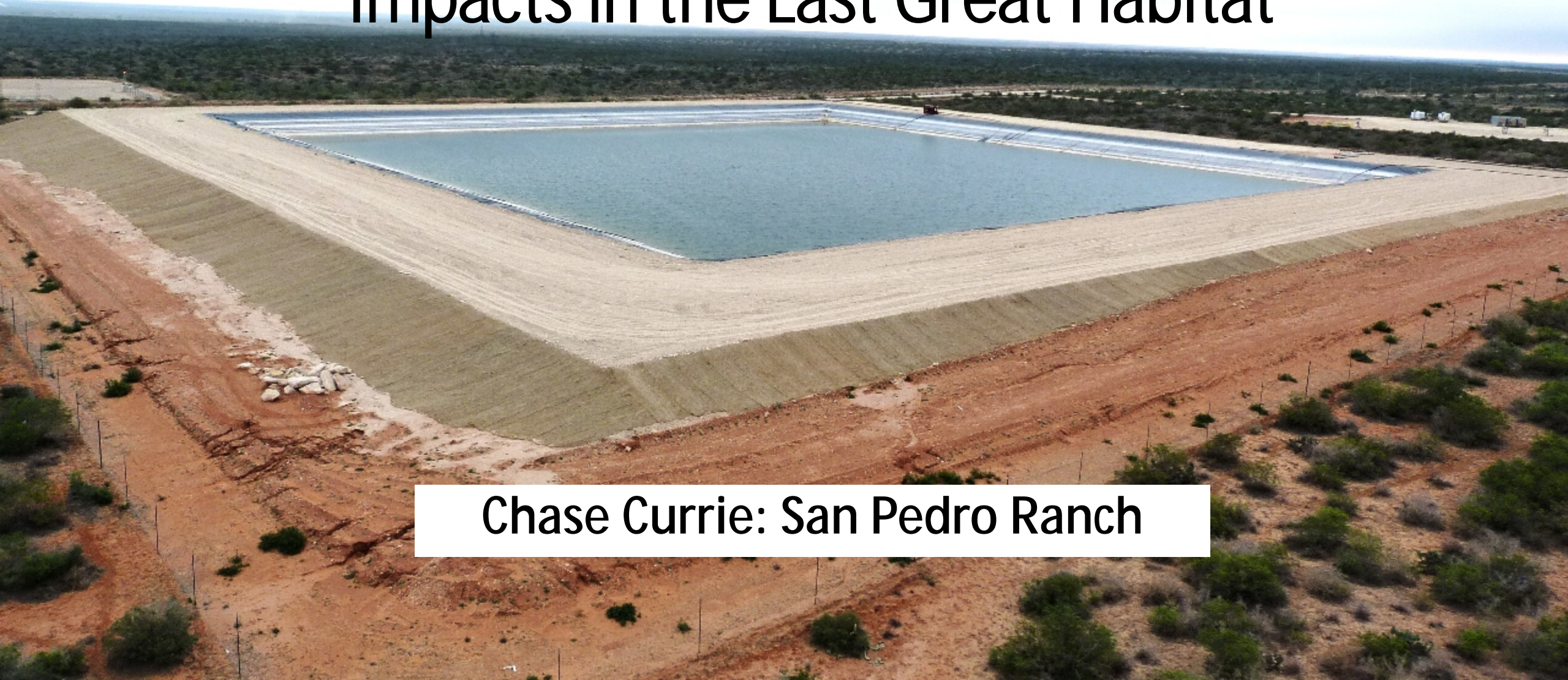


# The Eagle Ford Shale: Mitigating Oil and Gas Impacts in the Last Great Habitat

Chase Currie: San Pedro Ranch





# "The Last Great Habitat": South Texas

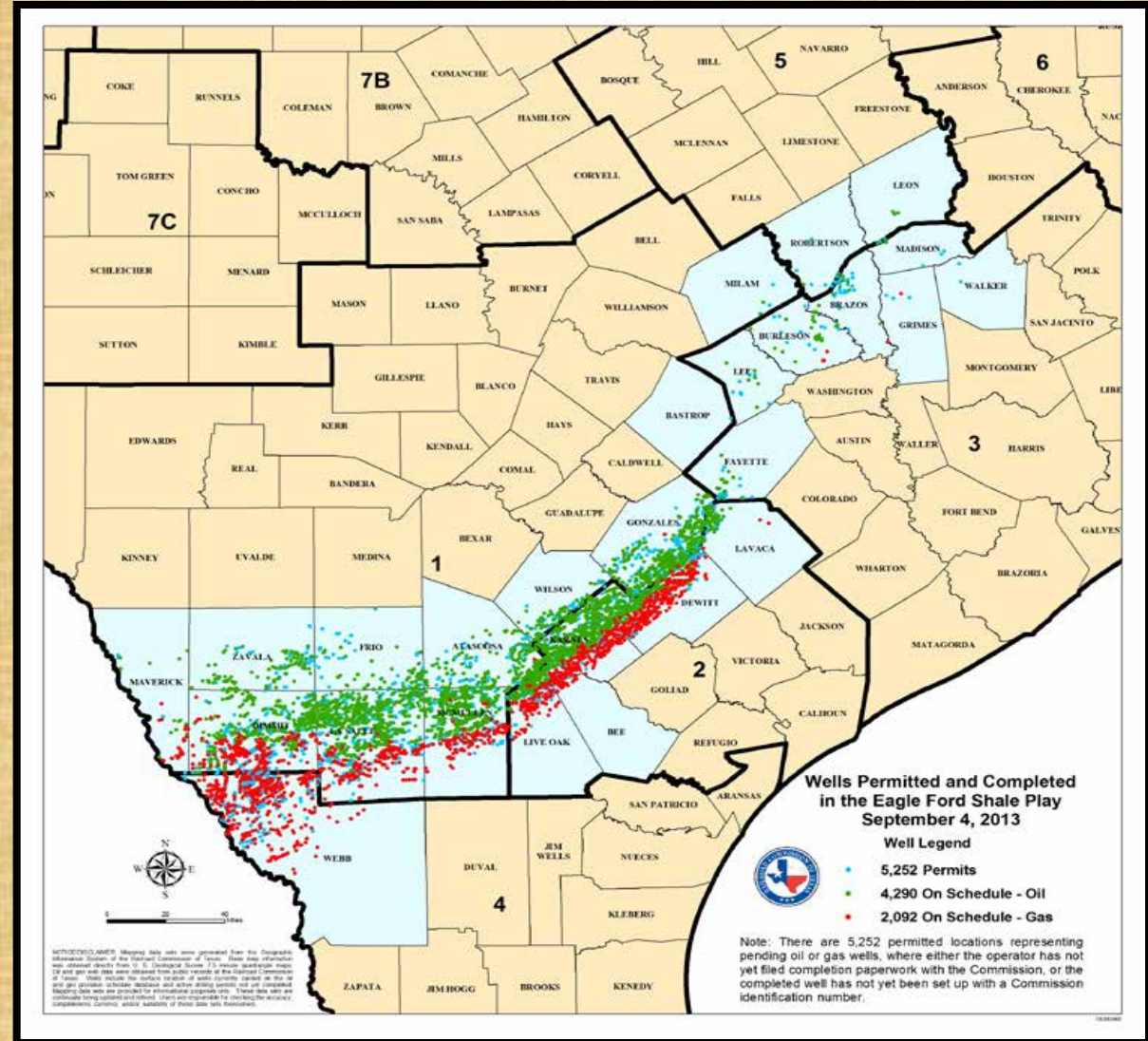
- Lies south of a line from Del Rio to San Antonio and southeast to Victoria and Port O'Connor
- Privately owned
- Hyperdiverse ecological community





# The Eagle Ford Shale

- Oil and gas play
- 11,624 permitted wells: 9/4/2013
- Impacts
  - Direct: loss of habitat and increased fragmentation
  - Indirect: soil erosion, spread of exotic plant species, increased rainfall run-off



