



Catalina Mtns



FOREST HEALTH IN ARIZONA

Forest Health Monitoring Workshop 4/17/12

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Topics Today

- Welcome to Arizona!
- Forestry in Arizona – organizational overview
- Recent AZ Forest Health Assessment & Outlook
- Forest Action Plans
- Western States Priorities and Strategies
- Good happenings in Arizona!



Welcome to Arizona!

- We're known for:
 - Grand Canyon
 - Saguaros
 - Petrified Forest
 - 5 "C"s: Cactus, Citrus, Copper, Cattle, Cotton
 - Native Americans
 - Lake Mead and Lake Powell
 - Military Training – Yuma and Barry M Goldwater Ranges, Luke & Davis Monthan
 - Best Mexican Food in the Nation



Quick Facts

- 6th largest state in the union
- 27% of Arizona (20 Million Acres) is forested (comparable to modern-day France or Germany)
- ~87% is publicly owned; ~13% is privately owned
- Largest contiguous stand of Ponderosa Pine trees in the world is contained in Arizona
- My favorite Mexican restaurants are Carolinas and El Bravo in Phoenix.



San Pedro River Riparian Forest

Forest Types & Acreages

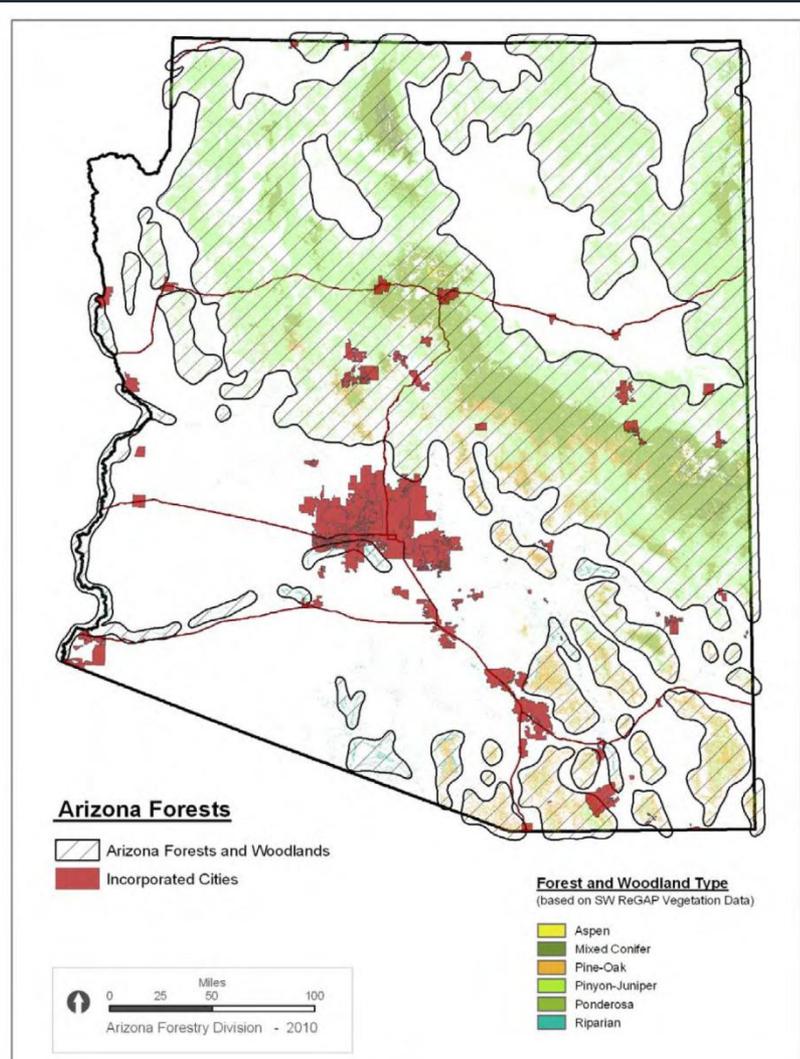


Table 2. Acreages of traditional forest types

<u>Class</u>	<u>Acres</u>
Aspen	111,293
Mixed Conifer	450,221
Pine-Oak	1,779,475
Pinyon-Juniper	13,420,572
Ponderosa	4,043,854
Riparian	<u>328,693</u>
	20,134,109

* Not enough data exists to quantify the types and species of vegetation that make up Arizona's urban forests.

Figure 2. Arizona forests and woodland areas shown with incorporated municipalities.

Arizona State Forestry Mission

Manage and reduce wildfire risk to Arizona's people, communities, and wildland areas and provide forest resource stewardship through strategic implementation of forest health policies and cooperative forestry assistance programs.

The Arizona State Forestry Division provides for the prevention and suppression of wildland fire on 22 million acres of State Trust Land and private property located outside incorporated communities.



