

PUBLIC MEETING AGENDA

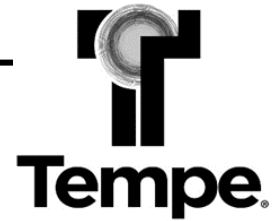
Sustainability & Resilience Commission

MEETING DATE Monday,
November 18, 2024
4:30 pm – 6:00 pm

MEETING LOCATION
[Virtual Link \(click here\):](#)
Meeting ID: 217 680 508 212
Passcode: axwEy9
Dial in by phone
+1 480-498-8745,,750057568# United States, Phoenix
Find a local number
Phone conference ID: 750 057 568#

AGENDA ITEM	PRESENTER	ACTION or DISCUSSION
1. Welcome and Commission Overview	Shawn Swisher, Chair (4:30 – 4:35 pm)	
2. Public Appearances The Sustainability Commission welcomes public comments for items listed on this agenda. There is a <i>three-minute time limit</i> per citizen.	Shawn Swisher, Chair (4:33 – 4:35 pm)	
3. Review of Meeting Minutes The Commission will be asked to review meeting minutes from the October 21, 2024 meeting.	Shawn Swisher, Chair (4:35 – 4:37 pm)	Action
4. Resilient Energy Hub Masterplan	Greg Kinkle, Quest Energy Carissa Fowler, Sustainability and Resilience Coordinator (4:37 – 5:00 pm)	Discussion
5. Growing Together Grant Funded Program Update	Kaci Fankhauser, Community Greening Program Coordinator Richard Adkins, Urban Forester (5:00 – 5:30pm)	Discussion
8. Sustainability and Resilience Office Updates and Housekeeping The Director will give an update on the Tempe, State and Federal election results including Tempe Bond Election and a federal funding update.	Eric Iwersen, Transportation and Sustainability Director (5:30pm-5:45pm)	Discussion
9. Sustainability and Resilience Commission Dates of Interest Calendar The Climate Action Manager will overview dates of interest in the calendar, specifically noting upcoming budget public meetings.	Brianne Fisher, Climate Action Manager (5:45 – 5:55 pm)	Discussion
10. Future Agenda Items - Commission may request future agenda items.	Shawn Swisher, Chair (5:55 – 6:00pm)	Action

According to the Arizona Open Meeting Law, the Sustainability Commission may only discuss matters listed on the agenda. The City of Tempe endeavors to make all public meetings accessible to persons with disabilities. With 48 hours advance notice, special assistance is available at public meetings for sight and/or hearing-impaired persons. Please call 350-2775 (voice) or 350-8400 (TDD) to request an a



Minutes

City of Tempe Sustainability & Resilience Commission October 21, 2024

Minutes of the Tempe Sustainability Commission meeting held on Monday, October 21, 2024, 4:30 p.m. in person at Tempe Transportation Center, Don Cassano Community Room, 200 E. 5th Street, Tempe, Arizona.

(MEMBERS) Present:

Shawn Swisher (Chair)
Melissa Harlan
Barbie Burke
Jake Swanson

Jacob Bethem
Ben Paulat
Matthew Nahlik

(MEMBERS) Absent:

Kendon Jung (Vice Chair)
Erin Boyd
Morgan Winburn
Joshua Randall

City Staff Present:

Eric Iwersen
Brienne Fisher
Elizabeth Mieth
Kaci Fankhauser
Carla Sidi

Guests Present:

Elora Bevacqua (Swette Center for Sustainable Food Systems)

Agenda Item 1 – Welcome New Members and SRC Mission

Chair Swisher called the meeting to order at 4:36 p.m. read the commissions' charge and mission and welcomed Commissioner Matthew Nahlik.

Agenda Item 2 – Public Appearances

No public comments were shared.

Agenda Item 3 – Review of Meeting Minutes

The minutes of the September 16, 2024, meeting was accepted with proposed modifications.

Motion: Commissioner Barbie Burke

Second: Commissioner Melissa Harlan

Agenda Item 4 – Accessory Dwelling Units Update

Lucas Jensen, Community Development, provided an update on the Accessory Dwelling Units. Topics Included:

- Objectives
- ADU Code Text Amendment (in progress)
- Background Research on Pre-approved ADU Plans
- ADU Plans RFP & Competition Overview
- Tentative Timeline

Agenda Item 5 – Rain 2 Roots Program Update

Brianne Fisher, Climate Action Manager, gave a background update on the key initiatives' priorities. Benefits of GSI:

- Supports tree canopy
- Reduces temperatures
- Reduces potable water use
- Mitigates flooding
- Promotes cleaner waterways
- Creates wildlife habitat

Project purpose:

- Expand green infrastructure & urban cooling initiatives.
- Promote cross-departmental coordination & planning.
- Identify opportunities for long-term funding.

