# The Master Plan

The Master Plan prioritizes the reinvigoration of the core Turkey Mountain experience Tulsans have come to love—easy access to a wilderness experience in the city. This means welcoming bikers and pedestrians via new gateways, strengthening and clarifying the trails system, and leveraging both age-old and innovative lessons from applied ecology to restore Turkey Mountain's landscape. This core mission safeguards the character of the site, "keeping Turkey Mountain wild," while laying the groundwork for new programs that invite new users to enjoy Turkey Mountain.

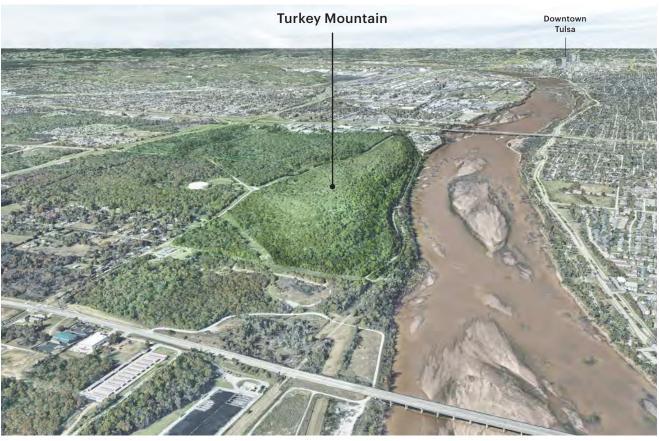
The Master Plan establishes four core principles to guide the future transformation of Turkey Mountain:

- 1. Restore Nature
- 2. Maximize Access
- 3. Enhance Trails
- 4. Integrate Program

### **An Expanded Vision**

Added Sites Make Space for New Program

In order to accommodate both unprogrammed wilderness areas and new opportunities for fun, the Master Plan proposes to expand Turkey Mountain into adjacent sites. These expansion properties at the periphery of Turkey Mountain provide the additional space necessary to incorporate new ways of experiencing the outdoors access to riparian wetland landscapes, adventure recreation and bike facilities, and spaces for group activities—and connect the core of the site to civic spaces and city parks to robustly integrate outdoors activities into the everyday life of Tulsa. The rustic, wild character of the core Turkey Mountain site would be preserved, while its new extremities could house activities to attract new users. Cooperation between city, state, and private landowners to grant easements and access is essential to expanding and preserving Turkey Mountain.



Existing Turkey Mountain Site Extents



Proposed Turkey Mountain Expansion and Connectivity

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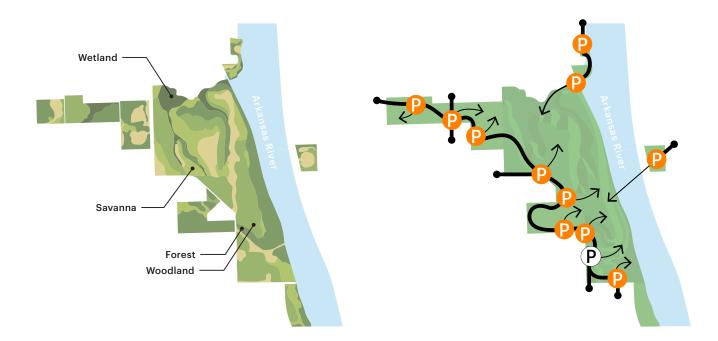








# **Four Core Principles**

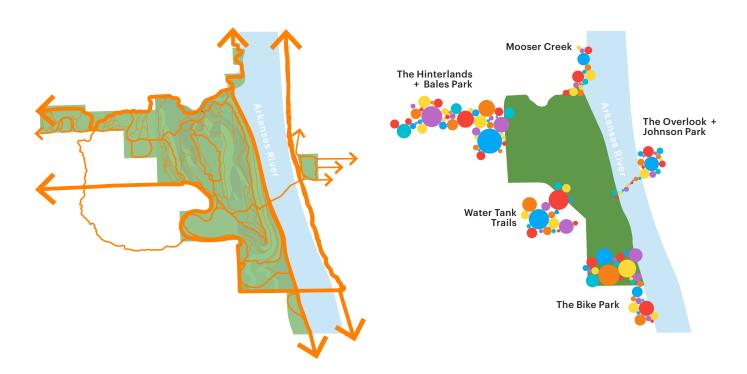


#### **Restore Nature**

Revive the native Cross Timbers landscape through active land management regimes encompassing prescribed burning and wetlands bioengineering.