Organizational Overview

65 FTE's ~100 Seasonal

- **Fire Management**
 - Operations, Coordination, Planning; safety & logistics; dispatch operations; communication and aviation; fleet management; prevention and training
- **Cooperative Forestry**
 - Technical assistance; forest health; forest stewardship; urban and community forestry; fuel reduction grant programs; Tribal outreach; GIS/IT
- **Districts**
 - District foresters; fire/forestry staff; wildland fire crews
- **Financial**
 - Procurement; accounting/billing; audits



Current AZ State Forest Health Cooperative Programs

- **DETECTION** – Aerial and Ground
- **TECHNICAL ASSISTANCE** – Landowner and Local Govt.
- **MANAGEMENT PLAN INPUTS** – Stewardship and State Lands
- **INFORMATION AND EDUCATION** –Media Alerts, Forest Health Workshops, Tie-ins to Firewise
- **GRANT ADMINISTRATION** – Western Bark Beetle Initiative and Invasive Plant Programs
- **PROGRAM DEVELOPMENT/CONTINUING EDUCATION**



AZ Forest Health Assessment



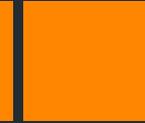
2002-04 Bark Beetle Outbreak
3.4 Million acres in AZ/NM

Recent past history
repeat?



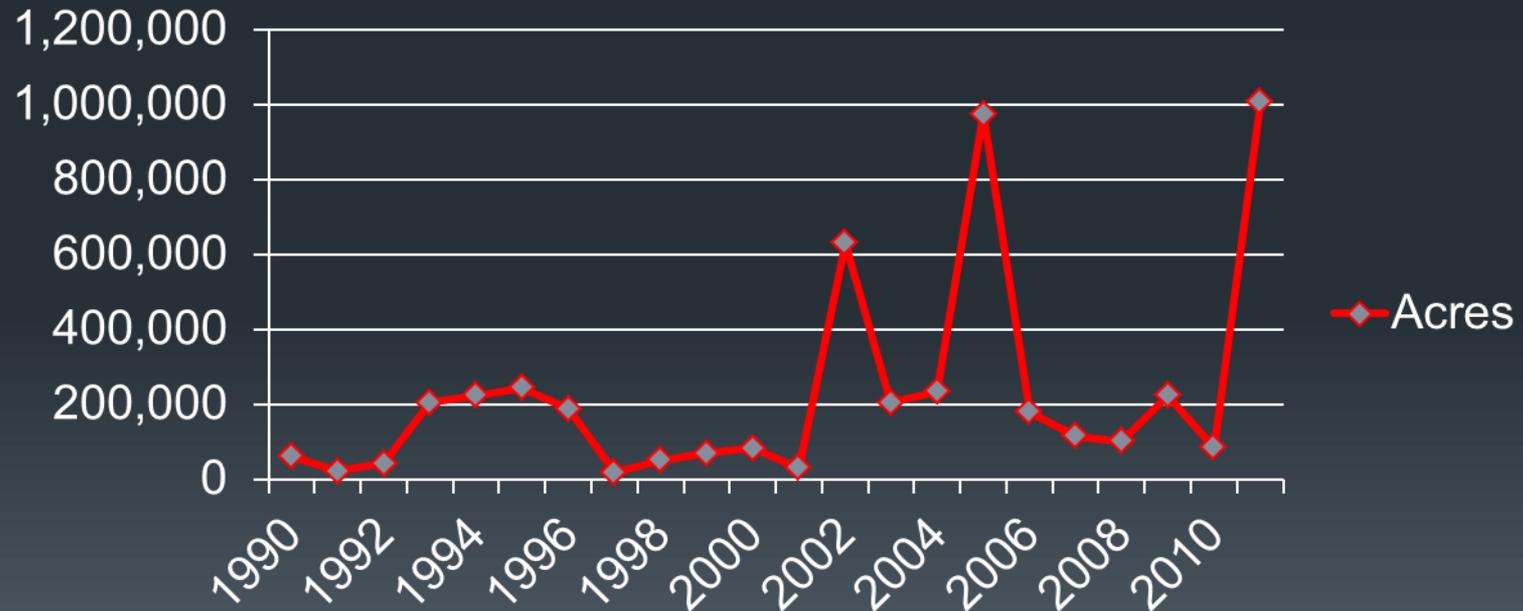
Aspen Decline
400K Acres 2008-2010 AZ/NM

AZ Forest Health Assessment



Acres burned and fire size increasing

Acres Per Year in AZ 1990 - 2011





Historical Large Wildland Fires

(Representative large fires of the past 25 years)