Agenda Item 6 – Sustainability and Resilience Commission Annual Report and Discussion

Brianne Fisher, Climate Action Manager, talking about developing an annual report which will be similar to the one made last year.

Agenda Item 7 – Retreat After Action Report and Commission Champions

Shawn Swisher, Chair, review recap of August 2024 retreat and focus on Urban Cooling, Transportation Master Plan and Energy Equity/Resilient Energy Hub. Would like each commissioner to be supporting at least to one priority.

Agenda Item 8 – Sustainability and Resilience Commission Dates of Interest Calendar

Shawn Swisher, Chair, wants to color code the calendar to correspond to the different highlight actions.

Agenda Item 9 – Sustainability and Resilience Office Updates and Housekeeping

Eric Iwersen, Sustainability and Resilience Director, no new updates.

Agenda Item 10 – Future Agenda Item and Adjournment

There are no future agenda items.

Chair Swisher motions to adjourn the meeting at 6:15 p.m.

Motion: Commissioner Barbie Burke

Second: Commissioner Jake Swanson

Decision: Approved 7-0

The meeting was adjourned at 6:15 p.m.

Prepared by: Elizabeth Mieth

Reviewed by: Brianne Fisher



Resilient Energy Hub Master Plan

Nov. 18, 2024





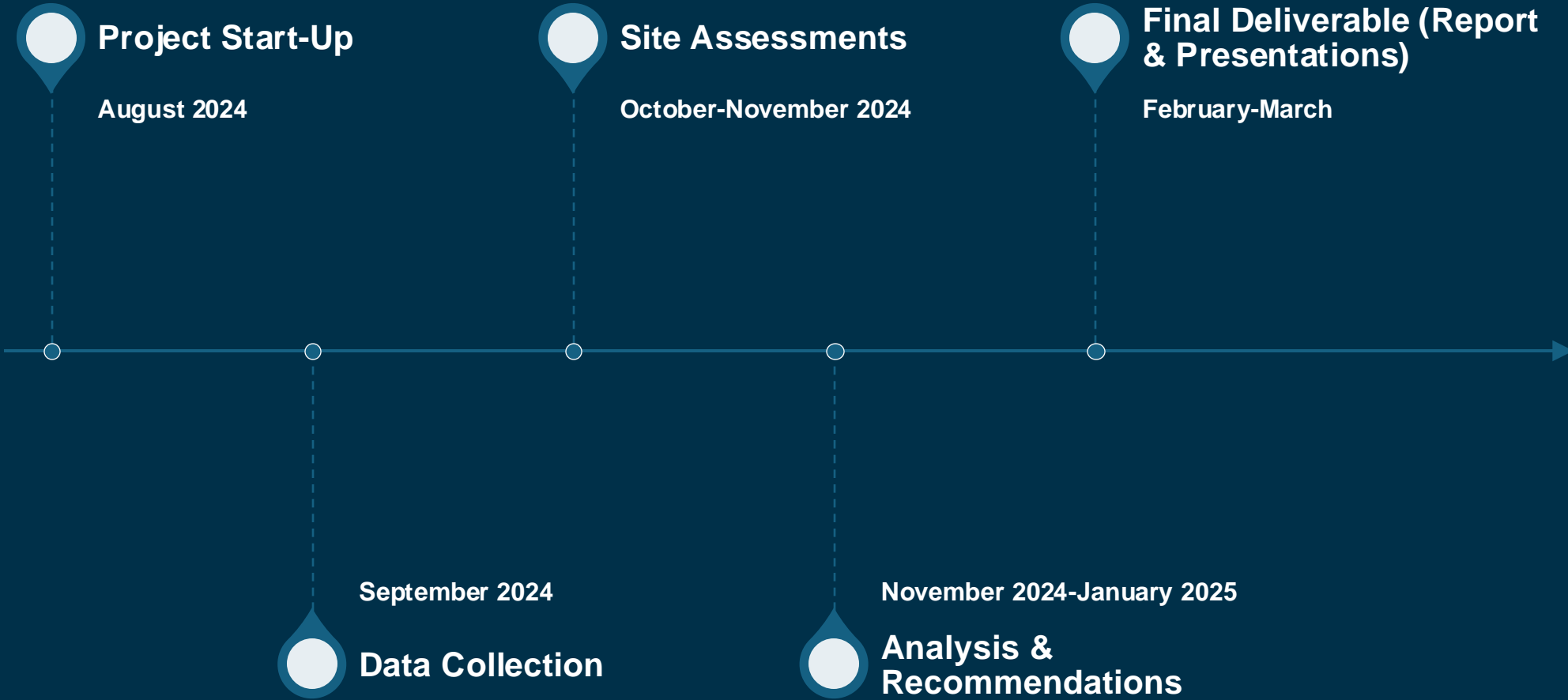
Deliverables

- Assess Police & Fire Stations, City-owned community centers, and community-owned sites for microgrid feasibility
- Conduct an analysis of energy load and consumption and determine system size and type of PV & battery storage
- Provide recommendations on which sites to prioritize and how to improve the energy efficiency of all sites





Project Timeline & Key Milestones





Data Collection

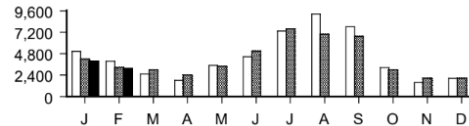
- Utility Data
 - SRP or APS Electricity Bills
- Building drawings
 - Electrical
 - As-Builts
