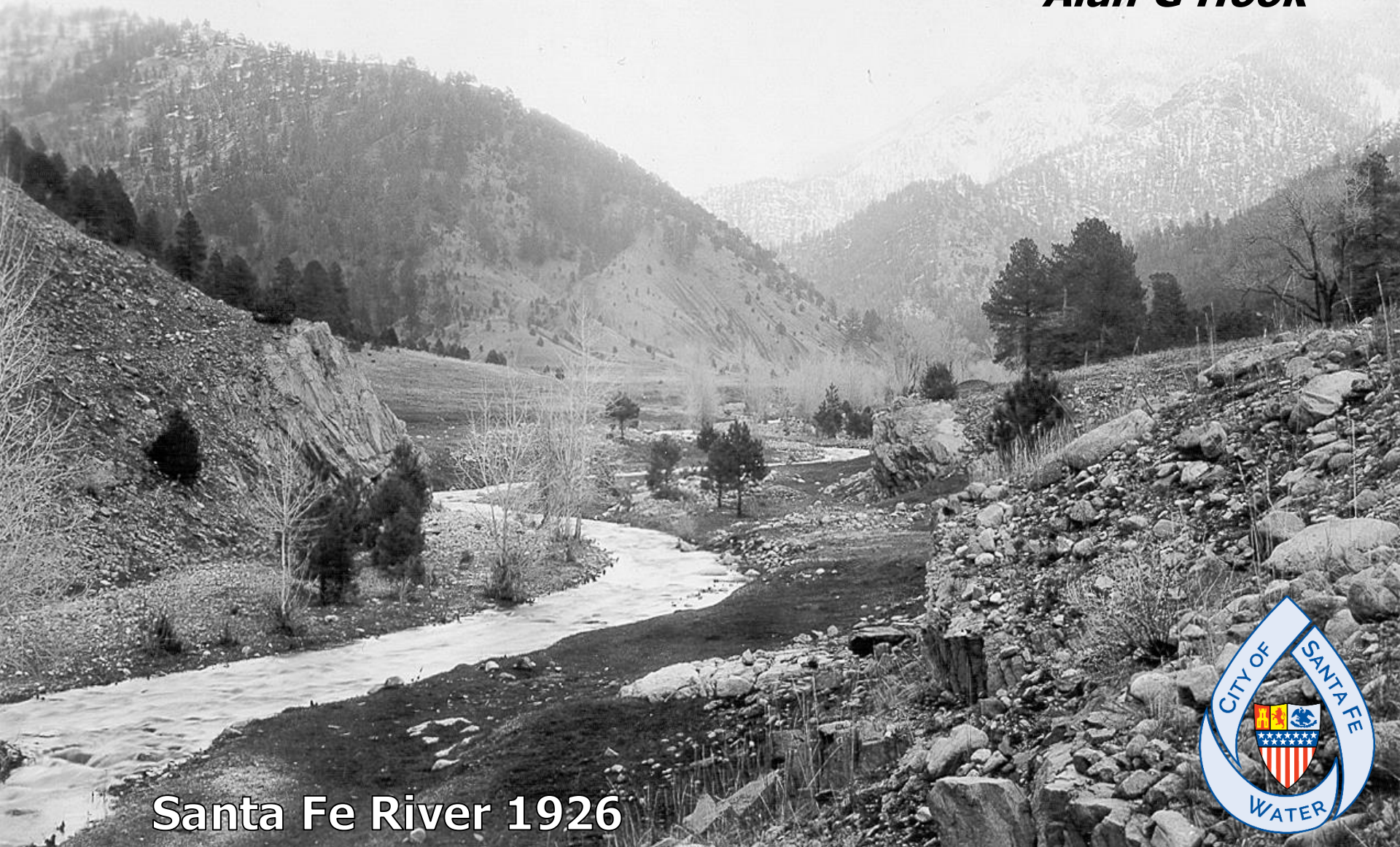


Managing Forestry Health and Reducing Wildfire Risk for Source Water Supply & Protection in Santa Fe, NM