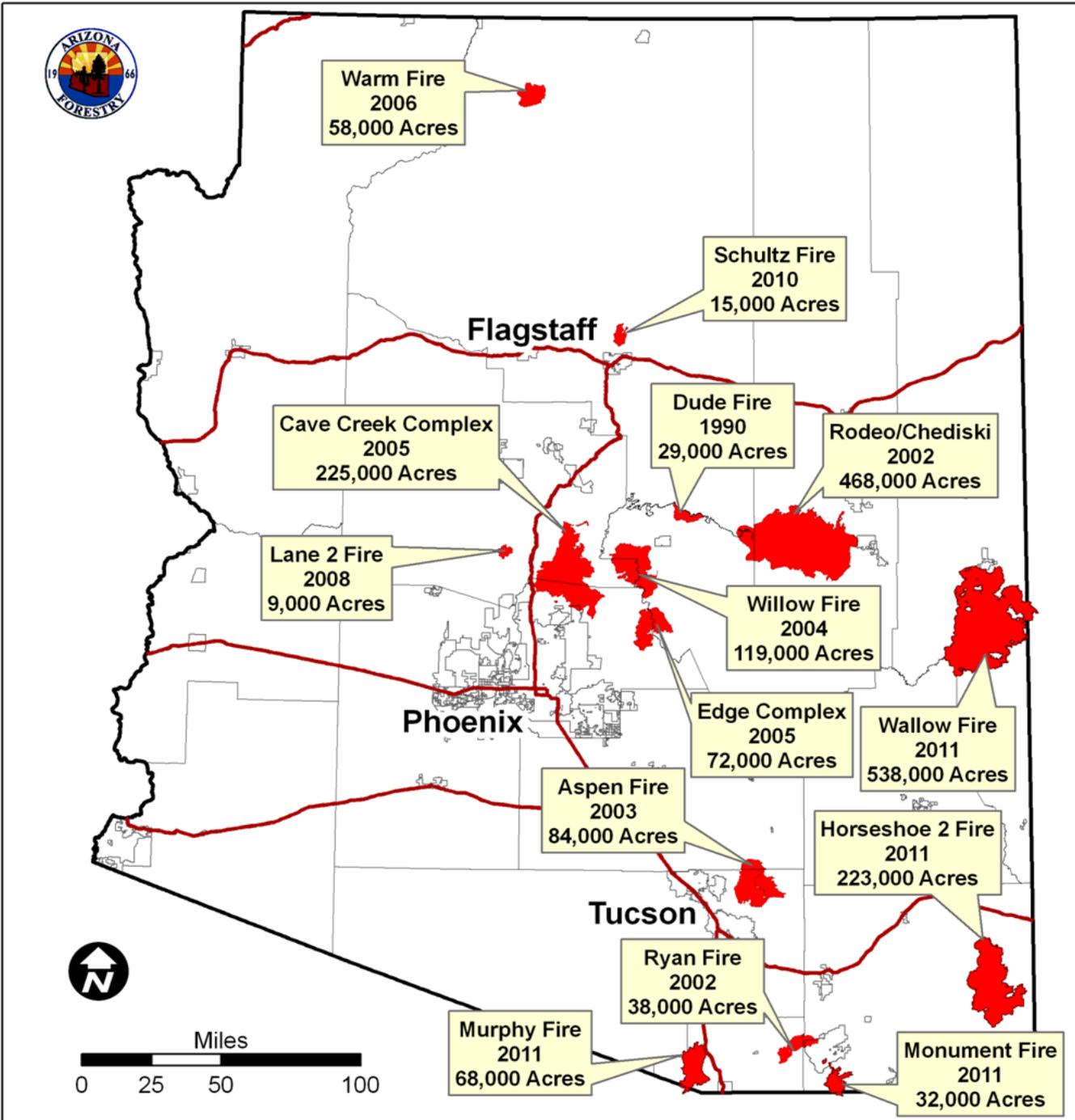
Large Wildland Fires

 Large fires

Map Created By: AZ State Forestry
Date: November 29 2011

Note: Wildland Fire data points based on Federal agency reporting and interagency dispatch data.

This map is for informational purposes only and not intended as an authoritative document. Arizona State Forestry Division makes no warranties, implied or expressed, with respect to information shown.