 - Structural
 - Existing solar



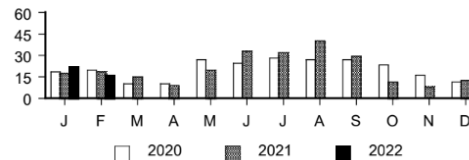
Energy Manager - Michelle.Gomez@srpnet.com
 Direct 602-236-4694 General 602-236-8833

DESERT PALM UN CH
 1230 E GUADALUPE RD TEMPE
 Business Time-of-Use Plan (E32)

ENERGY HISTORY (kWh)



ON PEAK DEMAND HISTORY (kW)



COMPARISON (Daily Averages)

	Days	kWh	Cost	Temp
Feb 2022	28	116	\$12.61	60.2°
Jan 2022	31	132	\$14.57	57.3°
Feb 2021	28	120	\$12.64	59.4°

Meter #	Type	Current Read	Prior Read	Energy
2033734	On Pk kWh	08760	08160	600
	Shoulder Pk kWh	09360	09120	240
	Off Pk kWh	28680	26280	2,400
	Total kWh			3,240
	On Pk kW			16.8
	Shoulder Pk kW			7.2
	Off Pk kW			20.4

SurePay Date
Feb 28, 2022

Account# 533-840-006
\$480.00

SERVICE FROM 1/20/2022 - 2/16/2022 (28 Days)

YOUR ACCOUNT SUMMARY AS OF 2/18/2022

Previous Balance	-\$522.51
1/31 SurePay Payment - Thank you	-\$480.00
Balance Before Charges	-\$1,002.51
Monthly Service Charge	\$39.60
Demand Charge	\$71.51
On Peak Energy Charge	\$63.42
Shoulder Peak Energy Charge	\$23.81
Off Peak Energy Charge	\$128.40
Tempe City Tax	\$5.88
County and State Tax	\$20.58
This Month's Charges	\$353.20
NEW ACCOUNT BALANCE	-\$649.31

Your Budget Billing Summary

New Account Balance	-\$649.31
Please Pay	\$480.00
Account Balance After Payment	-\$1,129.31

MESSAGES FOR YOU

- ✓ If you are having trouble paying your bill, we have programs and resources that may help you. Our team is available at (602) 236-8833 or contact your Energy Manager.
- ✓ You saved \$34.97 this month on the Time-of-Use Plan. Savings for the last 12 months are \$736.80.
- ✓ Demand (kW) is the rate of electricity being used at a given time measured by the average load over a 30-minute period. The highest demand value during the On Peak period plus the highest of the Shoulder or Off Peak periods are the billed demands.