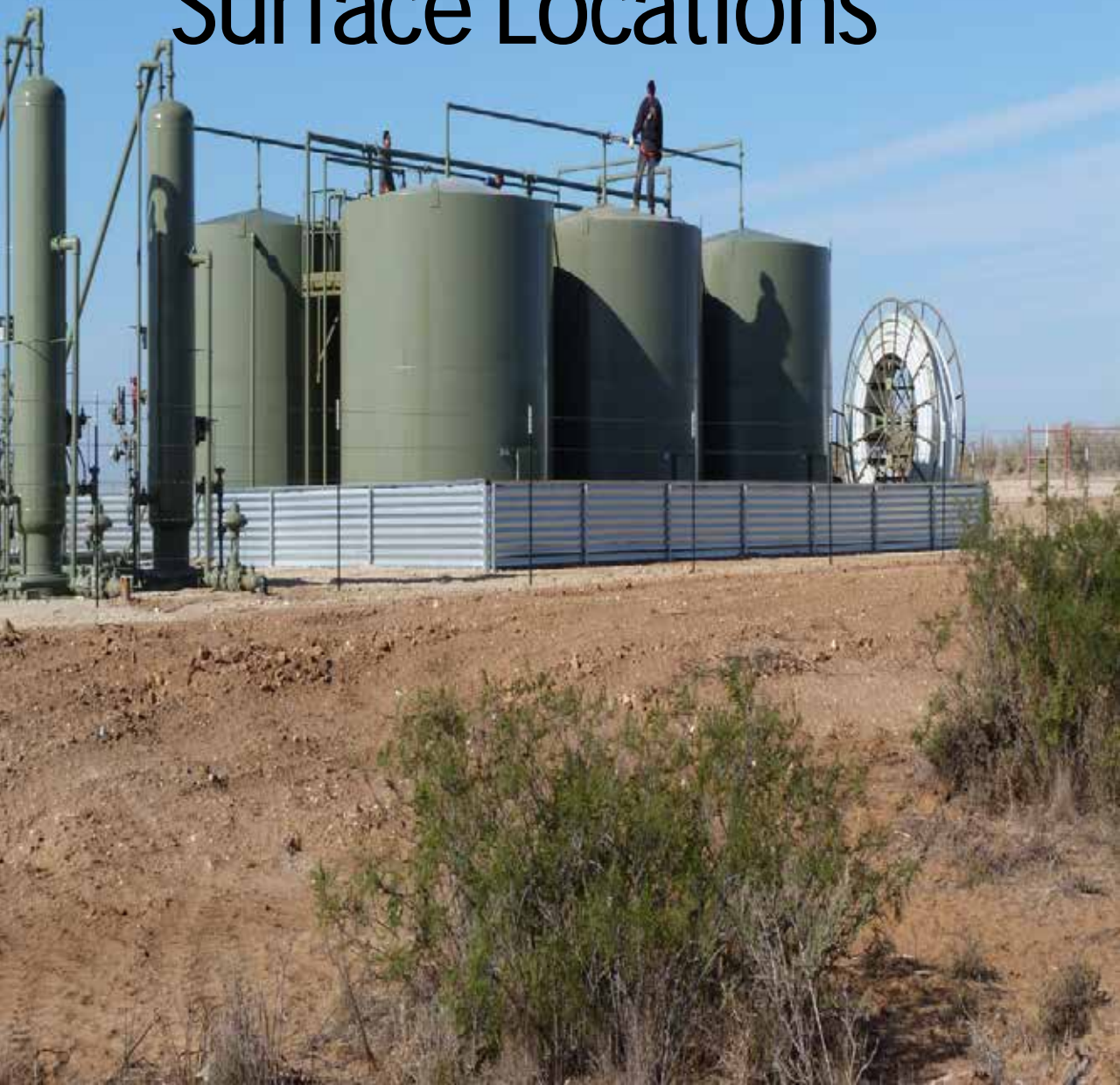
# Mitigation and Reclamation: Your Situation

- Each situation is unique
  - Property size
  - Available resources
  - Mineral rights
- ALWAYS....
  - A good surface use agreement
  - Seek legal advice