2011 Fire Season Stats

2011 Statewide Area Burned: 1,006,577 Acres*
10 Yr. Avg (2011-2002) 375,421 Acres *

2011 Statewide # of Fires: 1983 fires*
10 Yr. Avg (2011-2002) 2680 fires*

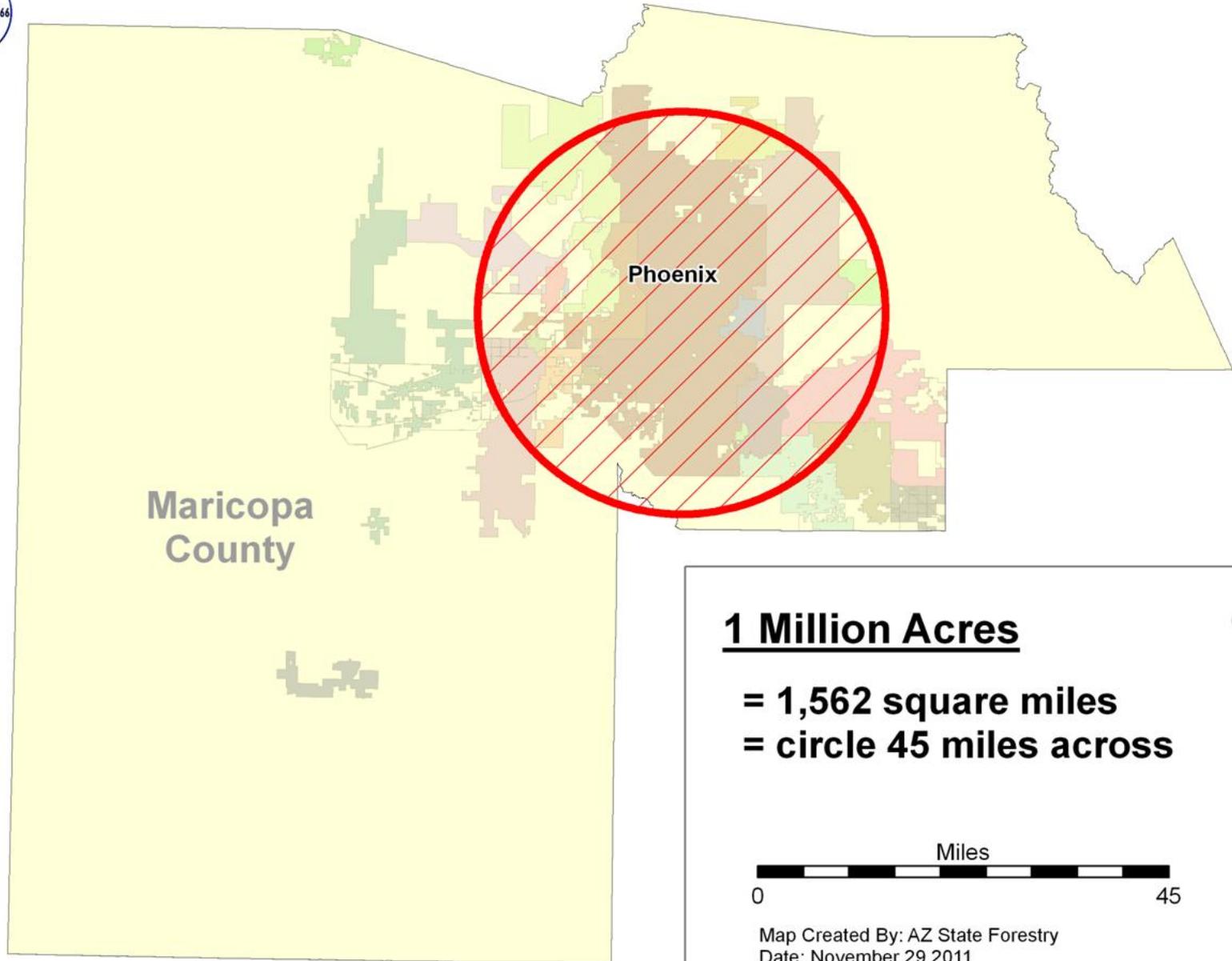
2011 Fire Suppression Costs for large fires: **\$204,000,000.00**



Wallow Fire (Greer)