Alan G Hook

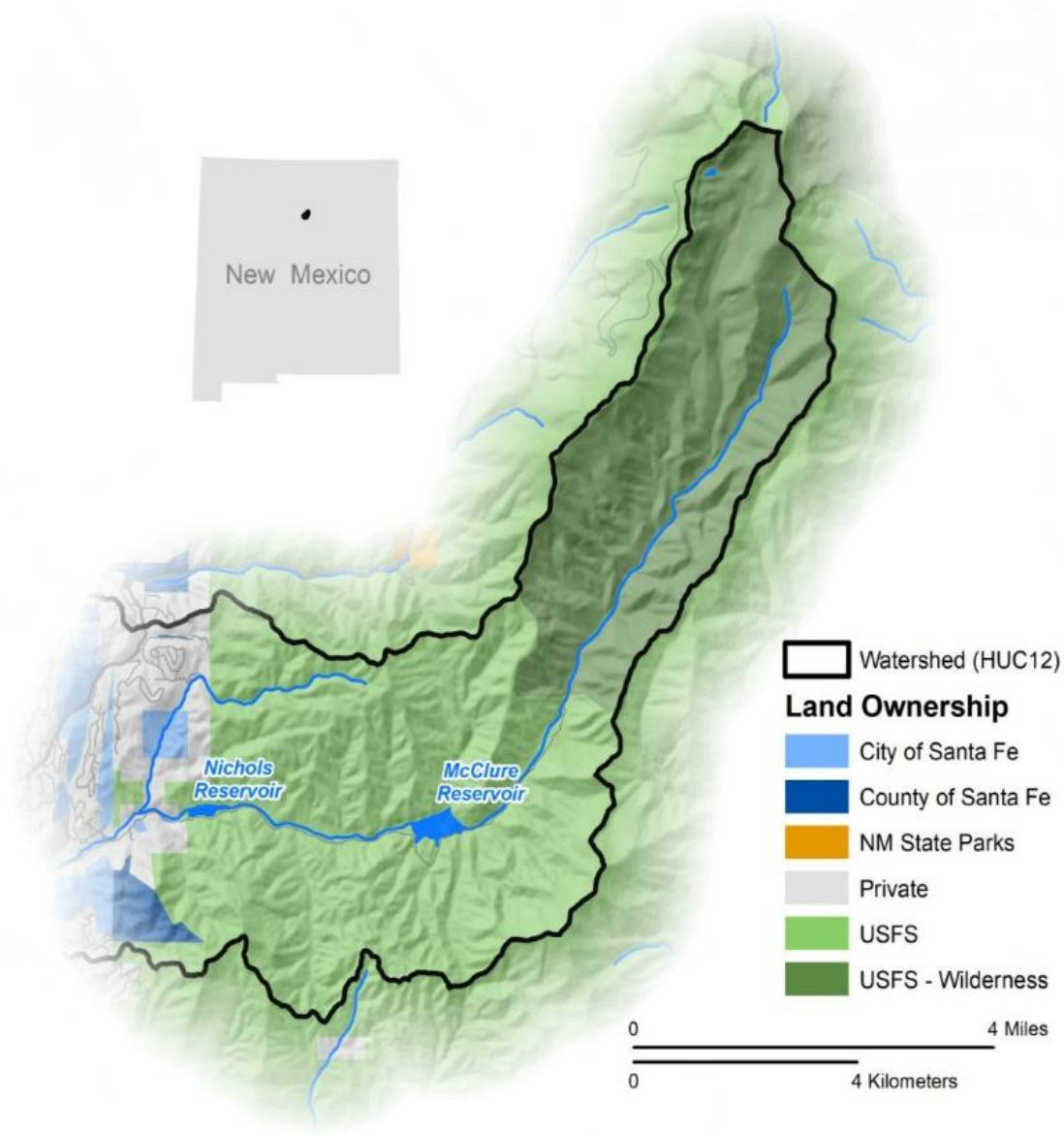


Santa Fe River 1926





