



Rewilding Zilker Park

A VISION FOR PEOPLE AND THE PLANET

Austin, Texas • SUMMARY PRESENTATION, April 2022



Roadrunner in Zilker Park's Austin Nature Center. Courtesy of George Afghan.

None of Nature's landscapes are ugly so long as they are wild.

— *John Muir, Our National Parks 1901*

This vision plan is a dynamic document that will evolve over time with public input and new information.

Please visit the Save our Springs Alliance website for a link to the full PowerPoint presentation and additional information

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'Cedar Infiltration' by Elizabeth McGreevy

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EXECUTIVE SUMMARY

O V E R V I E W



Parts of Barton Springs Pool are currently integrated with wild areas.

Parts of Zilker Park are being loved to death, while other parts are being under-utilized due to a lack of shade.

A 2020-2021 city-wide survey revealed 82% of Zilker Park survey respondents supported expanding natural areas in the park. Hundreds expressed concern about the negative impacts of large events and commercialization. Climate mitigation and post-Covid public health have become URGENT priorities. Water quality and quantity issues are also of paramount concern.

To address these needs, Save Our Springs Alliance, with support from Zilker and Bouldin Creek Neighborhood Associations, sponsored this project to rewild Zilker Park. We invite everyone to actively engage with us in the Zilker Park vision plan process.

EXECUTIVE SUMMARY

GOALS



Child picking a sunflower in a Zilker Park wooded prairie

- Support physical and mental health by connecting people to nature
- Give people what asked for– nature, trails, and water features
- Help implement the recently adopted Austin Climate Equity Plan [ACEP, 2021]
- Reduce erosion, enhance wildlife habitat, and protect water resources.

EXECUTIVE SUMMARY

OBJECTIVES



Monarch in Zilker. Courtesy of Gary St. Clair.



Urban birders in Central Park, New York. Source: J. Burger for Audubon New York.

- Allow at least 75 acres (21% of the park) to reestablish as natural areas using the rewilding process.
- Revegetate areas being use for illegal parking and low-use areas being excessively mowed.
- Increase old-growth forests and other natural areas to serve as green infrastructure and to decrease downslope streambank erosion along Barton Creek and Lady Bird Lake.
- Greatly increase tree canopy shade to enhance recreation and movement for people and benefit wildlife.
- Strategically use vegetation and soil microbes to reclaim the Butler Landfill (phytoremediation).

EXECUTIVE SUMMARY

INCREASE NATURAL AREAS BY AT LEAST 75 ACRES



Aerial photo showing the proposed new natural areas (shown in bright green). Aerial photo source: Zilker Park Metropolitan Park Vision Plan, 2021

WHAT IS REWILDING?

DEFINITION OF THE PROCESS



Red Buckeye in Zilker, source iNaturalist



American Goldfinch in Zilker, by George Afghan



Chantrelle near Zilker, source: iNaturalist

Rewilding refers to the PROCESS where nature takes the lead to reestablish biodiversity and ecosystem function. This process can also be called ecological regeneration. This contrasts conventional land restoration where outcomes are pre-determined by humans.

In wilderness areas being rewilded, large apex predators (such as wolves, mountain lions, and bears) are used to measure success.

In the context of a city, small, urban keystone species (such as ground-nesting bees, Monarchs and Great Horned Owls) are used to monitor ecosystem success. Also, adaptive vegetation management is used to accommodate people and infrastructure needs. For this reason, rewilding inside of cities is called 'Urban Rewilding.'

WHAT IS REWILDING?

EXAMPLES INSIDE ZILKER PARK

For a portion of Zilker Park, along Azie Morton Road, mowing was greatly reduced to allow for rewilding at low cost and with great benefits.



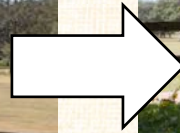
Little Zilker Creek at Azie Morton Road prior to starting the project in 2012.



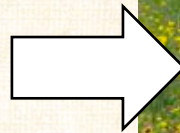
Area was allowed to rewild using adaptive vegetation management. Clustered plantings were added as needed to boost species richness and non-native plants were consistently removed. Follow up photo taken in 2018.

WHAT IS REWILDING?