*Southwest Coordination Center
Unofficial Data



1 Million Acres



= 1,562 square miles

= circle 45 miles across

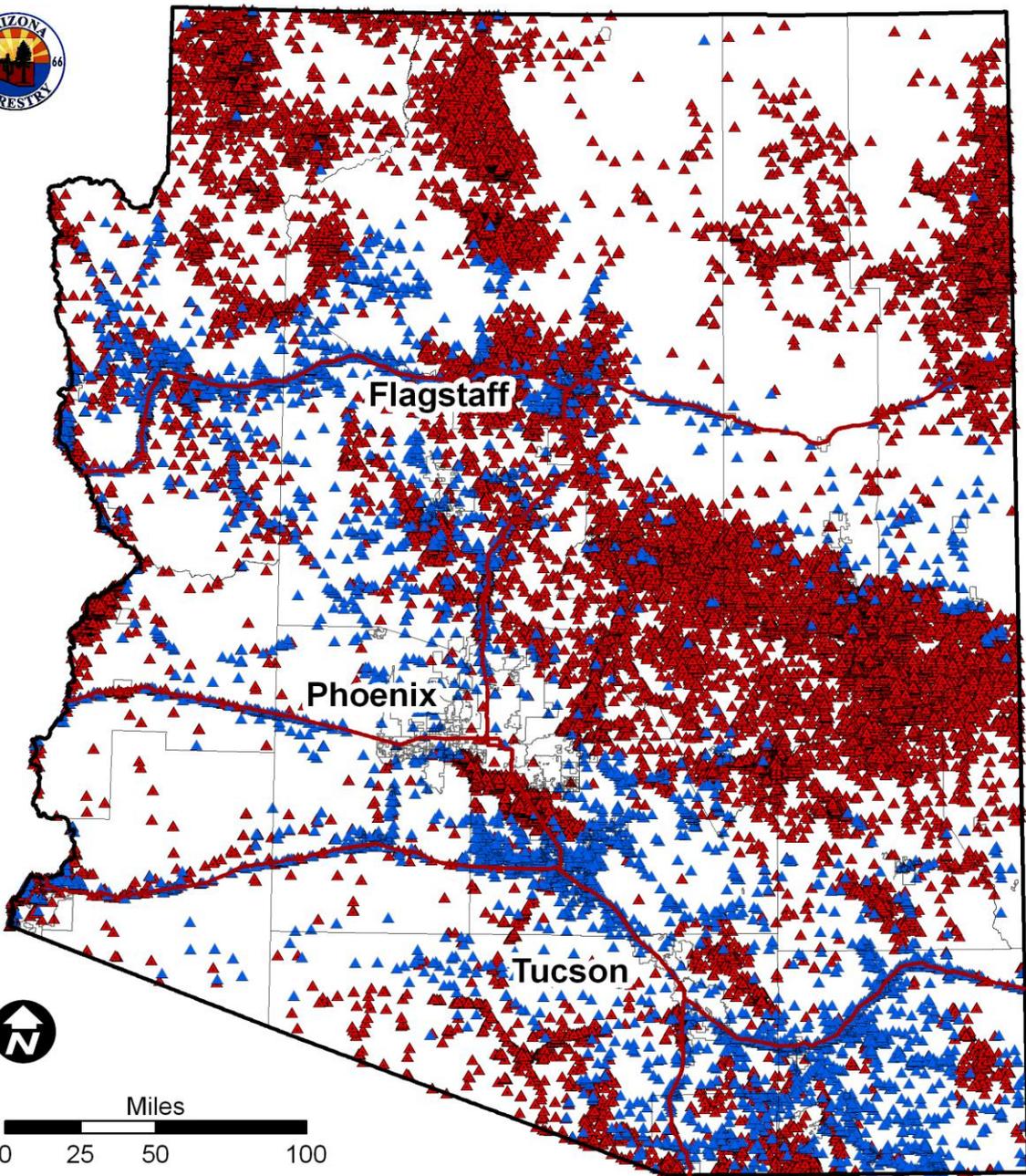


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A Decade of Wildland Fire 2000-2009



Reported Wildland Fires

- ▲ State/Private ~4,000 Fires
- ▲ Federal ~23,000 Fires

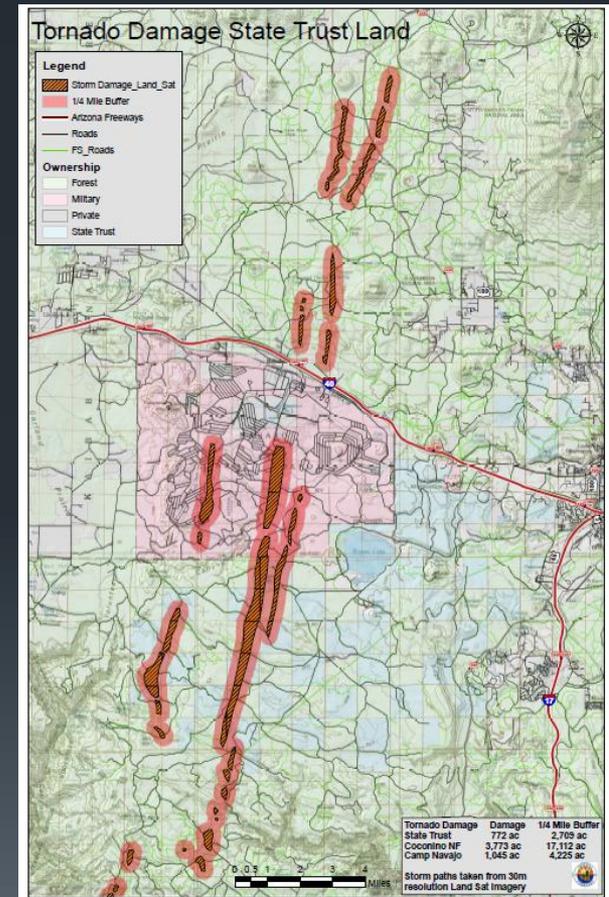
Map Created By: AZ State Forestry
Date: November 15, 2011

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AZ Forest Health Assessment

Extreme Weather Events - Tornado



AZ Forest Health Assessment

Tornado Aftermath



AZ Forest Health Assessment

Tornado Utilization



AZ Forest Health Assessment

Extreme Weather Events – Dust Storm

July Dust Storm



Downtown Phoenix



Payson



Pine

AZ Forest Health Assessment



Invasive Plants

348 invasive species identified in AZ
(www.eddmaps.org)



Buffelgrass
(Coronado NF)

2012 Forest Health Outlook

Things on the radar:

Fire Season

Changing climate

- drought conditions

- extreme weather events

Invasive species

- impacting deserts, creating continuous fuel from desert valleys to mountains (ex. buffelgrass, fountain grass, cheatgrass)