Site Assessments/Audits

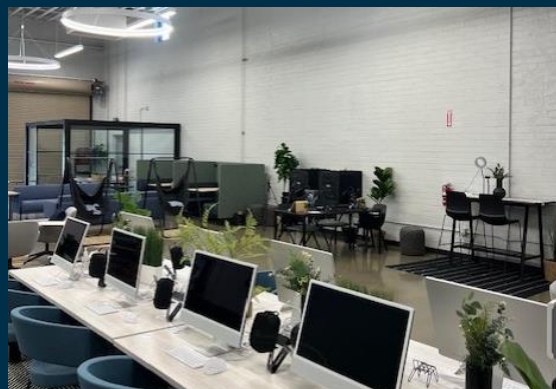
Fire Stations & Police

- Fire Station 1 (COMPLETE)
- Fire Station 4 (COMPLETE)
- Fire Station 5 (COMPLETE)
- Fire Station 6 (COMPLETE)
- Fire Station 7 (COMPLETE)
- Main Police Courts (NOVEMBER)
- Apache PD Substation (NOVEMBER)
- South PD Substation (NOVEMBER)



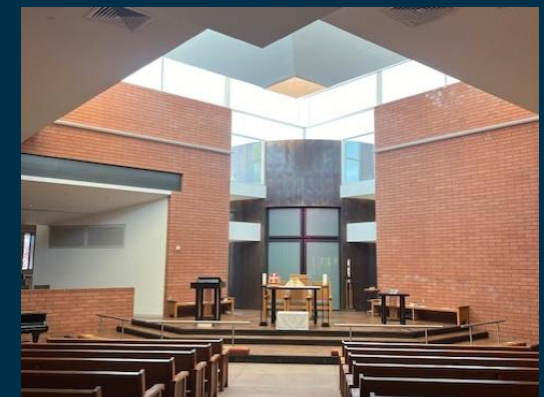
Community Centers:

- Library (COMPLETE)
- Pyle (COMPLETE)
- Clark (COMPLETE)
- North Temple (COMPLETE)
- Escalante (COMPLETE)
- Kiwanis (COMPLETE)
- Tempe YMCA (COMPLETE)
- EnVision (COMPLETE)



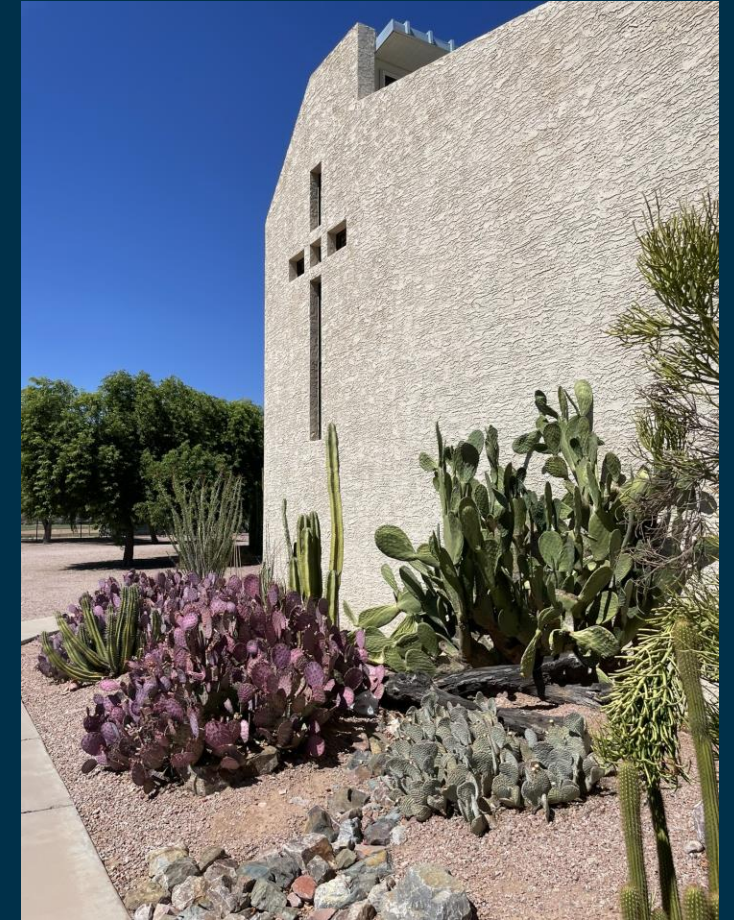
Community Owned

- Epiphany (COMPLETE)
- UPC (COMPLETE)
- Community Christian (COMPLETE)
- Tempe Church (COMPLETE)
- Dayspring (COMPLETE)
- Desert Palm (COMPLETE)
- Citypoint (COMPLETE)
- King of Glory (COMPLETE)
- YMCA (COMPLETE)



