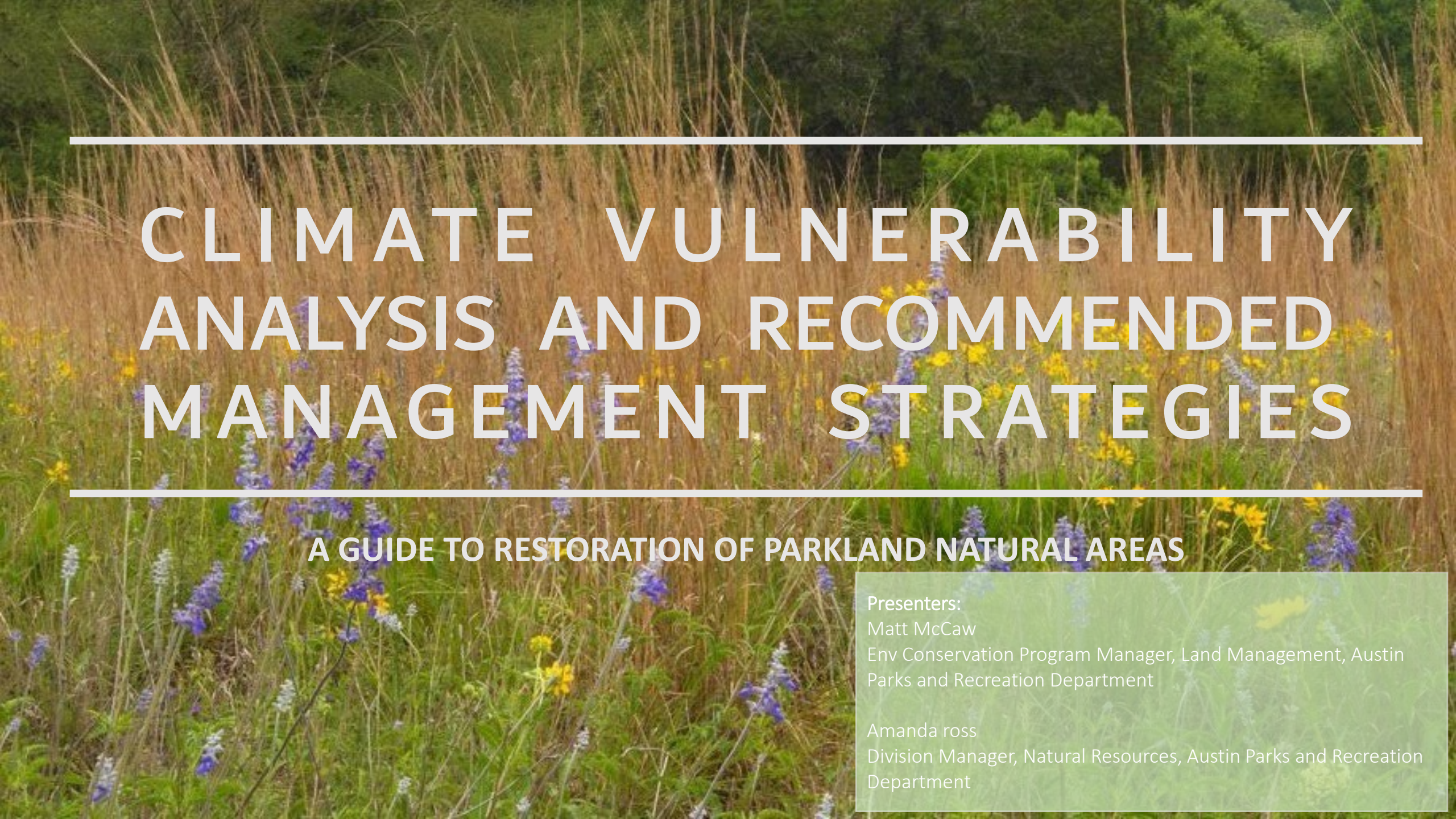

CLIMATE VULNERABILITY ANALYSIS AND RECOMMENDED MANAGEMENT STRATEGIES

A GUIDE TO RESTORATION OF PARKLAND NATURAL AREAS

Presenters:

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Env Conservation Program Manager, Land Management, Austin Parks and Recreation Department