Declining Grant Dollars

- Need for leveraging & prioritizing



Forest Action Plans

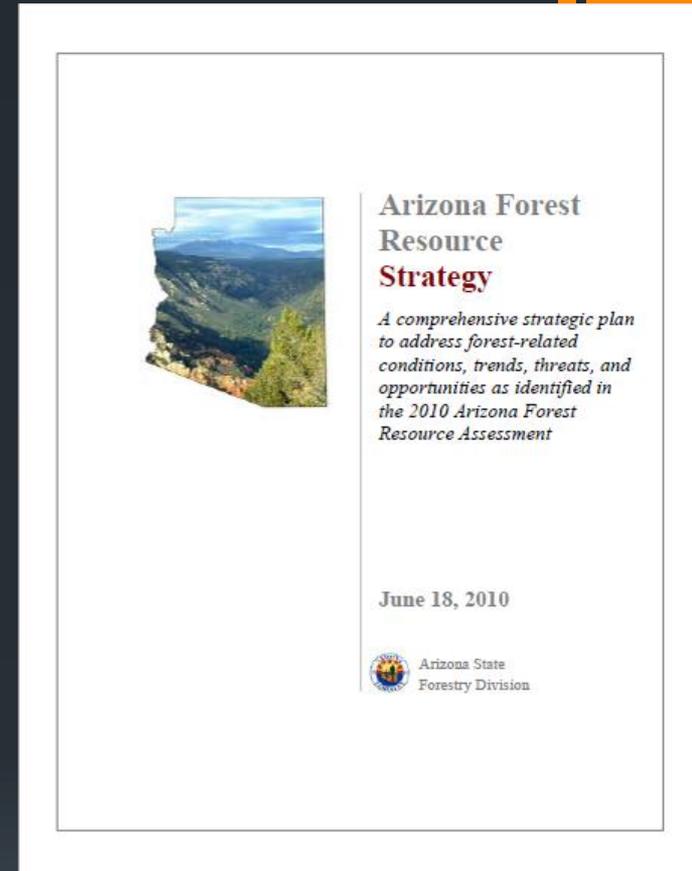
“Guiding Light”

Required of all States and Territories under the 2008 Farm Bill

Required States to identify priority landscapes and identify work needed to address national, regional, and state forest management priorities

Originally termed “State Forest Resource Assessments and Strategies”

<http://www.forestationplans.org/>



Forest Action Plans

Arizona has 8 Focus or Priority Areas:

- People and Forests
- Ecosystem Health
- Fire
- Economics
- Climate Change
- Water
- Air
- Culture

8.1 Focus Area Maps

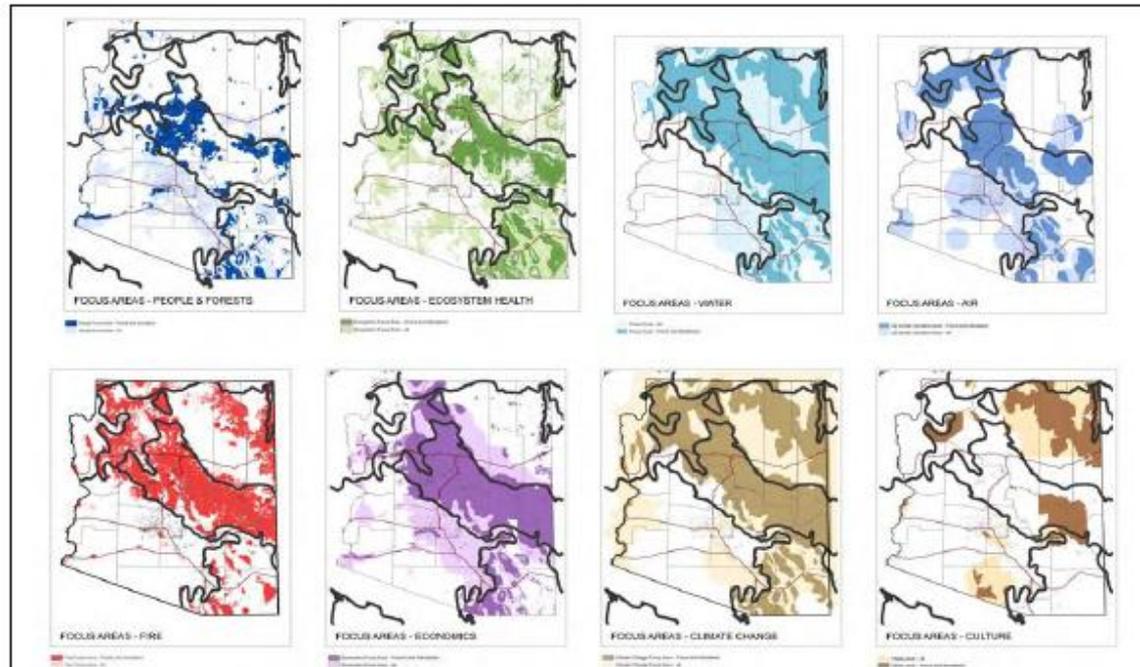


Figure 44. Focus area maps showing alignment with EPA Level III Ecoregions.