Faith-Based Findings/Trends

- Churches, in general, are set up in a way that makes it optimal to segregate one portion of the building to remain operational during outages.
- Churches will likely need to manually shut down most of the building due to the lack of controls.
- Investigating a strategy to keep Photovoltaics from disconnecting during power outages





Fire Station Findings/Trends

- Fire Stations all have some level of backup built into the Generator system.
- Newer Stations have larger systems that should cover close to 100% of the load
- Older stations have a small portion and only cover emergency systems (No HVAC)





City Owned Findings/Trends

- City Buildings have more challenges with segregating loads.
- Smaller buildings with Package Units are more ideal
- Larger Buildings with central plants will have more challenges





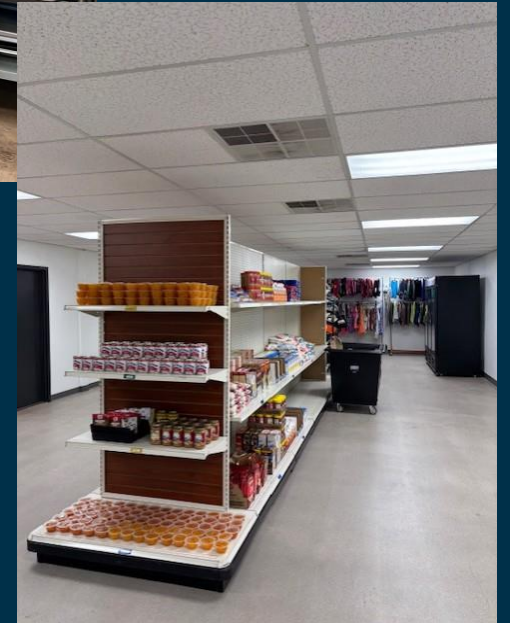
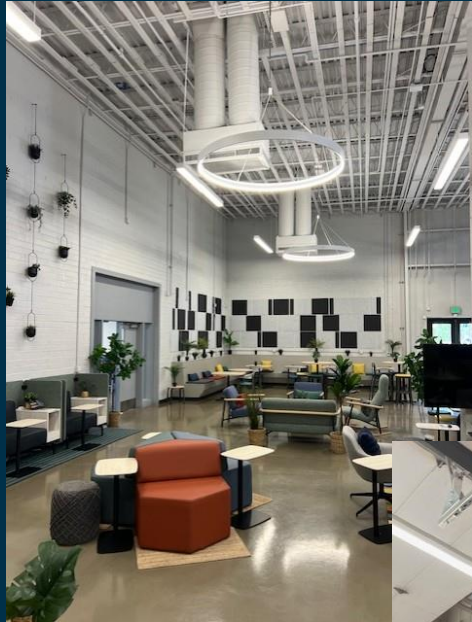
Alternative Approaches

- PV + Battery
- PV
- Battery
- Portable Generator
- Permanent Generator





Big Picture



Growing Together

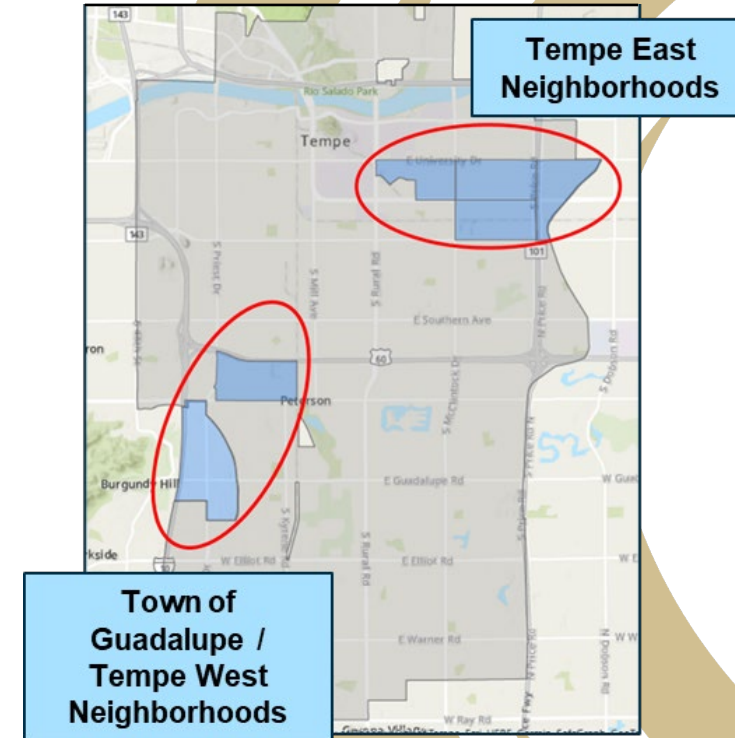
(UCFIRA 23-102)