Santa Fe Municipal Watershed

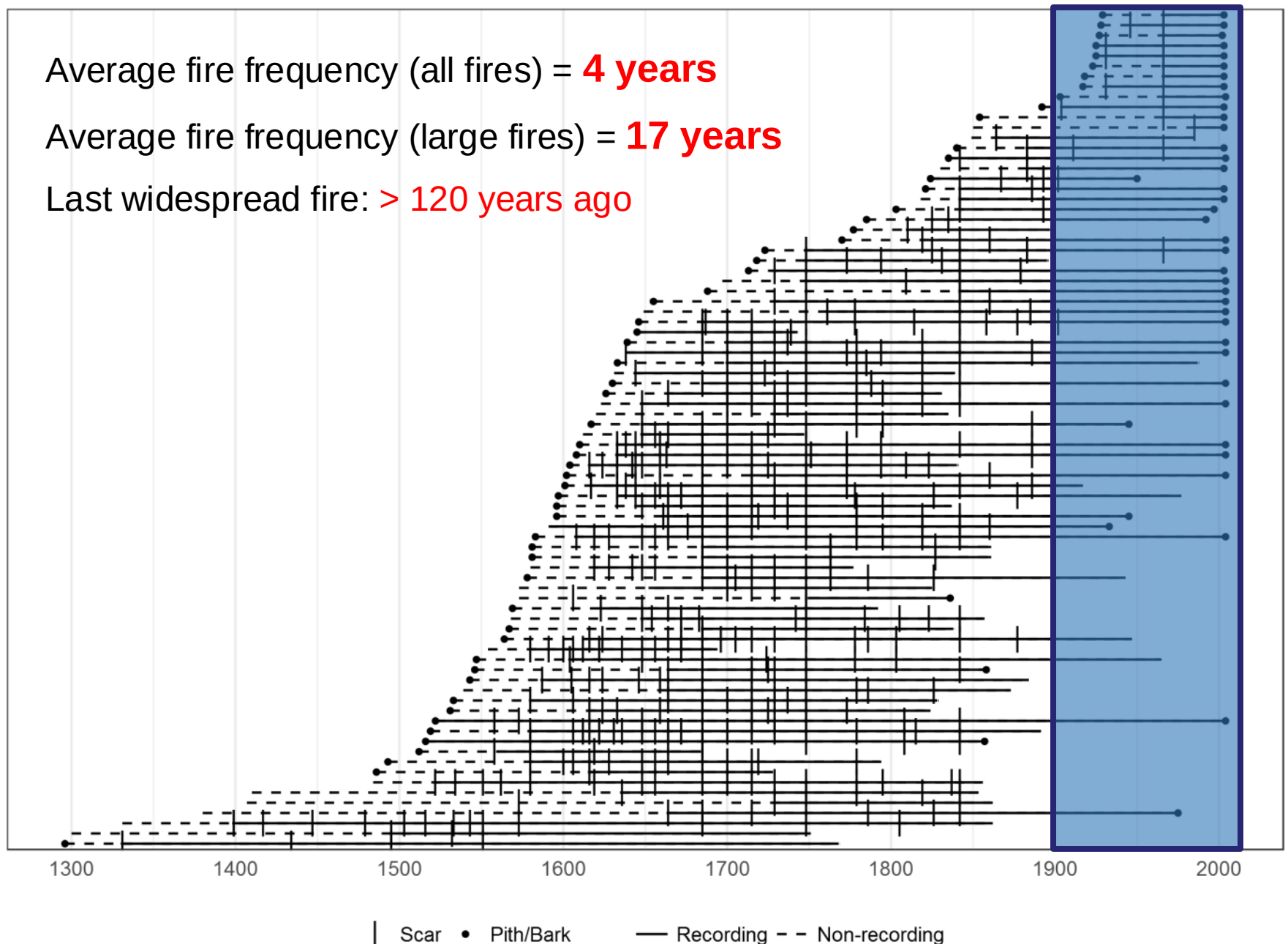


Santa Fe Watershed Ponderosa Pine