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BACKGROUND

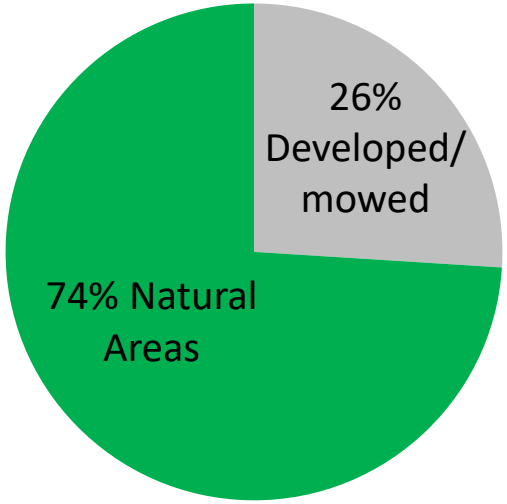
- A *natural area* is one with natural character, typically dominated by native plants and animals
- The majority of parkland acres are designated as natural areas in Nature Preserves, Greenbelts, and other park types
- Natural areas provide critical services such as support for human health and well-being, climate regulation, clean air and water

CHALLENGE

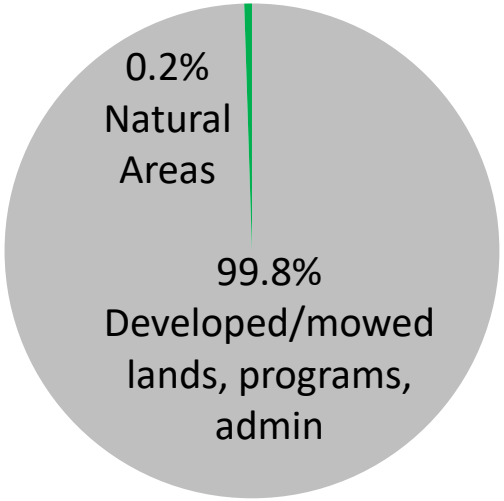
DEGRADED LANDSCAPES

Most parkland natural areas have not been managed for ecosystem health.

As a result, they are threatened by heat, drought, disease, and wildfire and present safety risks to both park users and neighbors.



PARD lands



PARD budget

SOLUTION: ACTIVE ECOLOGICAL RESTORATION

2019 WILDFIRE PREPAREDNESS AUDIT

The 2019 Wildfire Preparedness Audit highlighted this need from a public safety standpoint.

Recommended that PARD create and implement land management plans with a priority on "high-risk properties."

Response

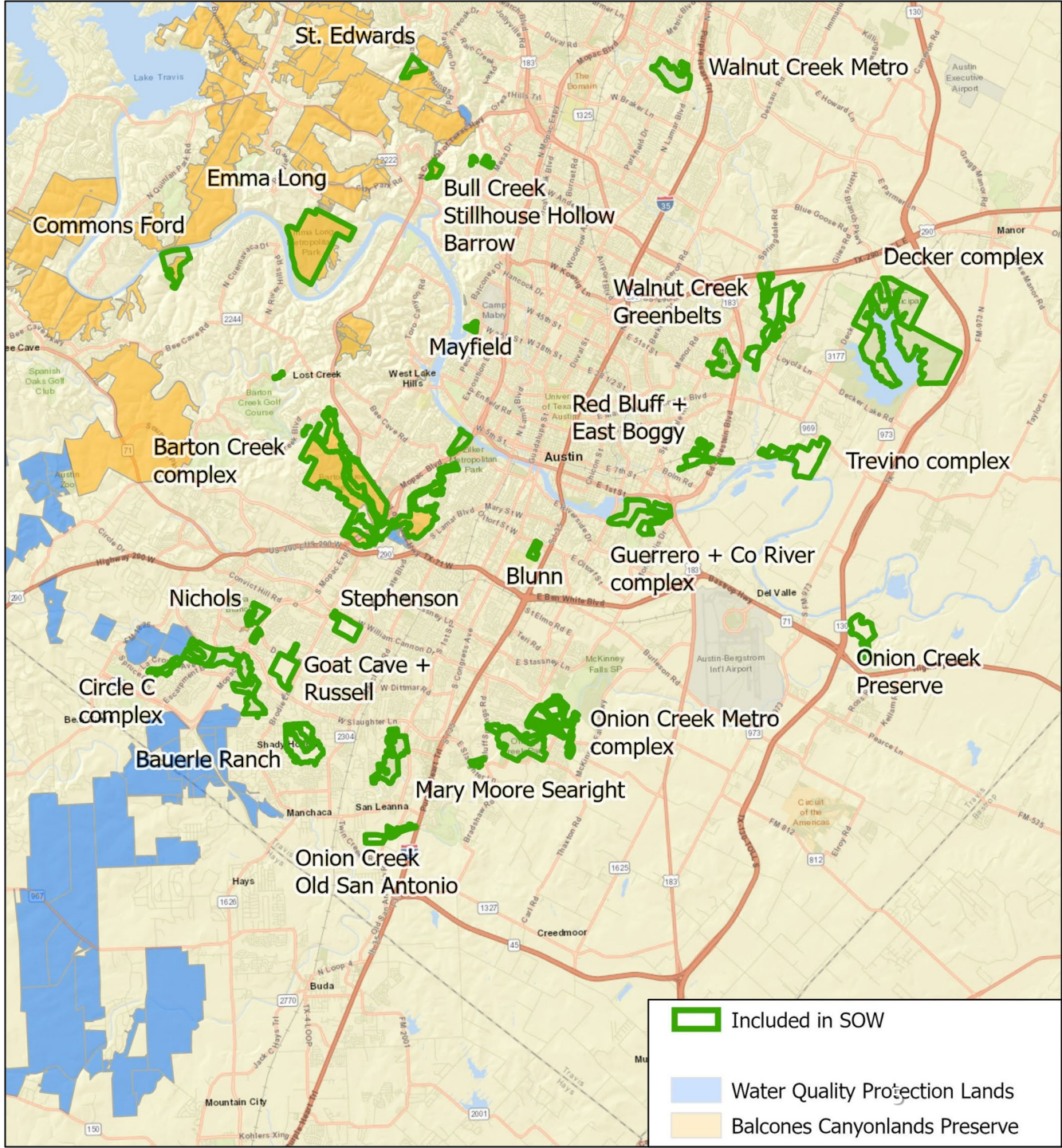
PARD established the beginnings of a land management program as well as created a technical guiding document – "Climate Vulnerability Analysis and Recommended Management Strategies" - to help direct action.