#### **Maximize Access**

Make using Turkey Mountain easy for everyone by adding bike and pedestrian connections, opening new entrances, and expanding parking without encroaching on the remote quality of its core.



### **Enhance Trails**

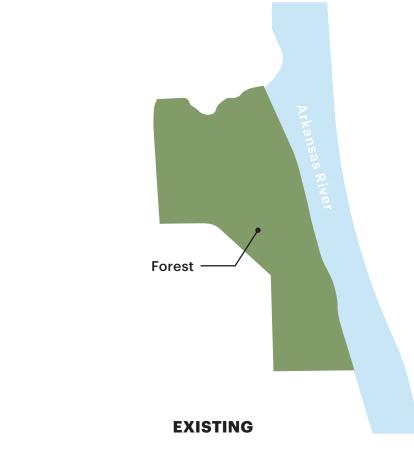
Introduce hierarchy in trail widths and uses to reduce user conflicts, improve wayfinding, and rebuild trails in ways that improve drainage and minimize erosion.

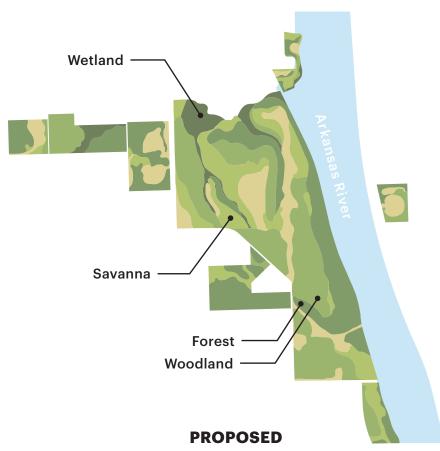
### **Integrate Program**

Group new recreational uses together to minimize their environmental impact and operational cost, while maximizing their accessibility.

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### Oak Savanna Restoration Case Study

Pleasant Valley Conservancy, Wisconsin



Butterfly and Wildflower Nature Walk with Audubon Society, Pleasant Valley Conservancy, 2018

#### **An Actively Managed Landscape**

Pleasant Valley Conservancy in Black Earth, Wisconsin, shares a similar site history to Turkey Mountain. Fire and other natural disturbances were suppressed in this remnant landscape resulting in diminished ecological and experiential diversity. Former prairies and savannas became overgrown.

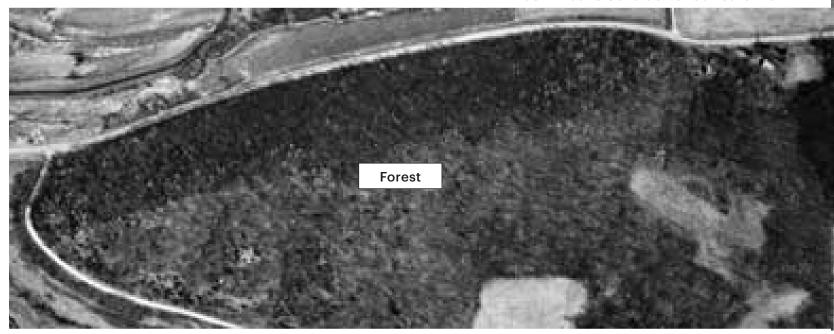
In 1990, the site was assessed and a plan for prescribed burn restoration was created. Careful identification of heritage post oaks and the application of frequent controlled fires, brushclearing, and prairie plant seeding has brought back the former landscape complexity and beauty.