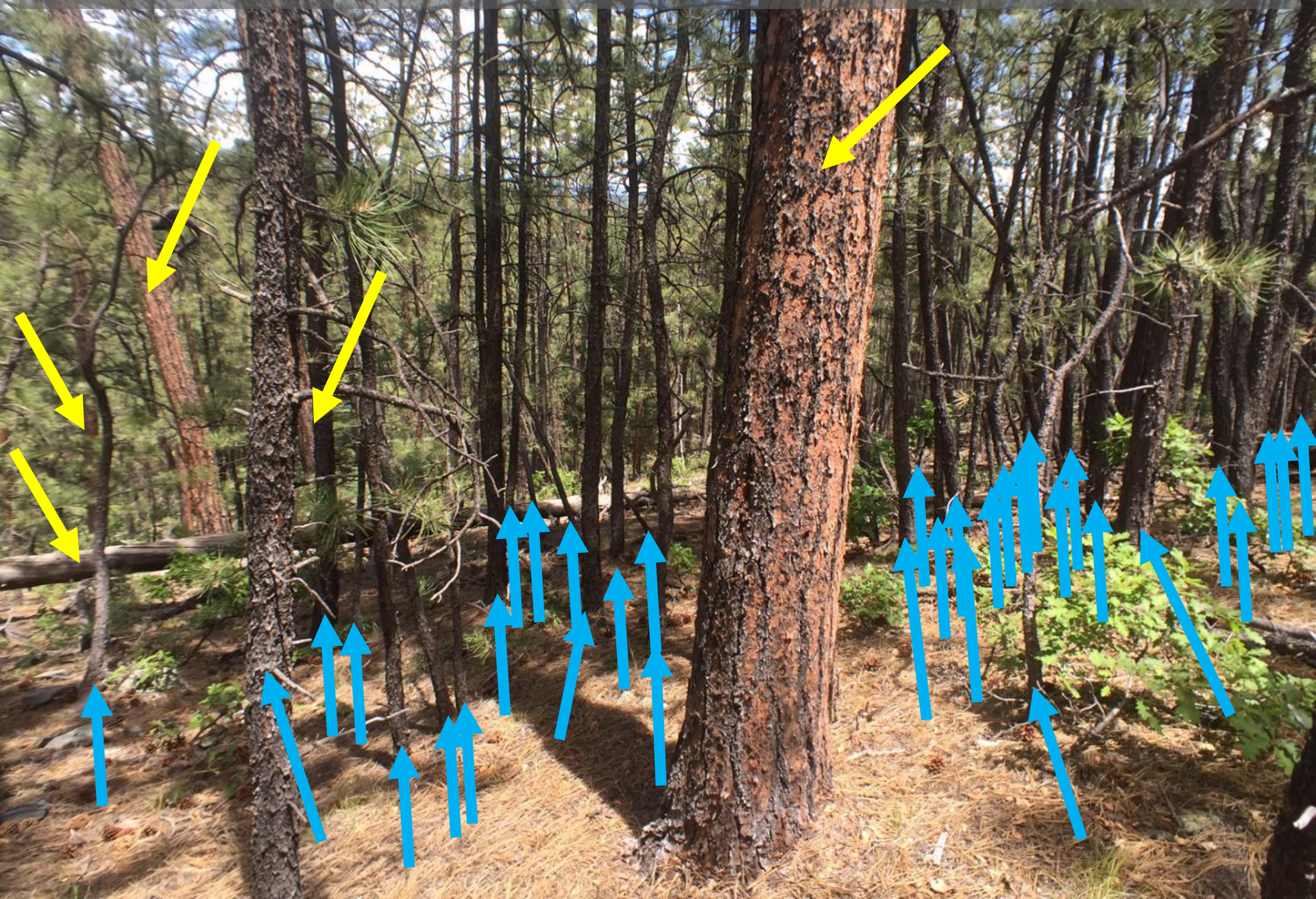
Average fire frequency (all fires) = **4 years**