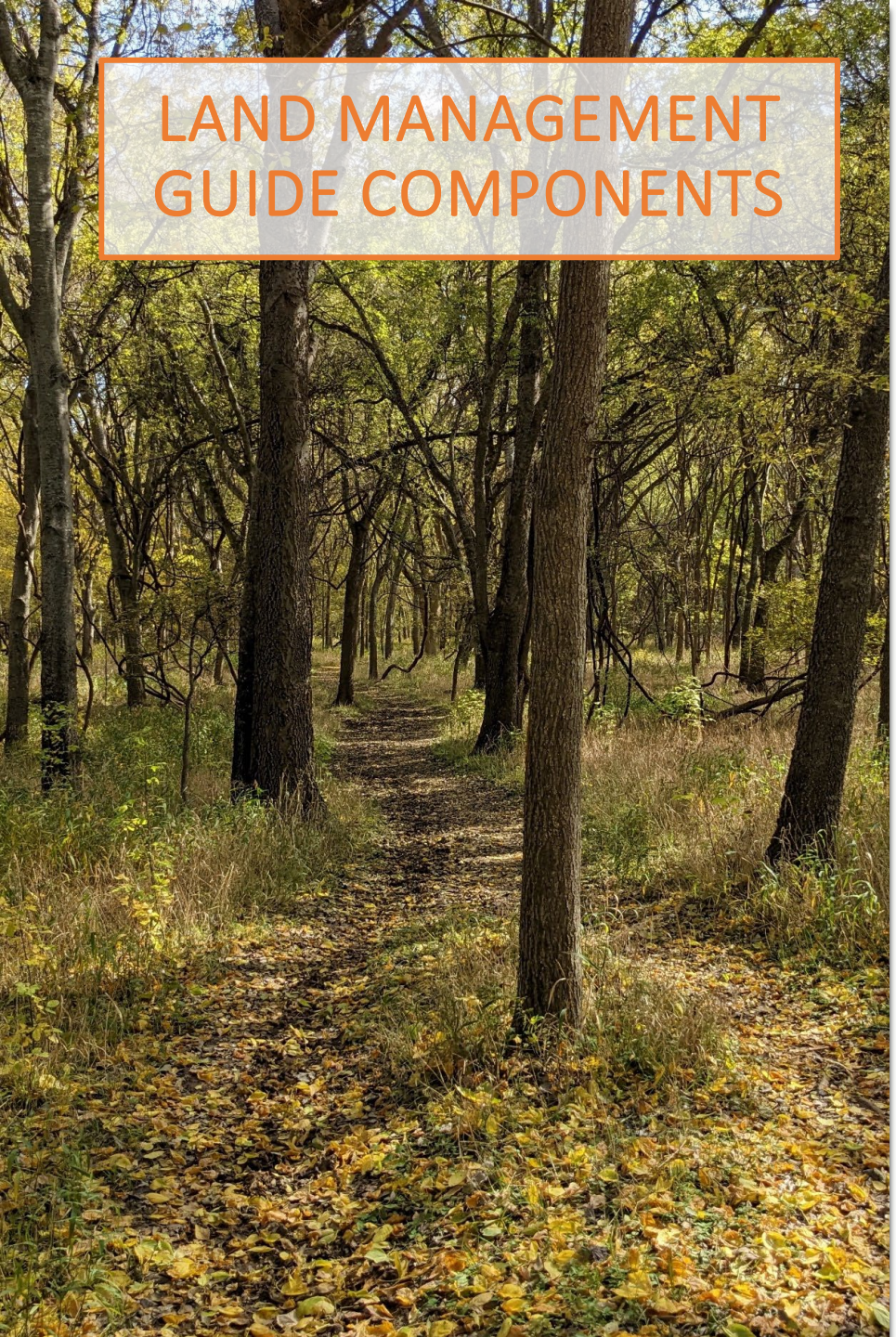
This land management guide will address goals in many other plans and analyses including:

- Austin/Travis County Community Wildfire Prevention Plan
- Nine parks vision plans
- PARD Long Range Plan
- Austin Climate Equity Plan
- Austin Green Infrastructure Strengths and Gaps Assessment
- Austin Healthy Parks Plan

LAND MANAGEMENT GUIDE SCOPE

- 10,347 acres of natural areas
- All PARD Nature Preserves and PARD Balcones Canyonlands Preserves
- Contiguous natural areas > 75-100 acres
- Excludes small and/or fragmented natural areas which provide difficult access and are expensive to manage
- Creates large management complexes

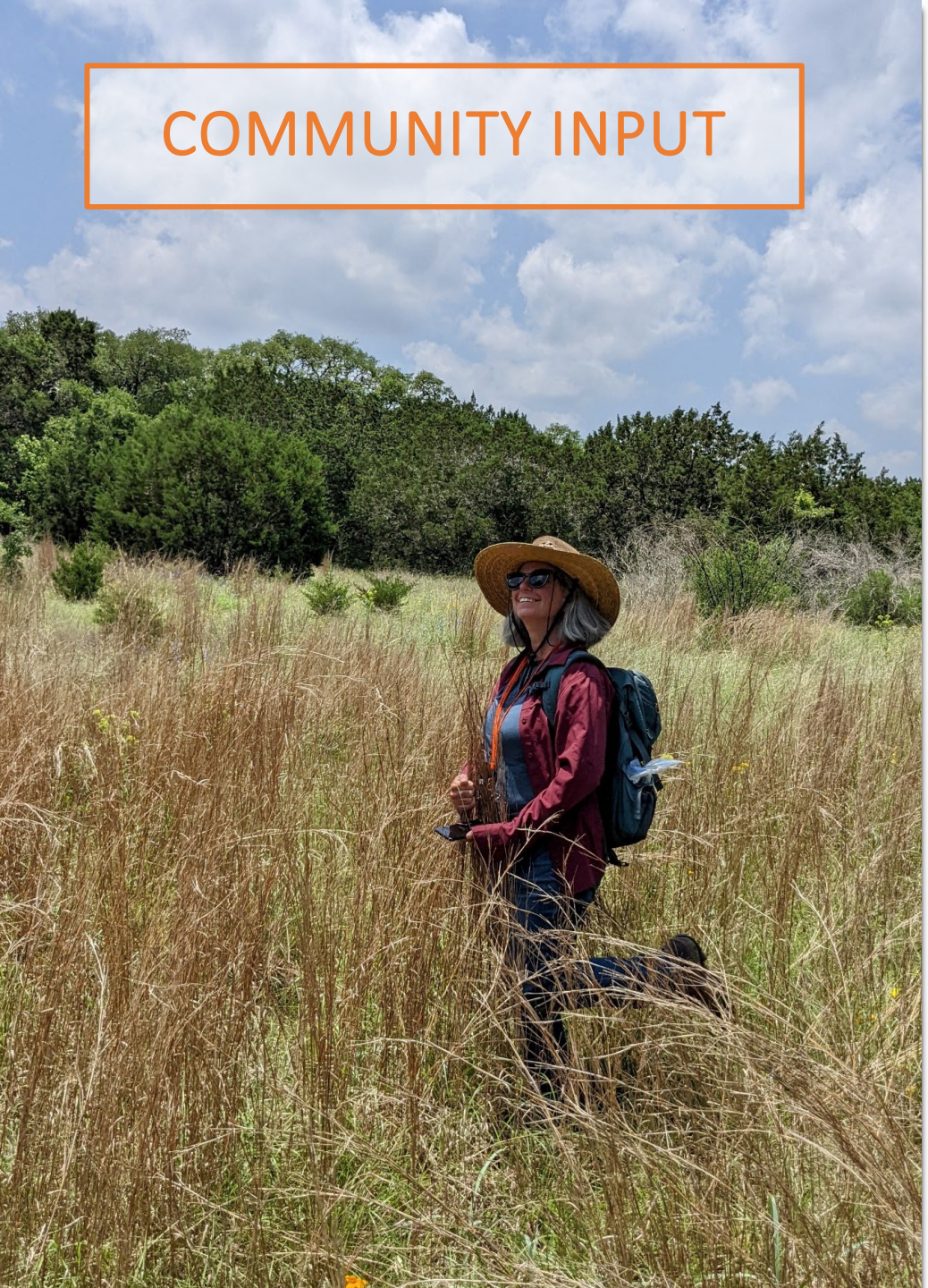




LAND MANAGEMENT GUIDE COMPONENTS

SITE ANALYSIS	Current conditions and challenges. Existing vegetation communities, wildfire fuel conditions, soils, hydrology, endangered species, other elements
