

Intro to Restoration

*What the heck is restoration
anyway?*

Stressor identification

Disturbance regimes

Stability, resiliency

Historical reference

Ecosystem function

Structure and function

and other academic-type words!



Definitions

Definitions

Remediation - *initial removal of toxic substances or oil that occur on site prior to restoration of the land.*

Rehabilitation - *a partial return to a previous state. Emphasizes the reparation of ecosystem processes, productivity and services*

Reclamation *is the process of reconvertng disturbed land to its former or other productive uses. "Land Stabilization"*

Mitigation - *an action that is intended to compensate environmental damage*



Restoration



Ecological restoration is the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed (from SER)

Remediation



The initial clean-up...getting rid of all the goo

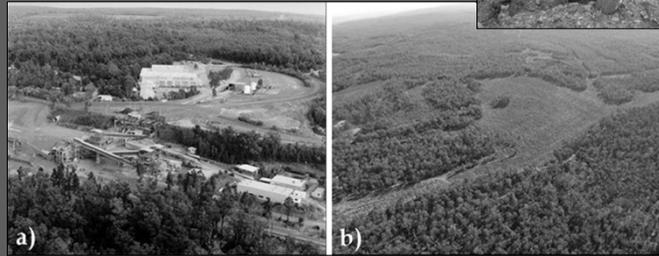
Habitat rehabilitation



Partial return to a previous state



Reclamation

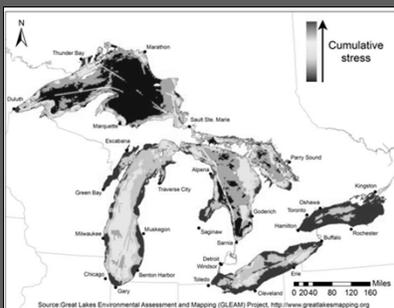


Commonly used in reference to mined lands
Reconverting mined lands to productive uses

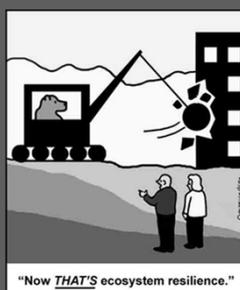
Concepts

Stressor identification

- Crucial!
- Important to identify all underlying stressors when planning your restoration effort



Ecosystem Resilience

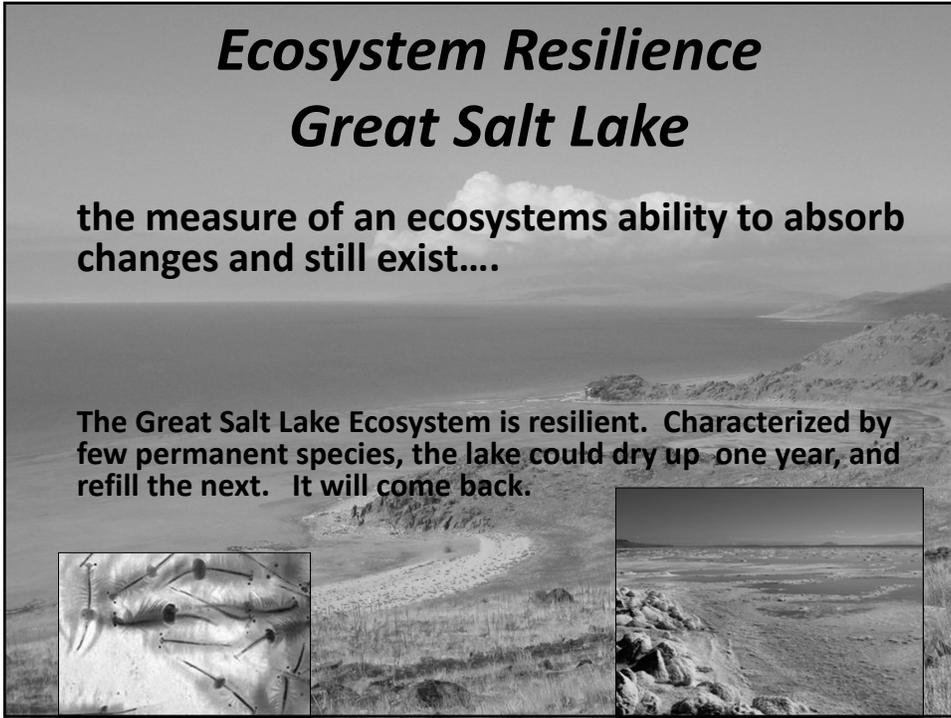


how complex systems adapt to and recover from localized disturbances like hurricanes, fires, and pest outbreaks