Average fire frequency (large fires) = **17 years**

Last widespread fire: **> 120 years ago**



Stopping fires dramatically increased tree density

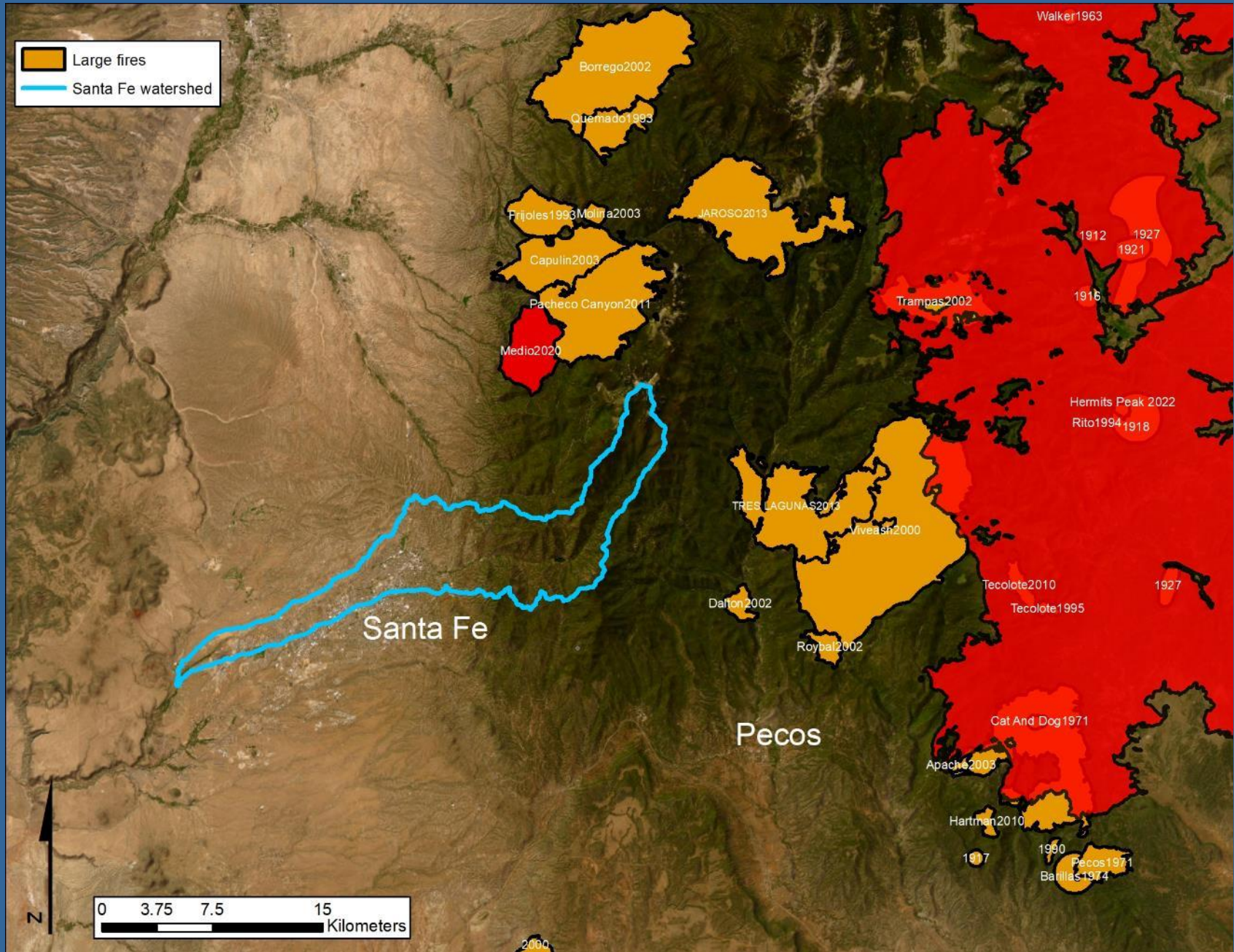


Increased forest density and connectivity: = greater area at risk of high severity fire

1935



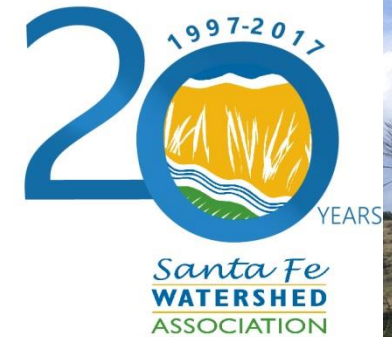
Large fires near the Santa Fe Watershed



Santa Fe Municipal Watershed Shared Stewardship



The Nature
Conservancy



City of Santa Fe & USFS, SFe Nat'l Forest Challenge Cost-Share Agreement



USDA, Forest Service

OMB 0596-0217
FS-1500-10

FS Agreement No. 15-CS-11031000-003

Cooperator Agreement No. _____

CHALLENGE COST SHARE AGREEMENT

Between the
CITY OF SANTA FE
And The
USDA, FOREST SERVICE
SANTA FE NATIONAL FOREST

This Supplemental Project Agreement (SPA) is hereby made and entered into by and between the City of Santa Fe hereinafter referred to as "the City" and the USDA, Forest Service, Santa Fe National Forest hereinafter referred to as the "U.S. Forest Service," under the authority: Department of Interior and Related Agencies Appropriation Act of 1992, Pub. L. 102-154.

Background: Like many cities throughout the western United States, Santa Fe's water supply is dependent upon forest health and protection from catastrophic wildfire. This agreement acknowledges goals and recommendations described in the Santa Fe Municipal Watershed Management Plan (2013), a plan jointly developed between the U.S. Forest Service, the City of Santa Fe and other stakeholders. The Watershed Management Plan (WMP) provides a framework and funding mechanism for the needed long-term stewardship of the Watershed. The WMP provides recommendations for vegetation management, water resource management, public education/outreach, and funding for the work. It is unique in that it seeks to fund forest restoration activities using the Payment for Ecosystem Services model as an insurance policy against future threats, particularly of catastrophic fire, to the municipal water supply.

