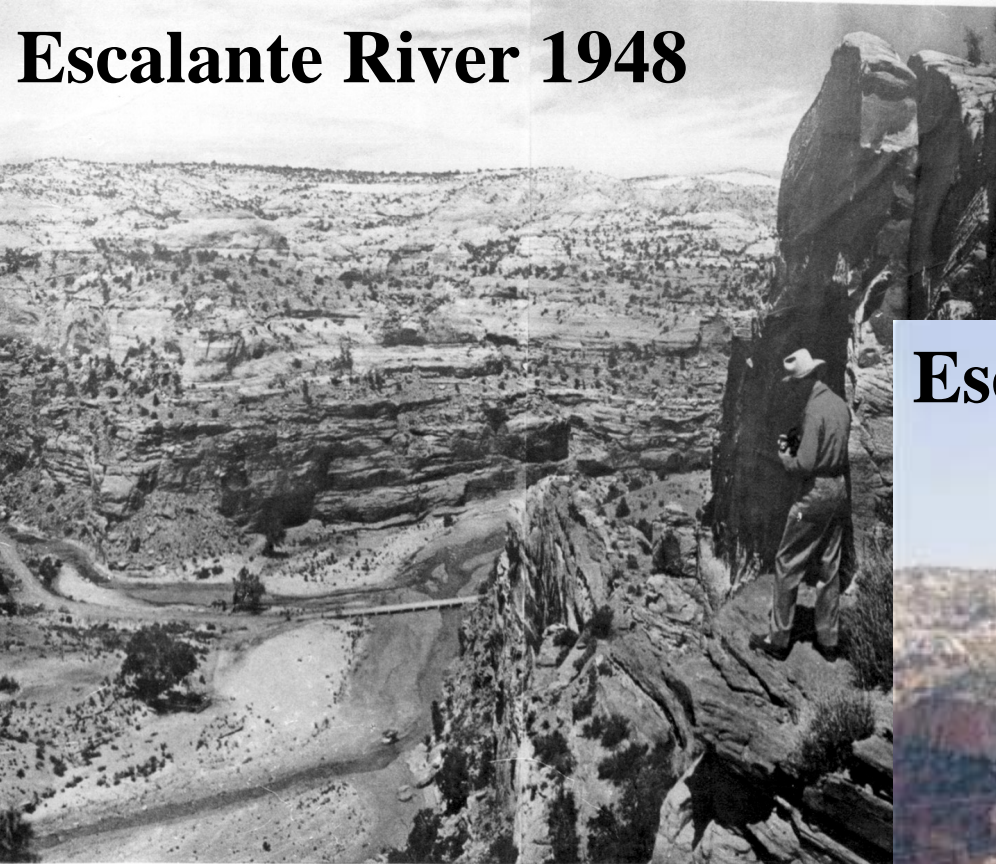
Land of Standing Rocks

1871

1998

Long-term climate
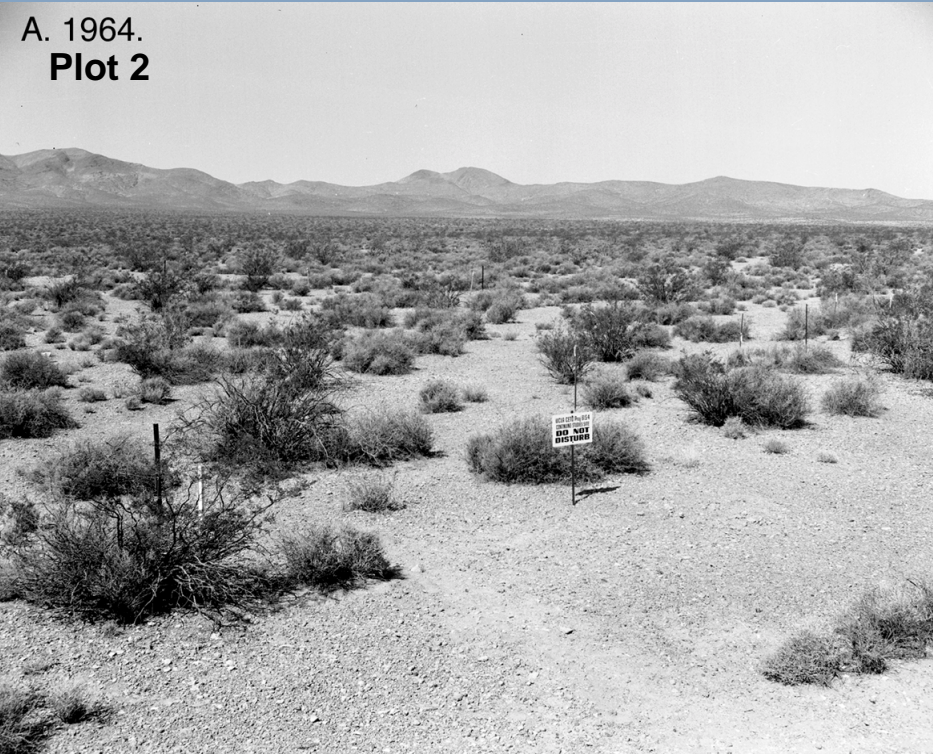

Escalante River 1948

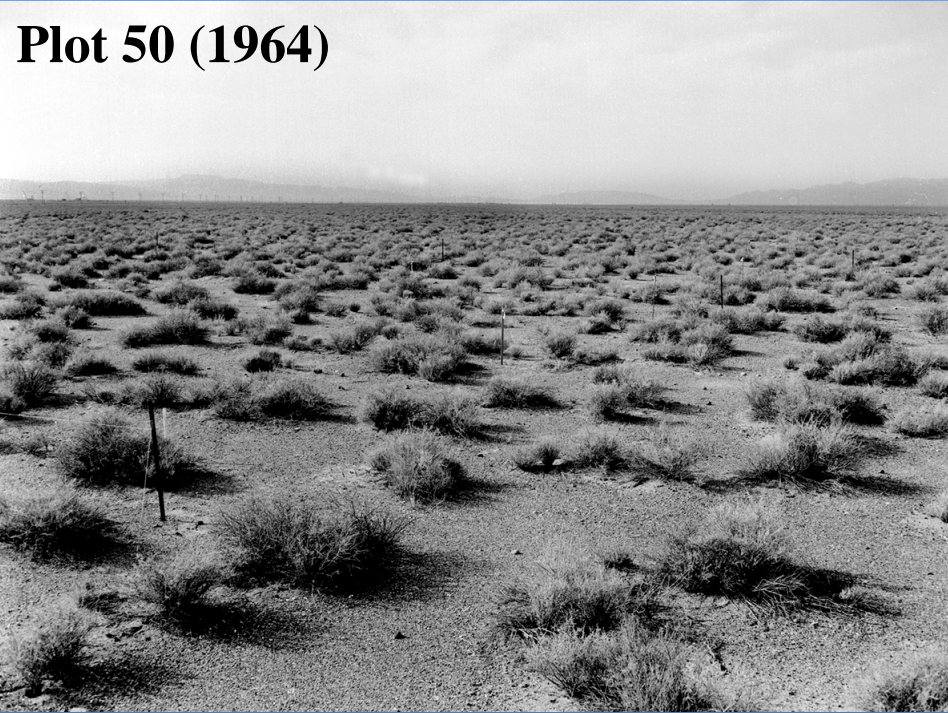Escalante River 1999

Long-term climate