AZ Forest Action Plan

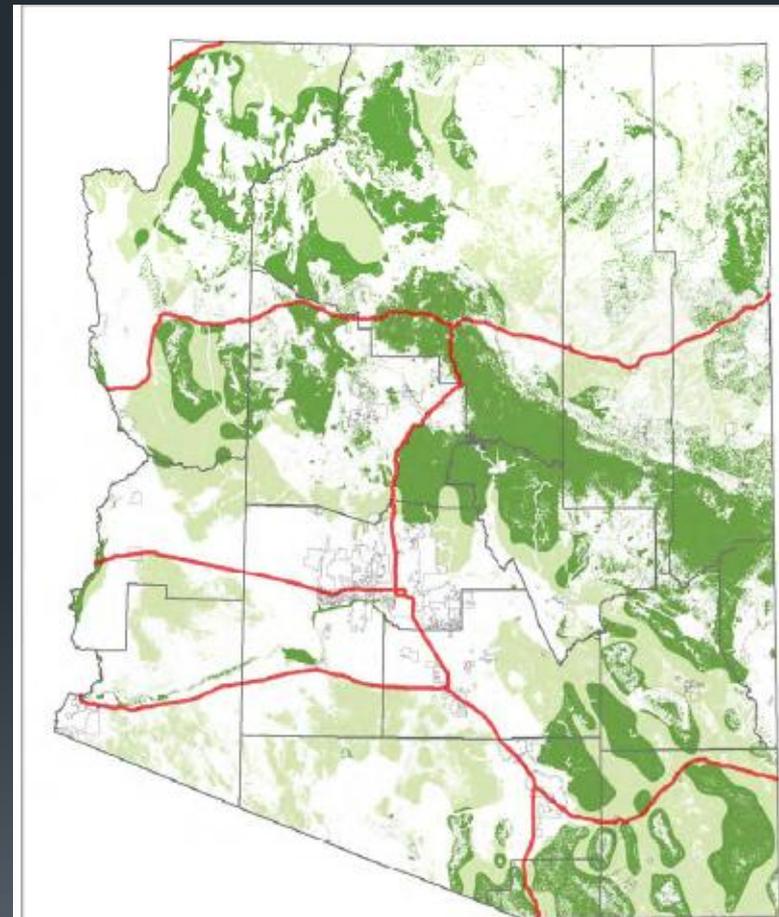
Ecosystem Health Focus Areas

Based on:

Fire Regime Condition Class

AZ Game & Fish Habitat
Condition Class

USFS National Insect & Disease
Risk Map



FOCUS AREAS - ECOSYSTEM HEALTH

AZ Forest Action Plan

Strategy

Statewide Actions (All agency)

Forestry Division Specific Actions

Ecosystem Health

Goal 1: Resilient and diverse forest ecosystem structures, processes, and functions.

Objectives	Arizona Actions
Objective 1: Protect, conserve and enhance ecological integrity, in order to maintain sustainable forest ecosystems, preserve ecosystem services and avoid public safety hazards associated with large scale catastrophic events.	<p>Continue to develop strong collaborative support for focused management practices, such as forest restoration, fuel reduction, wildlife habitat and population management, and treatments to control exotic pests and invasive plants, across integrated landscapes.</p> <p>Develop and implement effective training, education and outreach programs to inform landowners, government officials and the general public about the benefits of resilient ecosystem process and functions. Develop and utilize a well educated cadre of natural resource professionals in Arizona, to address forest threats across all lands in the state.</p> <p>Provide adequate levels of funding allocated to vegetation and fuel treatments.</p>

Ecosystem Health

Arizona State Forestry Division - Implementation

ASFD actions	Related program(s)	Measures
Work with resource management agencies to insure coordinated land management treatments. Management plans should consider other agencies and other landowner management goals.	Western Bark Beetle Initiative & Invasive Plants grants, NFP WUI, Competitive & Stimulus grants, Forest Stewardship	Acre surveyed, treated, monitored and restored.
Work closely with resource management agencies and educational institutions to provide up to date information on ecosystems to inform the public and governmental agencies	Cooperative Forest Health, Urban & Community Forestry	Training sessions, educational materials, public presentations
Work with state and federal agencies to identify funding shortfalls	USFS Forest Health Protection special funding, Western Competitive grants	Grants approved, budgets increased

AZ Forest Action Plan

Key FH Strategies/Objectives by Focus Areas:

PEOPLE & FORESTS

Goal 1: Connect people to trees & forests; improve their understanding of forest benefits

Goal 2: Increase awareness of threats to AZ's forests

Goal 2: Engage people in environmental stewardship activities

ECOSYSTEM HEALTH

Goal 1: Protect, conserve & enhance ecological integrity

Goal 1: Identify and monitor threats to forests and ecosystem health

Goal 2: Restore ecologically unhealthy forest, desert and grasslands impacted by current fire regimes, insect and disease outbreaks, and exotic invasive species

Goal 2: Integrate collaborative, science-based planning processes and public education into restoration treatments.