Title: City of Santa Fe Watershed Projects

I. PURPOSE:

The purpose of this agreement is to document the cooperation between the parties to provide a means to support the protection of the Santa Fe Watershed, located on lands administered by the U.S. Forest Service and the City of Santa Fe in accordance with the following provisions and the hereby incorporated Operating and Financial Plan, attached as Exhibit A.

II. STATEMENT OF MUTUAL BENEFIT AND INTERESTS:

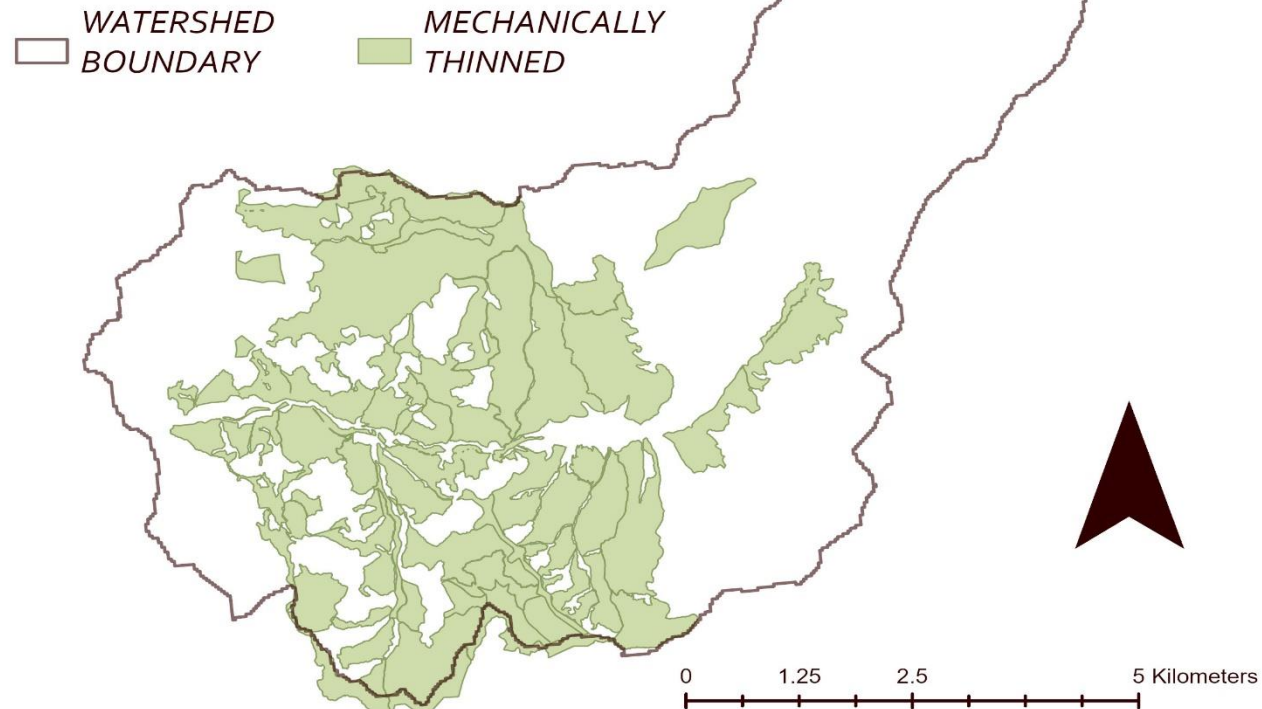
The U.S. Forest Service and the City recognize that a large portion of Santa Fe's water supply is dependent upon forest health and protection from catastrophic wildfire. With a common vision as described in the Watershed Management Plan, the U.S. Forest Service and the City can most effectively marshal resources to support long-term management to provide for the health of the watershed through targeted prescribed burns within the Santa Fe Municipal Watershed.