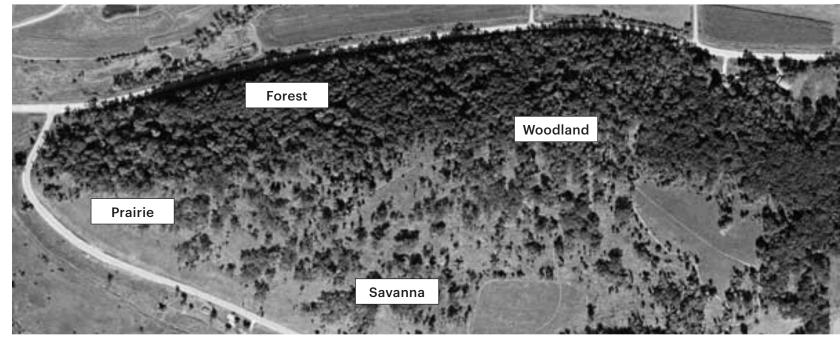
Dormant Season Prescribed Burn



1937—Native Condition of Oak Savanna



1990—Unmanaged, Degraded Site



2007—After Prescribed Burn Restoration

# **Prescribed Burn Management**

Restoring a Cross Timbers Landscape



### **Long-Term Benefits of Fire**

Without regular fires, leaf litter and dead plant matter accumulate, increasing the chances of wildfires. Conducting carefully planned, controlled burns in Turkey Mountain will reduce this accumulation and thus the risk of wildfire. Over time, the necessary burns will become smaller.

Prescribed burning is the most cost-effective means of managing a site as large as Turkey Mountain. Alternate methods such as herbicides or hand-pruning and removal can cost ten times as much, take longer, require more labor, and

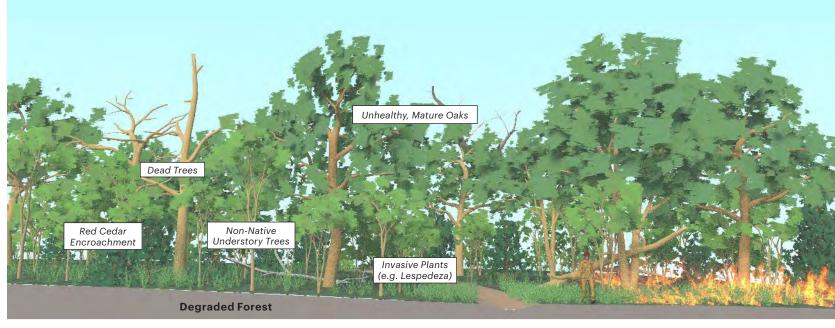
lack many of the other benefits of fire. Controlled burns stimulate post oak growth, cause meadow flowers to bloom more vigorously, attract native fauna through the growth of young herbaceous plants, prevent the spread of invasive species such a lespedeza and encroachment of red cedars into prairies and savannas, and reduce tick and chigger populations by reducing their habitats.

### **Training from Local Experts**

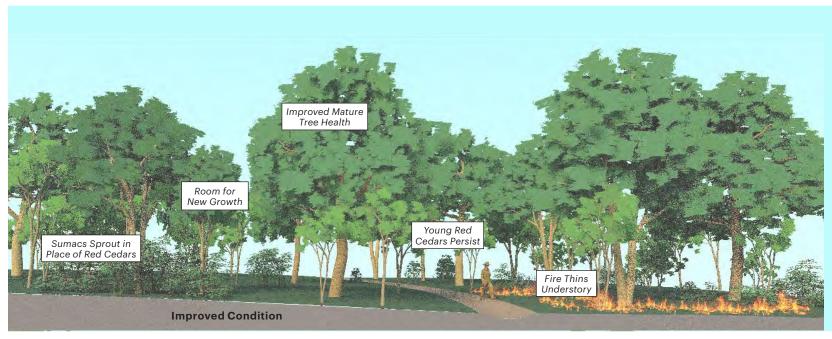
The most cost-effective and reliable strategy for implementing controlled burns at Turkey Mountain is to train a local burn crew led by River Parks staff and aided by members of local fire departments.

To train these crews, the Master Plan looks to John Weir, a practicing burn manager with 25 years' experience in the field, who is head of Oklahoma State University's (OSU) prescribed burn research facility in Stillwater. Weir has conducted extensive training of personnel of the U.S. Army Corps of Engineers, the Bureau of Land Management, state and city agencies, Native American reservations, and private landowners.