Growing Together - Project Overview

- **Purpose:** Expand Tempe's urban forest to mitigate extreme heat.
- **Project Area:** Northeast Tempe, Town of Guadalupe, & Baseline-Hardy
- **Total Funding Amount:** \$1.6 million
- **Timeline:** April 2024 – March 2027 (3 years)





Growing Together - Funding

The City of Tempe's Growing Together program is a part of ASU's Rob and Melani Walton Sustainability Solutions Service Urban Nature project, a 3-year \$5 million grant with the USDA Forest Service to grow the tree and shade canopy in metro Phoenix while also growing an urban forestry industry through community-industry partnerships. Urban Nature is a Justice-40 initiative funded through the Inflation Reduction Act by the USDA Forest Service, Urban and Community Forestry Program. Urban Nature is implemented in collaboration with 5 community-based organizations, 4 municipalities, 3 industry partners, 3 national organizations, and 4 ASU departments.

Additional funding and program support is possible through an Arizona Department of Fire and Forest Management and a USDA Forest Service IRA grant to the Community Services Department.





Growing Together - Partners

- City of Tempe – Community Services
- City of Tempe – Transportation & Sustainability
- Town of Guadalupe
- Retail, Arts, Innovation & Livability Community Development Corporation (RAIL CDC)
- ASU Walton Sustainability Solutions Service
- Tempe Elementary School District #3
- Tempe Union High School District
- **Tempe / Guadalupe Residents**





Growing Together - Components

Community Tree Stewards Program	School Greening & Grounds Maintenance Program	Food Forest Pilot Projects
Pay Tempe residents to become local Tree Stewards in neighborhoods with low canopy coverage & high heat vulnerability.	Provide additional capacity for school greening through new staff roles and professional development trainings.	Develop two new food forests to provide shade and increase community food access.





Community Tree Stewards Program

Overview:

- 6 cohorts, ~10 residents per cohort (**60+ total participants**).
- 7 in-person workshops with classroom and field activities
- Participants earn \$20/hour for all workshops attended, plus a limited number engagement hours in the community

During the program, participants will...

- Learn about tree biology, tree care, urban forestry, and careers with trees
- Grow their neighborhood's tree population with a community nursery and tree planting event
- Receive a set of planting tools to keep (\$500 value, one set per household)
- Have access to scholarship funding for continuing education & certification



Tree Stewards Workshops





Tree Stewards Schedule

- Session 1: Introduction to Trees & Urban Forestry
- Session 2: Tree Biology, Identification, & Stewardship
- Session 3: Ingredients for Tree Growth & Community Success
- Session 4: Site Assessment, Tree Selection, & Planting
- Session 5: Pruning, Maintenance, & Care
- Session 6: Career Exploration
- Session 7: Program Wrap-Up
- Walking Audit
- Tree Planting Event



Tree Stewards Cohort 1

Worried about the increased heat

Want to learn to care for trees in their neighborhood

Miss living in places with more trees

Have noticed trees in their community that are dying or not well maintained

Want a more walkable & connected community

Want to bring the lushness of the desert to the urban environment





Questions & Prompts

- What kinds of data or information would you want to see to advocate that council continues to fund this project after the grant runs out?
- Do you know folks who live in these neighborhoods that might be interested in participating?
- Potential next steps:
 - Ongoing communication & events
 - Broader geographic inclusion
 - Growing the program beyond trees (e.g. sustainable landscaping)





School Greening and Grounds Maintenance

Overview:

- Expands school districts' **capacity to plant and maintain trees** on school campuses.
- Involves hiring three **temporary staff** to provide additional grounds maintenance support.
- Includes **training & professional development** opportunities.
- Builds on the city's previous **investments in school greening** through the State Farm Century for Good Grant and Keep Tempe Beautiful programming.



2023 Tempe Tree-a-thon at
Connolly Middle School

Food Forest Pilot Projects

Eat Your Yard!

The Desert Can Feed You

Growing an edible food forest offers multiple benefits...

- Produces food for people and wildlife
- Provides clean air, shelter and shade
- Conserves water and energy

Choose native plants with differing fruiting seasons to enjoy food year-round.

Research all plants before harvesting to identify which varieties are edible and safe to eat.