AZ Forest Action Plan

Key FH Strategies/Objectives:

ECONOMICS

Goal 1: Develop policies, plans and incentives to encourage the development and perpetuation of forest products businesses that will diversify the economy and facilitate forest restoration activities.

Goal 2: Prioritize program delivery and resources into high priority landscapes where resource threats will most likely threaten/negatively impact critical forest landscapes across Arizona.

CLIMATE CHANGE

Goal 1: Develop and maintain threats analysis for Arizona's forests and other high priority ecosystems using the best available scientific information.

Goal 1: Develop adaptation plans for Arizona's forests and other high priority ecosystems to increase resilience to climate change.



AZ Forest Action Plan

Key FH Strategies/Objectives:

CULTURE

Goal 1: Improve broader understanding of various cultural perspectives as they relate to forest resources, fire management, and other natural resource issues.

Goal 2: Where appropriate, share data and implementation strategies to leverage successful outcomes on tribal and adjacent lands with similar management objectives.



AZ Forest Action Plan

Key FH Strategies/Objectives:

WATER

Goal 3: Collaboratively develop information and educational materials on watershed and riparian issues (related to forested ecosystems and forest health).

AIR

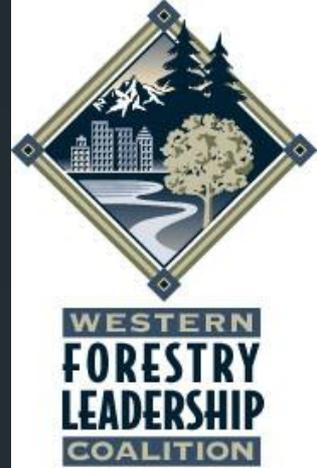
Goal 1: Maintain or improve health of existing forest lands.

FIRE

Goal 1: Manage forest structure to restore fire regimes and minimize negative impacts from unwanted wildfire.



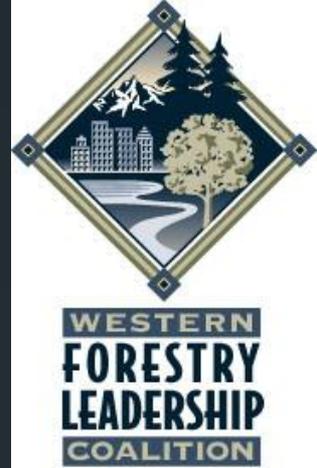
Western States Priority Issue and Strategies



- **Wildland Fire and the Wildland-Urban Interface**
 - Reduce wildfire risk to communities and mitigate wildfire impacts.
- **Water Quality and Quantity**
 - Secure clean and sustainable flows of water through forest management.
- **Forest Health & Invasive Species**
 - Reduce impacts to forest health from insect, disease, and invasive species threats.
- **Climate Change, Carbon Sequestration, and Biomass Energy**
 - improve forest ecosystem resilience in the face of a changing climate and ensure that forests are recognized contributors to climate change solutions.
- **Sustainable Communities and Economies**
 - support new and existing forest-based industries and programs that provide for the economic, social, and environmental needs of society.

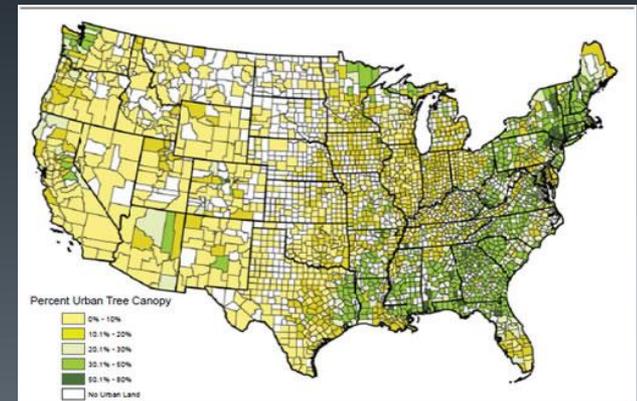
Western States Priority Issue and Strategies

- Strengthen partnerships and collaborative approaches
- Build adequate and flexible capacity and funding
- Capitalize on "co-benefits"
- Actively manage all forestlands
- Support research to inform science-based decision making
- Gain support through effective engagement



Good things going on in AZ

- 4 Forest Restoration Initiative (4FRI)
- Firescapes in Southern Arizona
- Governor's Forest Health Council
- Collaborative networks
- Restoration fund seeking
- White Mountain Stewardship Contract
- Initiating statewide urban forest inventory & urban forest health monitoring



Arizona State Forestry Division



QUESTIONS??

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