Year 1

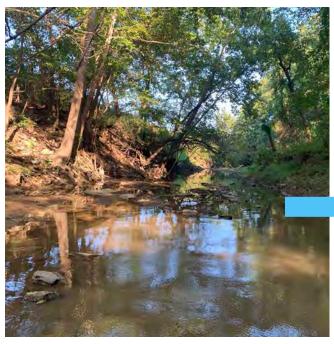


Year 5



# **Mooser Creek Bioengineering**

### Creating Riparian Habitat and a Greenway





### **Stabilizing and Reconnecting the Creek**

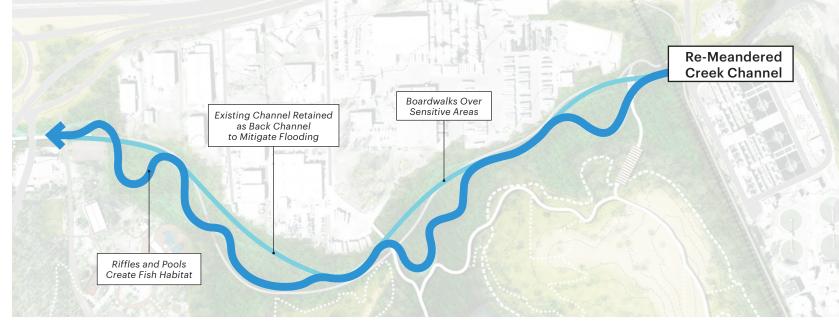
Mooser Creek forms the northern border of Turkey Mountain. Likely straightened and channelized as part of the development of the industrial park to its north, the creek's steep banks are eroding, and it remains largely inaccessible to Turkey Mountain users.

Restoring this riparian corridor has the potential to create fish and bivalve habitat, allow human interaction with the creek, and provide new access to Turkey Mountain from the north through the integration of a proposed bridge. The addition of a regional multi-use path along the top of the riverbank will also connect the River Bank West Trail to West Tulsa.

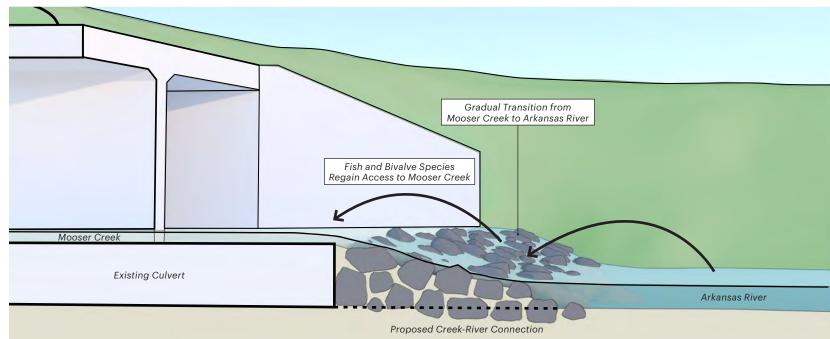


### **Wetlands Bioengineering Experts**

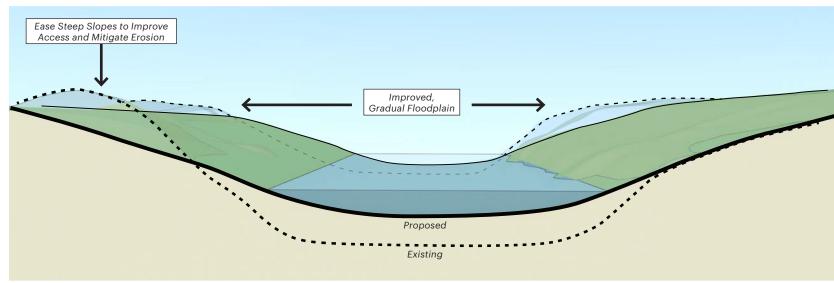
On-site analysis conducted by Inter-Fluve, experts in wetland restoration and bioengineering, indicates that Mooser Creek's channel could be renaturalized, improving its water quality and value as a habitat. Reconnecting the mouth of the creek to the Arkansas River would allow marine fauna to return to the creek. Lessening the steepness of the banks will improve resiliency during flood events and make room for an asphalt path along the top of the bank.