A. 1964. Plot 2

B. 2000. Plot 2

Long-term climate
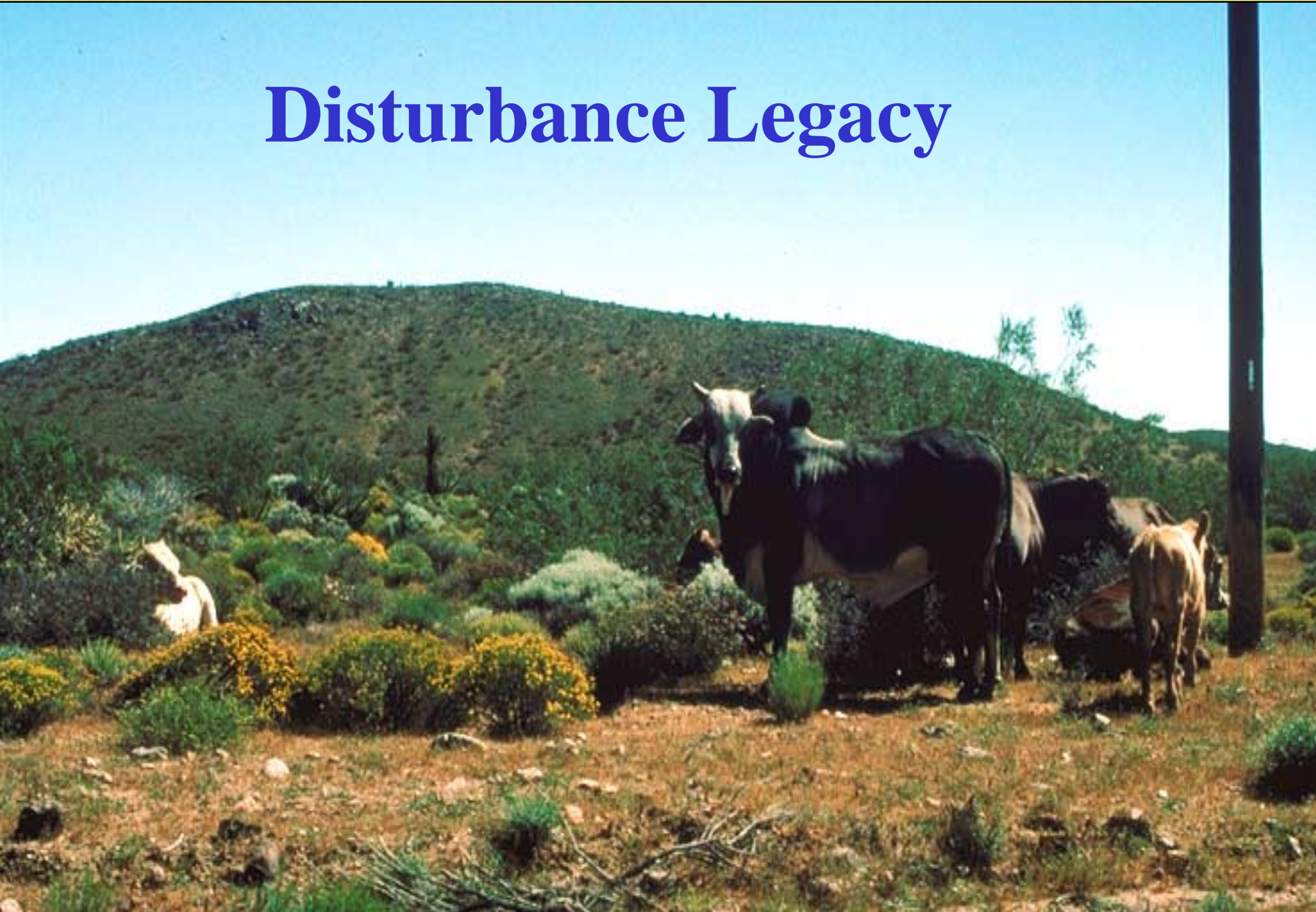

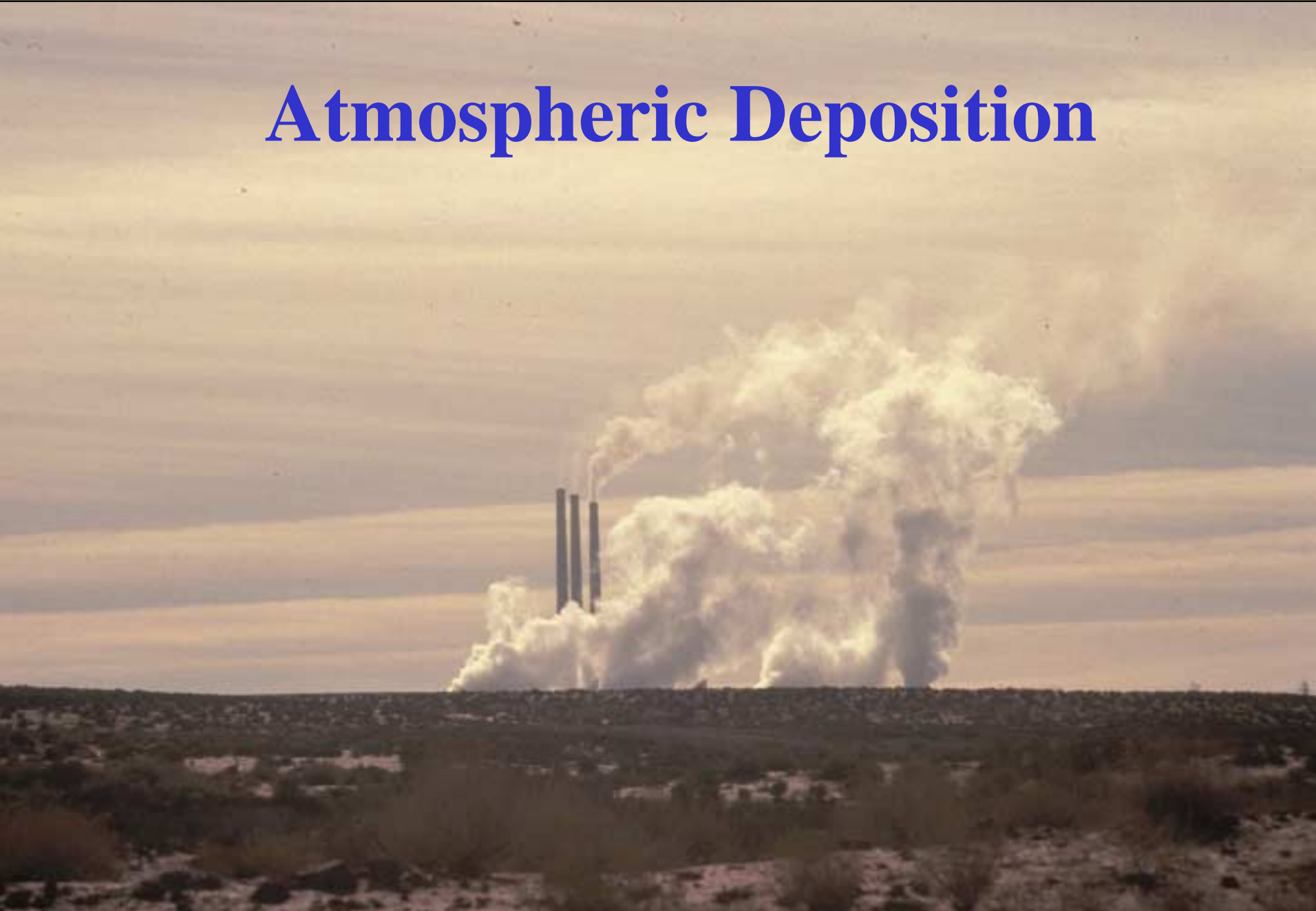Plot 50 (1964)

Plot 50 (2001)

Long-term climate

Plot 51 (1964)

Plot 51 (2002)

Disturbance Legacy