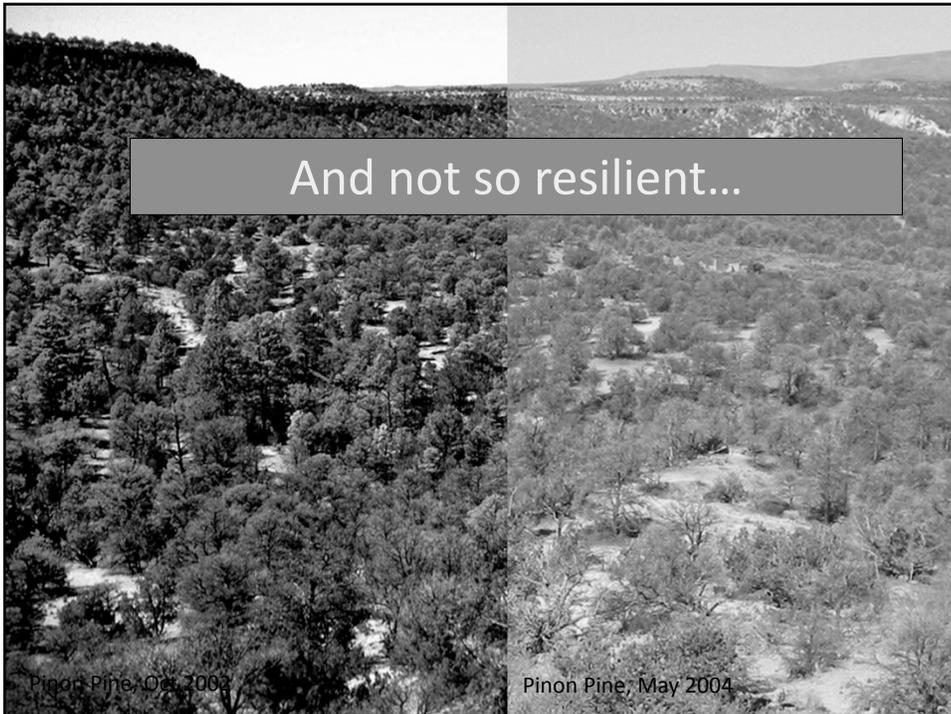
Ecosystem Resilience ***Great Salt Lake***

the measure of an ecosystems ability to absorb changes and still exist....

The Great Salt Lake Ecosystem is resilient. Characterized by few permanent species, the lake could dry up one year, and refill the next. It will come back.



And not so resilient...



Pinon Pine, Oct 2003

Pinon Pine, May 2004

Ecosystem Resilience



Disturbance Regimes

Natural disturbances include severe weather, fire, flooding, and even volcanic eruptions.



Disturbance regimes may be important for maintaining an early stage of succession.



Reference conditions

- 1492?
- Pre-European settlement?
- Pre-ice age....which one?

Need to be realistic...



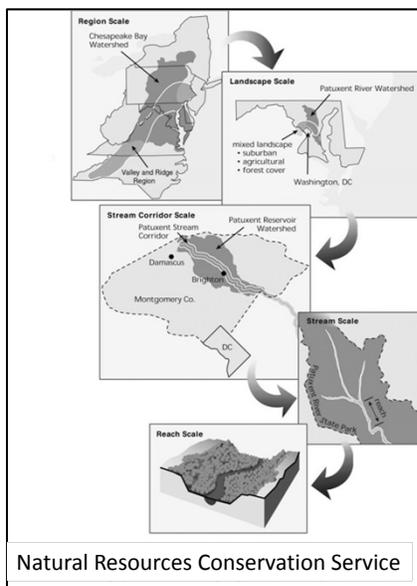
California oak woodlands

Human use,
Infrastructure
Climate change



Scale and Scope

Scale



or



Why is Project Scope Important?

- IDs Issues of concern
- IDs stressors
- Setting preliminary goals
- Developing quantitative indicators
- IDs stakeholders
- IDs level of project planning
- IDs potential project partners