Remeander the Creek



Reconnect to the River



Widen the Floodplain

# **Turkey Mountain Core Site**

### Bringing Back Landscape Diversity

### Wild Character in the City

Turkey Mountain is a precious resource— undeveloped, open land—that will only get rarer and rarer as cities like Tulsa continue to expand. The rustic quality and immersive, wild character of Turkey Mountain is extraordinary given its location just four miles from Downtown Tulsa. Any Tulsan, regardless of means, has access to a wilderness experience close to home.

### Sameness in the Landscape

The native Cross Timbers landscape is extremely varied—a patchwork of plant families that create microclimates, varying degrees of enclosure, long and short views, and habitats for native fauna. By contrast, the vast majority of Turkey Mountain today has grown into a uniform thicket that provides very few of these ecological or aesthetic benefits.

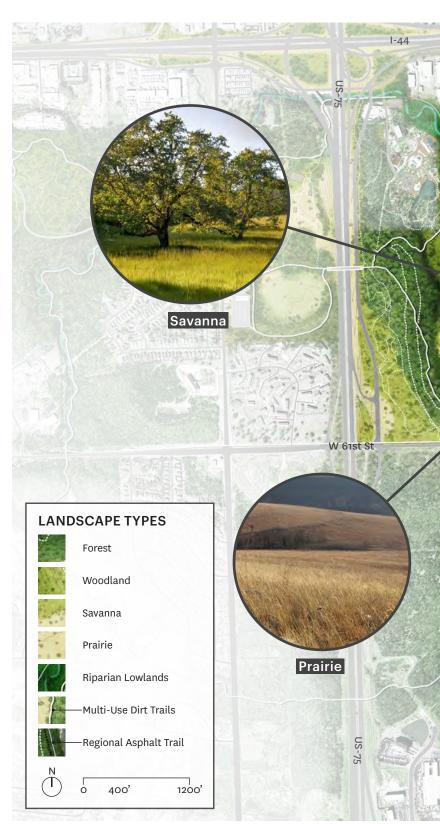
#### **A Window Back in Time**

Preserving Turkey Mountain means honoring the character of its native Cross Timbers landscape. Since the health of that landscape depends on forces of disturbance, predominantly fire, active management is necessary to restore Turkey Mountain's ecology.

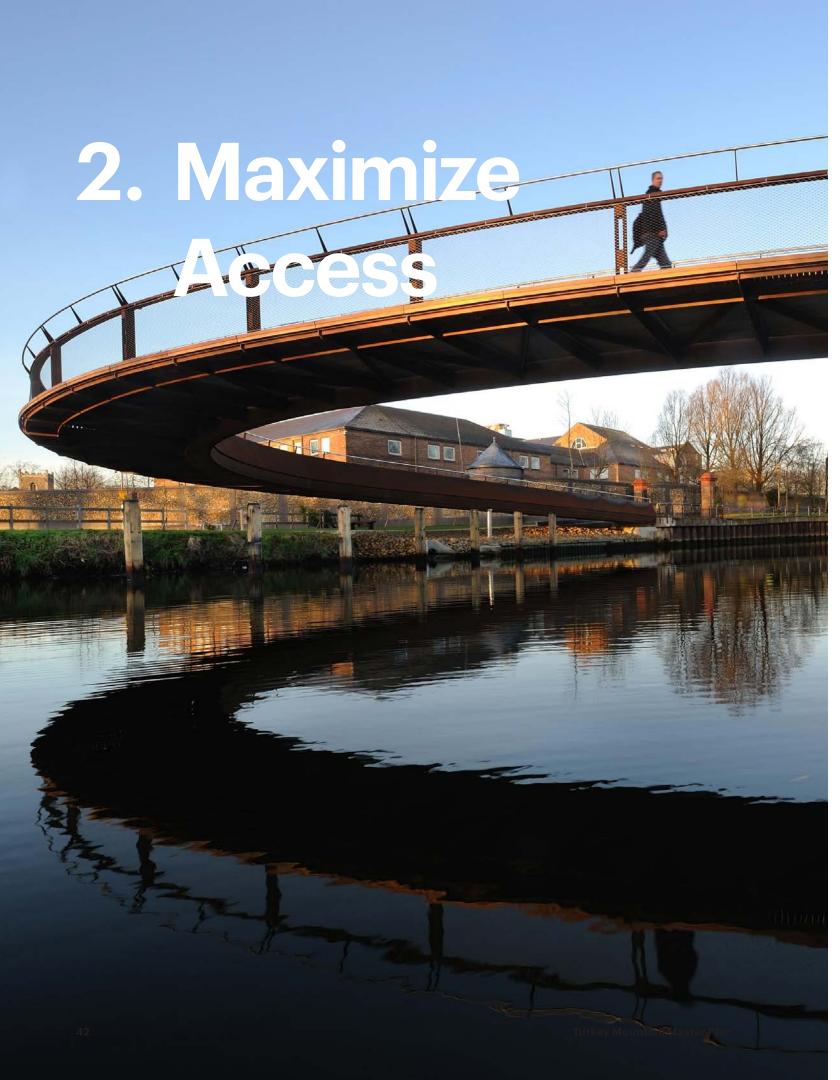
Reintroducing fire to the site through a regime of prescribed burn management will effectively turn back time, opening a window into what this region of Oklahoma looked like prior to its degradation.