Choose a variety of trees, shrubs, vines and ground cover plants. Plants of varying heights mimic a natural forest.

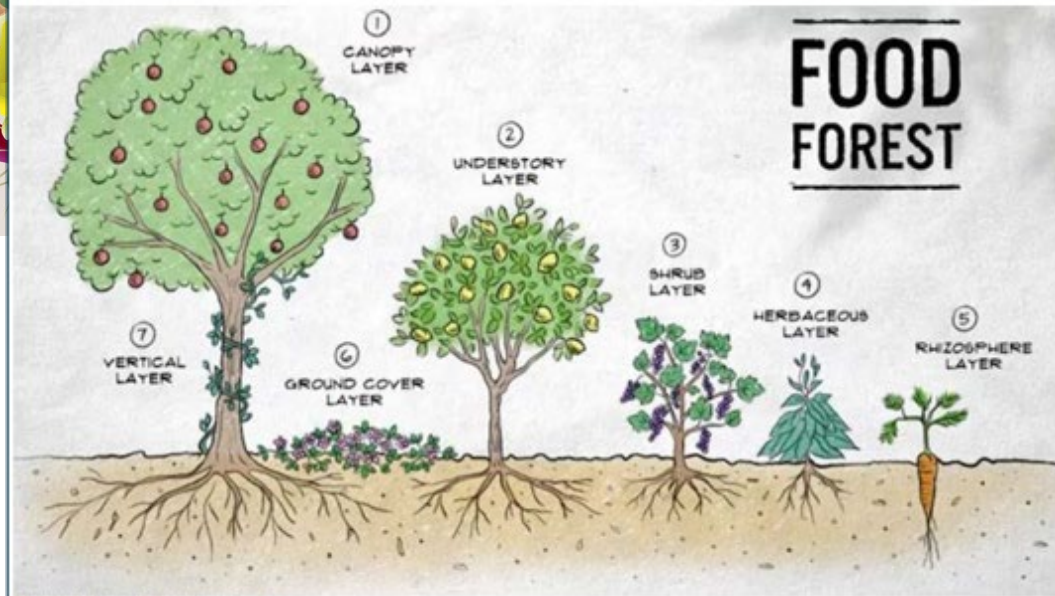
Group plants in clusters to maximize food production in small urban spaces.

Avoid using herbicides and pesticides to protect people, wildlife and the environment.



Funded through the Arizona Department of Forestry and Fire Management and the USDA Forest Service. This institution is an equal opportunity provider.

Food Forest



Pictured: Food Forest Layering

FOOD FOREST INFO

A Food Forest is a sustainable and productive ecosystem designed to mimic the structure and function of a natural forest. By strategically layering a diverse array of edible and beneficial plants—such as trees, shrubs, herbs, vines, and groundcovers—we create a self-sustaining environment where each species supports the health and growth of the others. This approach not only maximizes space and yields but also enhances soil fertility, conserves water, and promotes biodiversity. Unlike traditional two-dimensional farms, Food Forests harness natural processes to reduce the need for artificial fertilizers and pesticides, offering a resilient and regenerative solution that benefits both people and the planet.

FOOD FOREST



Food Forest Pilot Projects

- **Overview:**

- Develop **two community food forests**, one at McClintock High School and one at the City of Tempe EnVision Center
- Includes funding for **site design and assessment, installation, programming, & maintenance.**
- Builds on plans & partnerships developed through Tempe's Sustainability Office ***Grow Local Tempe*** initiative.