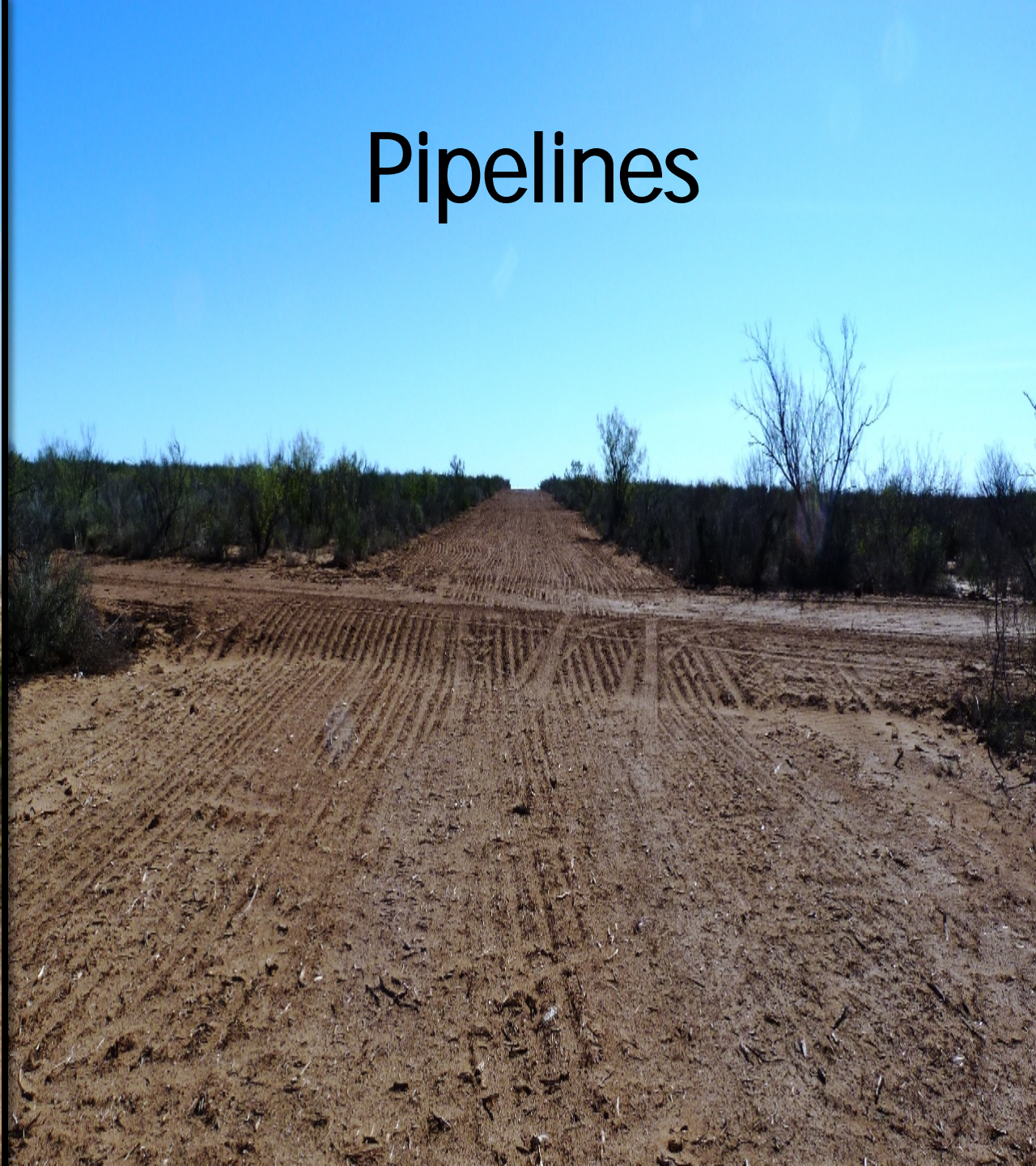




# Surface Locations



# Pipelines



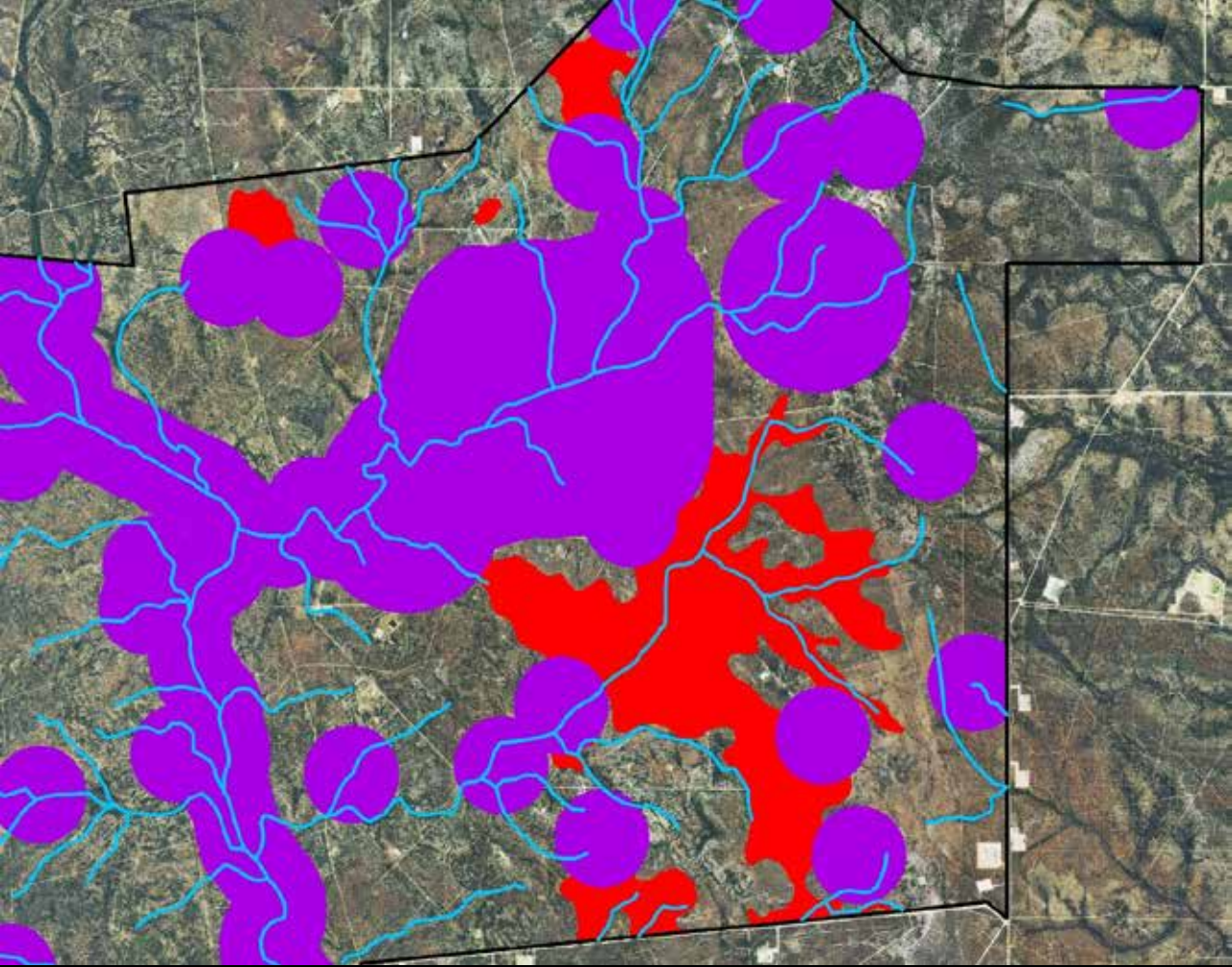


# Mitigation Process (Pre-Construction)

- Develop a baseline for surface locations and pipelines
  - Identify sensitive areas (map)
- Topography
- Access: Road?
- Oil Field Corridor







**Identify sensitive  
areas with mapping**

**Pipelines: position  
along existing roads**



# Mitigation Process (Construction)

- Environmental friendly drilling matts
- Stockpiling topsoil
- Clean equipment
- Bore sensitive areas
  - Riparian areas





Bore sensitive areas





# Reclamation Process (Post Construction)

- Re-distribute topsoil back over the site
- Seed bed
- Plant natives
- Erosion blankets
- Screening techniques





# Planting Native Seeds

- Plant a diverse mix
- Use the correct ecotype
- Timing?
  - August 15-October 15  
(South Texas Natives)
- Use correct equipment





Use erosion blankets







# Screening Techniques



# Monitoring





9/11/2013



2/18/2013



9/16/2013



3/20/2013





# Conclusions

- Plan, Plan, Plan!!!
- Be steadfast in your monitoring
- Use oilfield related disturbance to your advantage
- Be creative and flexible





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Questions??