CLIMATE VULNERABILITY ANALYSIS	Defined the components of climate vulnerability. Identifies and maps vulnerability to intense heat, drought, disease, and wildfire. Incorporates social vulnerability as a component of risk.
MANAGEMENT GOALS	Vegetation types expected to be most resilient throughout 21st century
RESTORATION STRATEGIES	Actions for economically and efficiently achieving management goals at large scales
MONITORING DIRECTION	For evaluating progress relative to management goals

COMMUNITY INPUT



PREVIOUS PUBLIC ENGAGEMENT

Parks vision plans, Long Range Plan, Climate Equity Plan, Wildfire Preparedness Audit, existing community-supported projects

Two presentations to Parks Board, City Council approval

COMMUNITY INPUT DURING PLAN DEVELOPMENT

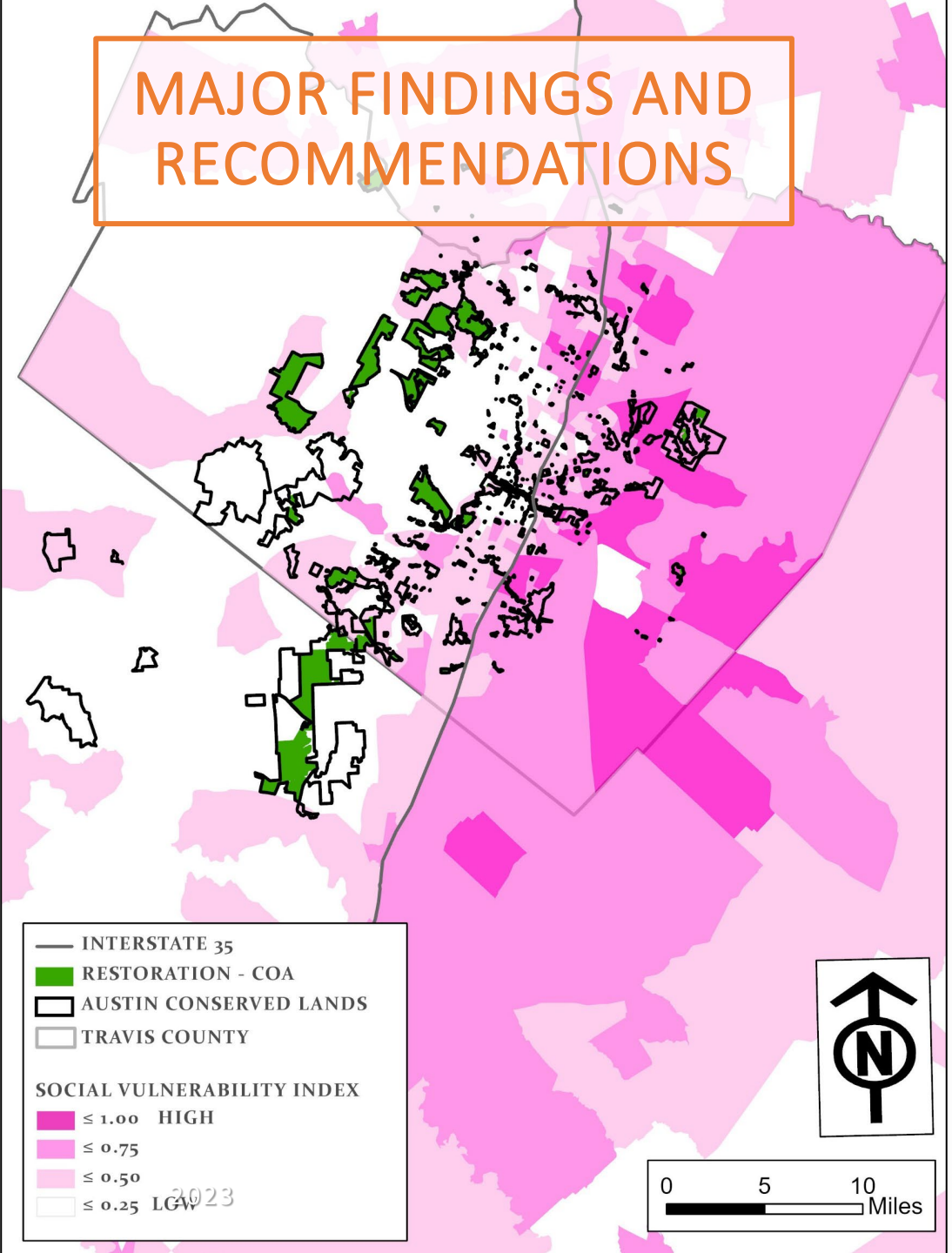
Targeted and general outreach to 50+ stakeholder groups

