



Best Practices Around the World: Tiny Forests

Public Works Commission

January 11, 2024



Tiny Forests

- What is a forest?
- The challenge of increasing canopy coverage
- Constructing a Tiny Forest
- Preserving the dynamic of a Tiny Forest
- Conclusion



Tiny Forests



Photo credit: Grant Nixon

What is a “forest”?



Tiny Forests



Photo credit: Andreas Krappweis

What a “forest” is not



Tiny Forests



Photo credit: Martin Richter

What a “forest” is not



Tiny Forests



Photo credit: Grant Nixon

Tiny Forests: introducing the forest concept into small spaces



Tiny Forests



Photo credit: Gujarat Protector

Soil preparation



Tiny Forests

Canopy layer

Tree layer

Sub-tree layer

Shrub layer



Maximizing three dimensional canopy



Tiny Forests



Photo credit: Kara Newman



Tiny Forests



Photo credit: Kara Newman



Tiny Forests

- Is at least 15 feet wide
- Soil has been modified and amended properly
- Has at least 25 different tree species
- Contains only native trees and shrubs
- Has 3-5 trees per square meter
- Space provided is undisturbed for at least 10 years
- Branches, leaves and dead trees are allowed to lie where they have fallen
- Has a layer of mulch at least 6 inches deep
- Is enclosed by a fence for the first two years to protect the young trees

Preserving the dynamic of a Tiny Forest



Tiny Forests

- All City parks were considered
- Integral elements of the Tiny Forest Model are impractical in a Park Setting
Other City sites were considered
 - Access to public
 - Appearance
 - Preservation of existing canopy
 - Practicality
 - Maintenance
 - Current condition
 - Goals of Urban Forest Management Plan/Climate Action and Adaptation Plan

Progress Report



Tiny Forests

WE 2 ECOSYSTEMS

WE 2.1 Urban Forest Management Plan

Implement the Urban Forest Management Plan

IMPLEMENTATION ACTIONS:

Action 1. Implement all policy recommendations included in the Urban Forest Management Plan to improve the health, resilience, and services of the urban forest.

Action 2. Align implementation and maintenance with CIP funding cycles.

Action 3. Identify grant funding opportunities for Urban Forestry implementation.

GHG Reduction Potential (2030)	Applicability	Implementation Timeline	Implementation Level	Lead City Department	City Commission	Cost
37 MT CO ₂ e	Municipal	1-3 years	N/A	Public Works	Public Works	\$\$

WE 2.2 Miyawaki Tiny Forest pilot

Implement a Miyawaki Tiny Forest pilot project in City park. Akira Miyawaki, a Japanese botanist, pioneered the method of planting ultra-dense pocket forests using native species that grow rapidly.

IMPLEMENTATION ACTIONS:

Action 1. Identify appropriate city facility for Miyawaki forest and secure funding.

Action 2. Prep soil: combine perforators, water retainers, organic fertilizers and microorganisms with existing soil.

Action 3. Purchase native tree species.

Action 4. Plant and support trees, add mulch.

Action 5. Monitor and maintain forest for 3 years.

Action 6. Communicate results of the pilot forest to Council and the community and explore opportunities to expand the program to other city facilities.

GHG Reduction Potential (2030)	Applicability	Implementation Timeline	Implementation Level	Lead City Department	City Commission	Cost
Supportive	Municipal	1-3 years	N/A	Public Works	Public Works	\$





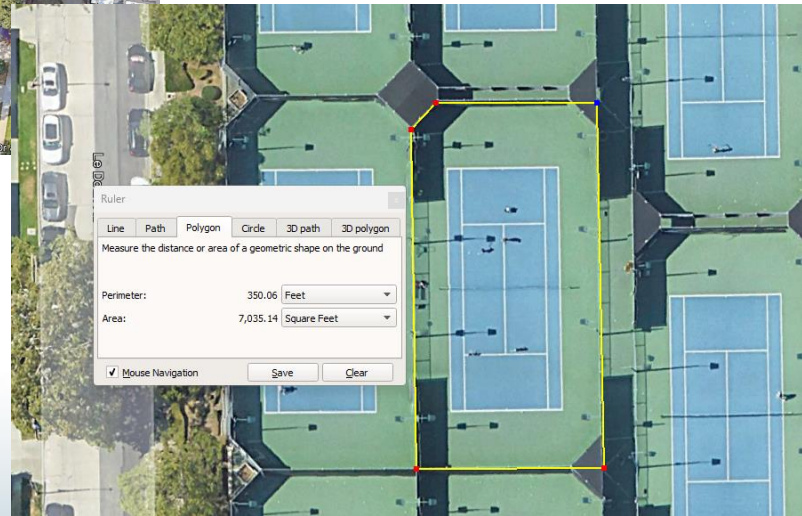
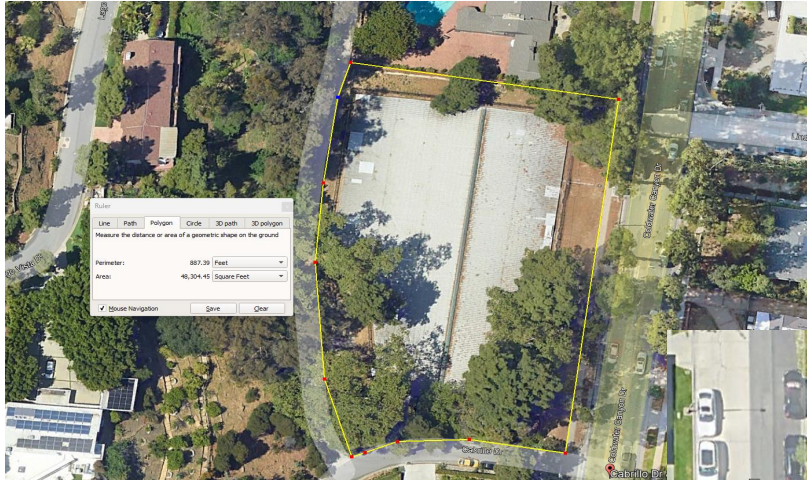
Tiny Forests



Reservoir site



Tiny Forests



Reservoir site



Tiny Forests

- Improvements being considered
- Currently areas available for planting
- Native soil profile in place
- Supports native growth
- Not openly accessible
- Additional screening required
- Maintenance requirements not as stringent as formal park
- Measurable to UFMP/CAAP/HSFZ goals

Site Considerations



Tiny Forests

Staff seeks Commission support for the development of a Tiny Forest model inspired landscape into the design of the Cabrillo reservoir project.

Recommendation



Comments