Mechanical Treatments



20 YEARS OF HISTORICAL TREATMENTS IN THE SANTA FE MUNICIPAL WATERSHED



Prescribed Fire Treatments

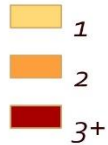


Photos courtesy of Santa Fe National Forest

20 YEARS OF HISTORICAL TREATMENTS IN THE SANTA FE MUNICIPAL WATERSHED

BROADCAST BURNING

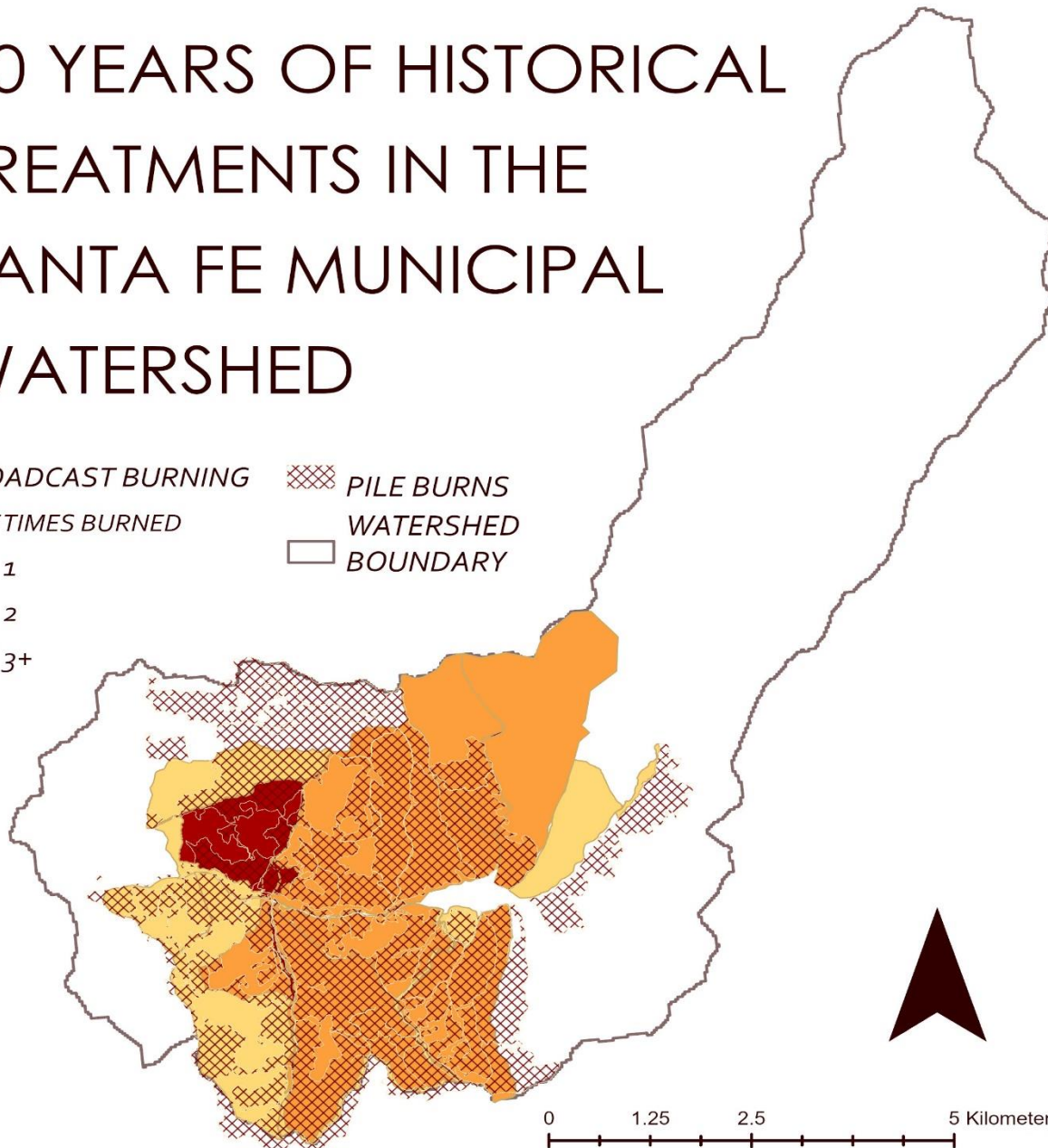
OF TIMES BURNED



PILE BURNS



*WATERSHED
BOUNDARY*



Fire effects: reducing heavy fuels, patchy mosaic



Photos courtesy of Santa Fe National Forest

Fire effects: reducing heavy fuels, overstory intact



Fire effects: reducing fine fuels

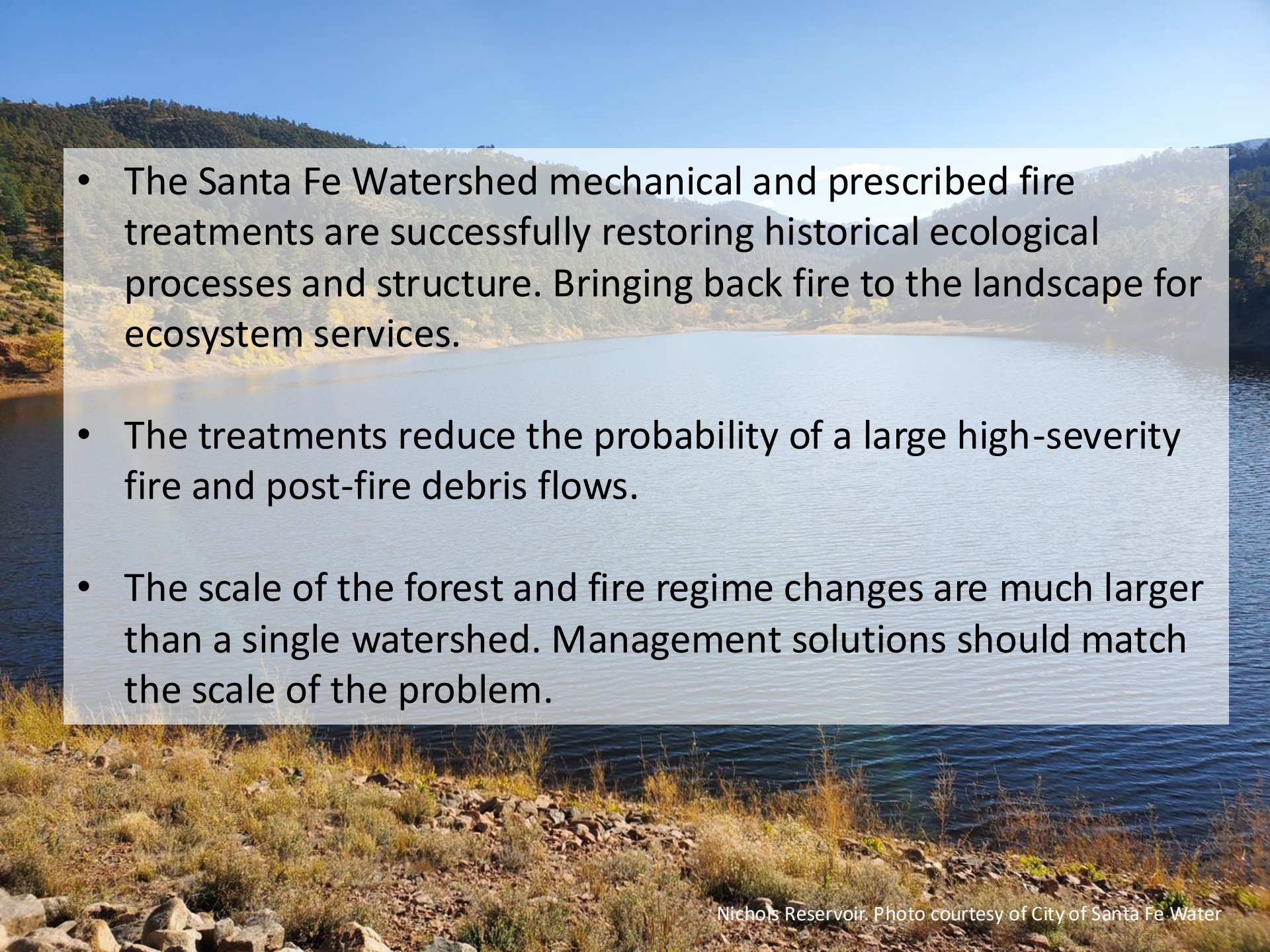


Fire effects: retain organic layer in soil



50% more understory plant species in burned vs untreated areas



- 
- A scenic photograph of Nichols Reservoir. The foreground shows a rocky shoreline with dry, yellowish-brown grass and shrubs. The middle ground is the calm, blue water of the reservoir, reflecting the sky. In the background, there are forested hills under a clear blue sky. A semi-transparent white box is overlaid on the middle of the image, containing a bulleted list.
- The Santa Fe Watershed mechanical and prescribed fire treatments are successfully restoring historical ecological processes and structure. Bringing back fire to the landscape for ecosystem services.
 - The treatments reduce the probability of a large high-severity fire and post-fire debris flows.
 - The scale of the forest and fire regime changes are much larger than a single watershed. Management solutions should match the scale of the problem.

Santa Fe Municipal Watershed Program



Questions

