

PARD LAND MANAGEMENT STRATEGIES AND CLIMATE VULNERABILITY ANALYSIS

MAJOR FINDINGS AND RECOMMENDATIONS

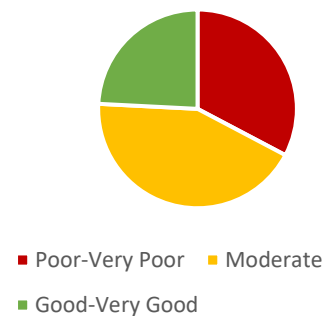
Austin's natural areas

- 87.5% of Austin's public natural areas (PARD and Austin Water) are west of Interstate 35.
- 98.5% of all lands that have received ecological restoration activities are west of Interstate 35.
- Socially vulnerable (i.e. disadvantaged) communities depend heavily on healthy ecosystems for their health, well-being, and economic vitality. Most communities classified as high social vulnerability are located east of Interstate 35.

Current challenges

- 76% of parkland natural areas are classified as Very Poor to Moderate condition due to issues such as invasive species, loss of biodiversity, and hazardous wildfire fuel conditions. Poor ecological condition contributes to elevated likelihood of tree mortality and intense wildfire.
- Areas of elevated probability of intense wildfire are distributed throughout the park system.
- Areas of highest Climate Vulnerability Index are distributed throughout the park system but concentrated east of Mopac.

Natural area condition class



Future challenges

- Climate change will increase the likelihood of widespread tree mortality and intense wildfire.
- The temperature and evaporative demand conditions during the 2011 wildfire season – the most destructive in Texas' history – are projected to be the average condition as soon as 2040 to 2070.
- This means that as few as 17 years remain to address current challenges and prepare our natural areas for significant climatic stress.

Implementation

- Over 1,000 acres/year of restoration treatment are needed over the next ~20 years.
- Strategies will include:
 - Selective thinning: Targeted removal of small trees and brush to improve forest health
 - Fuel reduction: More intensive selective thinning, typically targeted near structures
 - Prescribed fire: Important land management and wildfire mitigation tool
 - Invasive species removal: Improves climate resilience park user safety
 - Planting and seeding: improves climate resilience
- Resource needs:
 - PARD has little capacity to accomplish the recommended management actions with existing resources.
 - Implementation will require additional staffing, equipment, and workspace.
 - The estimated need is ~\$200/ac ongoing for staffing and O&M, based on internal cost estimates and comparisons with similar programs.