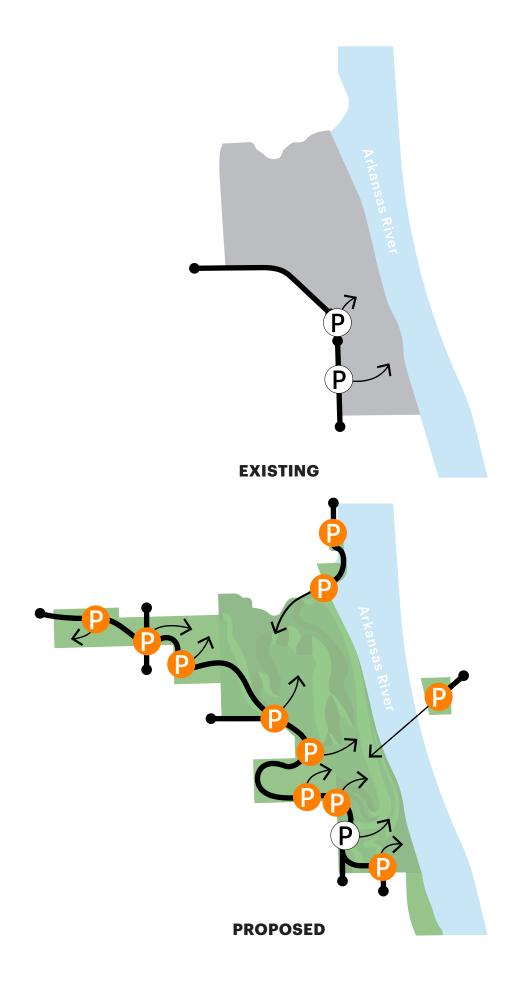


**Existing Condition** 









# **Bridging Across an Expanded Site**

New Bike and Pedestrian Access





### **Vehicular Access and Parking**

### Adding Parking While Minimizing Paving

### **Existing Parking**

The two existing parking lots at Turkey Mountain—the Main Lot and the Upper Lot—together provide only a few hundred parking spaces for the average of 14,000 people who visit every month. Furthermore, both lots are located on the southern side of the site, leaving the northern and western reaches of the park inaccessible to many.

### **Proposed Actions:**

#### 1. Close South Elwood Ave

Traffic along South Elwood Ave, with its blind curves and steep topography, poses a safety risk to pedestrians, cyclists, and motorists alike. The proposed closing of South Elwood Ave grants safe access to the adjacent water tank property, where proposed trails add miles of new terrain for Turkey Mountain users to explore.

### 2. Add Gravel Access Drives

Two short gravel access drives provide access to new parking situated along the periphery of the park. The gravel surface slows traffic, disincentivizing the use of the new drives as shortcuts.

#### 3. Expand Parking

Significantly expanding parking without paving over substantial areas of Turkey Mountain's precious wilderness is achieved through a combination of new connections to existing parking lots in Bales and Johnson Parks, expansion of these off-site lots, and the addition of parking lots along the periphery of the proposed additions to Turkey Mountain.

#### 4. Preserve Remoteness

The strategic placement of proposed parking lots distributes over 2,000 parking spots along Turkey Mountain's perimeter to allow users to arrive nearer to their intended destination while preserving the remote character of the core site.