Atmospheric Deposition

Current vs. past characteristics?

Post-disturbance characteristics
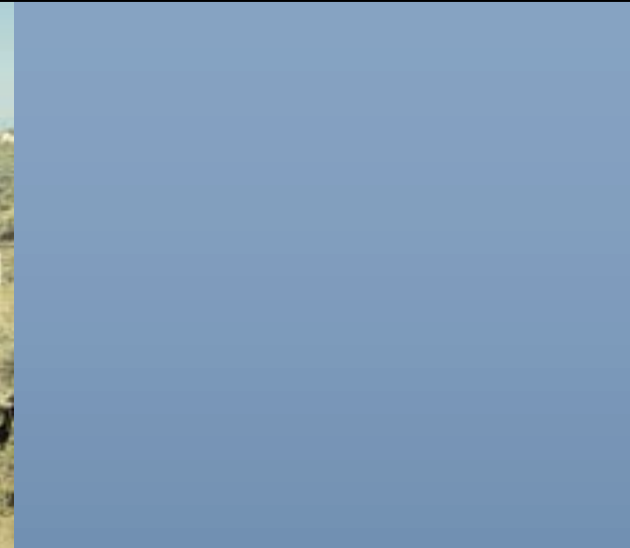

Soils: yes, they have changed!

Herbivores: have they changed?

Climate (local): is it changing?

Disturbance legacy: how does recovery change conditions

Atmospheric deposition: it will change!

Management goals

- **Timing**
- **Type**
- **Intensity**
- **Amount**

Likely future disturbance

No restoration?

Constructing "best guess" scenerios