EXAMPLES INSIDE ZILKER PARK



A Zilker Botanical Garden grounds keeper adopted this stretch along Barton Springs to reduce mowing and allow it to rewild.



WHAT IS REWILDING?

EXAMPLES INSIDE ZILKER PARK



Rewilded forest and large shade trees along northern portion of the Butler Landfill

Other areas throughout the park show examples of where nature has been rewilding where lawnmowers can't reach and cars can't park.



Rewilding along a fence line



Denberry rewilding along a draw

WHAT IS REWILDING?

BASIC REWILDING STRATEGIES



Fencing and signs can guide people away from rewilding areas.



Contour-swales installed will boost rainwater infiltration. Source: Drought Proof Texas at Austin's Festival Beach Food Forest.

- Stop mowing and off-road parking
- Add boundaries and signs
- Incorporate green infrastructure
- Boost soil health and biology
- Add contour-bioswales
- Plant and seed in clusters where seedbank has degraded
- Enhance wildlife habitat diversity (ex. retain snags and logs, add bird houses, remove non-natives, and promote dark skies)

WHAT IS REWILDING?

BENEFITS OF THE REWILDING PROCESS



- More sustainable than conventional land restoration strategies since it allows nature to pre-determine outcome
- Decreased lawnmower pollution
- Reduces cost and irrigation needs
- Increases wildlife biodiversity
- More holistically regenerates native ecosystems than conventional land restoration
- Teaches people to see and comprehend how ecosystems evolve over time

Black-chinned Hummingbird and Red Shouldered Hawk in the Austin Nature Center. Source: Gary St. Clair

REWILDING RECOMMENDATIONS

THE REWILDING PLAN



PROPOSED COVER TYPES

-  Forest (25 acres)
-  Phytoremediation (+ forest and woodland cover types) (15 acres)
-  Dense Woodland (8 acres)
-  Open Woodland (23 acres)
-  Green Parking Woodland (3 acres)
-  Savanna Wetland (1 acre)

TOTAL: 80 acres minimum
(22% of park)

REWILDING RECOMMENDATIONS

PROPOSED COVER TYPES DEFINED

NOTE: These areas will be achieved through natural rewilding guided by adaptive vegetation management, especially for the open woodlands to meet park use goals and infrastructure needs.

Forest (*85% to 100% canopy closure*) Used for trails, passive recreation, and nature observation. Multiple horizontal and vertical layers of understory trees and vines, fallen debris, snags, unmowed groundcovers, and infrequently mowed grassy meadows,.

Dense Woodland (*70% to 85% canopy closure*) Used for trails and nature observation. Multiple horizontal and vertical layers of understory trees and vines. Dense mid-understory with grassy or woody thickets.

Open Woodland (*50% to 70% canopy closure*) Used for trails and recreation. Small clusters of mid-understory shrubs and small trees with continuous cover of unmowed groundcovers or infrequently mowed grassy openings.

Green Parking Woodland (*70% to 85% canopy closure*) Densely planted trees and wide parking islands (15' minimum) to produce a robust canopy cover and support clustered understory trees and a continuous, unmowed groundcover.

Savanna Wetland (*wetland vegetation*) Used for trails and nature observation. Contains stand-alone trees and forbs that tolerate seasonal poor drainage or wetland conditions. Infrequently mowed grassy meadow.

REWILDING RECOMMENDATIONS

OPEN WOODLANDS

Open Woodlands would be subjected to more adaptive vegetation management to provide informal, shaded recreation activities and gatherings such as picnics, walking, reading, and outdoor photography.



Park users gathered for a picnic in the shade of an open woodland adjacent to a large mowed recreation area. Source: Wikipedia Commons by Mansard vokser.

REWILDING RECOMMENDATIONS

A R E A S S E L E C T E D W O U L D R E D U C E E R O S I O N



Erosion is most severe along Barton Creek and Lady Bird Lake. It is caused in part by mowed, compacted upslope areas. Rewilding these upslope areas will act as green infrastructure to reduce erosion.



Severe rill and sheet erosion is occurring in the riparian forest downslope of the landfill parking lots. Sheet and rill erosion are severe.

Soil erosion is threatening the large trees along the creek...continuing erosion could eventually kill these trees...or could cause them to topple over.