Input from 60+ key staff: Austin Water/BCP, Austin Fire Department, Watershed Protection, Office of Sustainability, Office of Resilience, Equity Office, Travis County Fire Marshall's office, others

COMMUNITY INPUT DURING IMPLEMENTATION

Co-development of work plans and unified management of tracts with stakeholder groups

MAJOR FINDINGS AND RECOMMENDATIONS

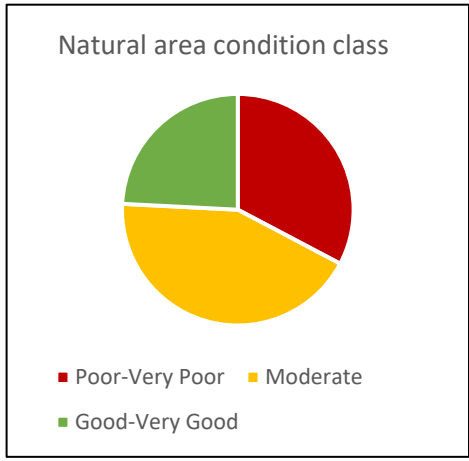


AUSTIN'S NATURAL AREAS

- 87.5% of Austin's public natural areas are west of Interstate 35.
- 98.5% of all lands that have received ecological restoration activities are west of Interstate 35.
- Socially vulnerable 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 in Very Poor to Moderate condition due to invasive species, loss of biodiversity, and hazardous wildfire fuel conditions. Ecological condition affects the likelihood of widespread 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.



FUTURE CHALLENGES

- Climate change will increase the likelihood of widespread tree mortality and intense wildfire.
- The temperature conditions during the 2011 wildfire season are projected to be the average condition as soon as 2040.
- This means that as few as 17 years remain to prepare our natural areas for significant climatic stress.

MAJOR FINDINGS AND RECOMMENDATIONS

PROGRAM STRATEGY

- Long-term, holistic restoration and management of parkland natural areas to mitigate risk, improve resilience, and secure ecosystem services.

- Over 1,000 acres/year of restoration treatment are needed over the next ~20 years.

RESTORATION ACTIVITIES

- Selective thinning: Targeted removal of small trees and brush to improve forest health
- Fuel reduction: More intensive selective thinning, typically near structures
- Prescribed fire: Important land management and wildfire mitigation tool
- Invasive species removal: Improves climate resilience and park user safety
- Planting and seeding: Improves climate resilience

RESOURCE NEEDS

- Staffing, equipment, operating funds, workspace

- Estimated annually at $200 per acre under management

NEXT STEPS

Joint Sustainability Committee – July 26, 2023

Environmental Commission – August 2, 2023

REQUESTED ACTION:
Recommend to Austin City Council to approve the implementation of the Parks and Recreation Department Climate Vulnerability Analysis and Recommended Management Strategies.