— *Dr. Norma Fowler, University of Texas biologist, Fowler, 2021*

REWILDING RECOMMENDATIONS

A R E A S S E L E C T E D W O U L D D E C R E A S E E R O S I O N



Mowed caliche sparse grass cover does not control erosion or reduce downslope flooding

Areas where limestone bedrock has been exposed by excessive mowing and vehicular traffic were marked as areas for rewilding (polo field and main entrance). These areas all have soils less than 14" deep over bedrock (see the Map of Soils and Topography in the full Rewilding PowerPoint version).

Degraded soils do not allow rainwaters to soak into the ground to recharge groundwaters; instead it causes erosion and downslope flooding. Where shallow soils exist over limestone bedrock, this is made worse since it causes the karst to lose groundwater storage capacity.

[McGreevy, 2021]

REWILDING RECOMMENDATIONS

A R E A S S E L E C T E D W O U L D I N C R E A S E C A N O P Y S H A D E



Park visitors walking in the sun on a hot summer day.



Gravel parking in full sun

Mowed, degraded grass cover and parking lots in full-sun are extremely hot in Austin summers. These areas do not allow rainwaters to soak into the ground to recharge groundwaters; instead it causes erosion and downslope flooding where shallow soils exist over limestone bedrock.

[McGreevy, 2021]

Areas that showed caliche and/or exposed limestone bedrock were marked as areas for rewilding (polo field and main entrance). These areas have soils less than 14" deep over bedrock (see the Map of Soils and Topography).

PREDICTIONS

M O R E F O R E S T , L E S S G R A S S



It was predicted that the areas selected would naturally rewild to a more forested condition. It is important to embrace this potential reality instead of fighting it by forcing new natural areas to be dominated by prairie grass cover.

Tree cover will more effectively restore groundwater storage capacity, sink carbon and rainwater, and reduce erosion and downslope flooding since the depth to the carbonate limestone bedrock is shallow at Zilker. [McGreevy, 2021]

Wild areas with trees mitigate the heat island effect of urban areas by shading hardscapes, sequestering carbon dioxide, and filtering air pollutants. [Haynie, 2021; EPA, 2021] Trees also reduce temperatures by 2 to 9 degrees when their roots bring up deeper, cooled groundwaters and release moisture through their leaves. [EPA, 2021]

References: Berardelli, 2010; Birdsey, 1992; Dasgupta et al., 2006; Hester et al., 1997; Knight et al., 1984; Magdoff et al., 2009; McGreevy, 2021; Nelle, 2014; Slaughter, 1997; Sorenson, 2004; Taucer et al., 2006; Urich, 2002; Wilcox et al., 2010; Zhou, et al., 2015.

PREDICTIONS

EXISTING NATURAL AREAS FAVOR TREE COVER



Pecan-Elm Woodland



Bottomland Thicket



Meadow



Juniper-Oak Forest

PREDICTIONS

INDICATOR SPECIES POINT TO MORE TREE COVER

The presence and age of certain native plants provided clues to which areas would lean towards wooded cover.



White Shin Oak at Macbeth



American Elm thicket at the west Butler Landfill



Western Soapberry inside a Texas Live Oak thicket



Mountain Cedar, +200 years old, at main entrance



Yellow Passion Vine and Cedar Sedge

PREDICTIONS

BENEFITS OF REWILDING ZILKER



Bald Cypress trees along Lake LBJ

- Increased canopy shade
- Reduced the heat island effect
- Reduced erosion and downslope flooding
- Improved water quality and quantity
- Enhanced park experience and mental well-being with shade and greater ecosystem health
- Enhanced biodiversity



Ringtail in the Greenbelt. Courtesy of Robby Deans.

Zilker Park

Rewild



A
VISION
FOR
PEOPLE
AND
THE
PLANET

We invite the community to join us in a conversation to further explore the many benefits of rewilding Zilker Park.

Please visit the Save our Springs Alliance and ZNA websites for a link to the full version of this presentation and additional information:

https://www.sosalliance.org/uploads/2/1/7/4/21744914/rewilding_zilker_park.pdf
[https://zilkerneighborhood.org/docs/zpvp/rewilding_zilker_park%20\(Jan%202022\).pdf](https://zilkerneighborhood.org/docs/zpvp/rewilding_zilker_park%20(Jan%202022).pdf)

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