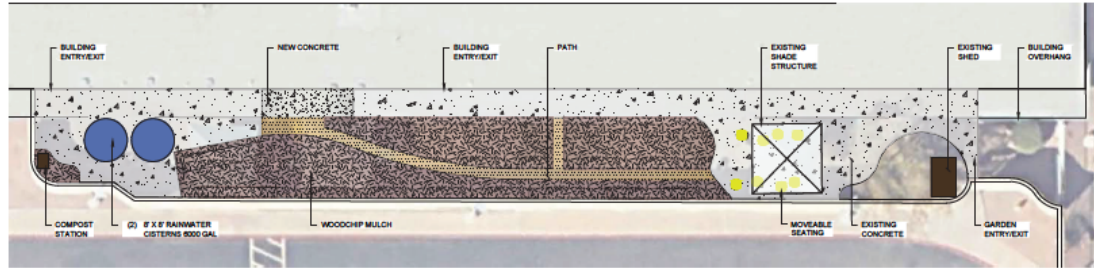


2024 Community Food Showcase & EnVision Open House

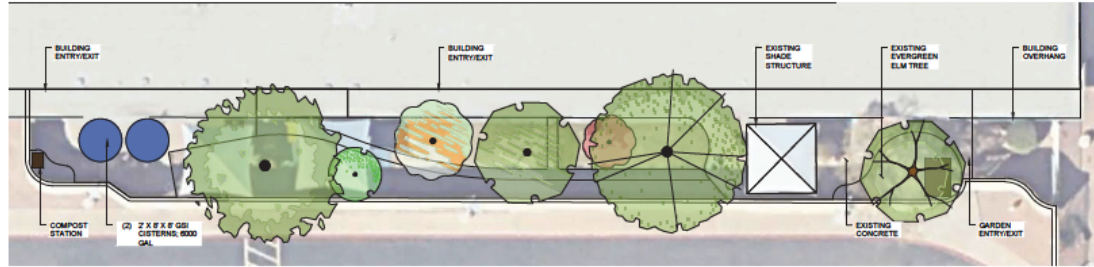
McClintock Food Forest Planning

Site Plan

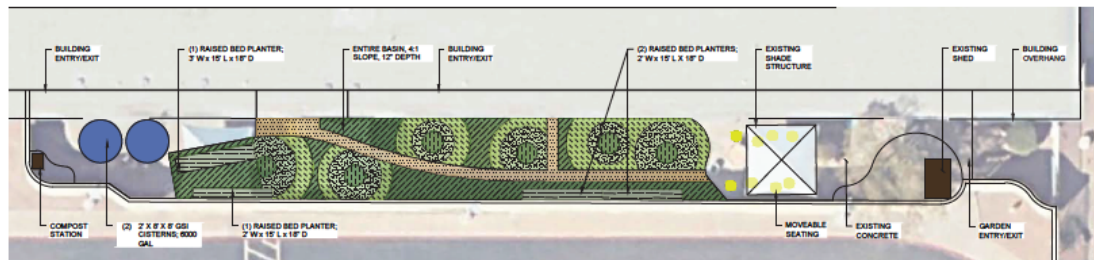
HARDSCAPE / SITE FURNISHINGS



CANOPY DESIGN



UNDERSTORY PLANTING DESIGN



PLANT SCHEDULE MCCLINTOCK HS FOOD FOREST

SYMBOL	QTY	BOTANICAL / COMMON NAME	PLANTING SIZE	CALIBER	HEIGHT	WIDTH	MATURE SIZE
TREES							
	1	Ulmus parvifolia Evergreen Elm	Existing				
	SUBTOTAL:						
CANOPY LAYER							
	1	Celtis reticulata Netleaf Hackberry	15 gal	0.5"-1.0"	5.0'-6.0'	2.0'-3.0'	30' x 30'
	1	Franklinia florida Blue Palo Verde	15 gal	1.75"-2.25"	8.0'-10.0'	5.0'-6.0'	20' x 20'
	1	Prosopis velutina Velvet Mesquite	15 gal	0.5"-0.75"	4.0'-5.0'	2.0'-3.0'	30' x 30'
	SUBTOTAL:						
UNDERSTORY LAYER							
	1	Citrus japonica 'Fukushu' Fukushu Kumquat	5 gal	0.5"-0.75"	3.0'-5.0'	2.0'-3.0'	6' x 2'
	1	Citrus x tangelo 'Minnesota' Minnesota Tangelo	16" B&B	1" Min.	3.0'-4.0'	2' Min.	15' x 15'
	1	Punica granatum 'Wonderful' Wonderful Pomegranate	15 gal	1" Min.	3.0'-4.0'	2' Min.	15' x 15'
	SUBTOTAL:						
SHRUB LAYER							
		Maryland Century Plant / Agave murphyi Pineapple Guava / Feijoa sellowiana Goji Berry / Lycium barbarum					
HERBACEOUS LAYER							
		Bird Pepper / Capsicum annuum glabrusculum English Chives/Onion / Chaerophyllum nobile Squash / Cucurbita moschata					
RHIZOSPHERE LAYER							
		Onion / Allium cepa Creeping Rush-pea / Hoffmannseggia repens Ornamental Sweet Potato / Ipomoea batatas					
GROUND COVER							
		Spearmint / Mentha spicata Elephant Bush / Portulacaria afra Trailing Rosemary / Rosmarinus officinalis prostratus					
VERTICAL LAYER							
		Patio Screen / Phacelias vulgaris 'Pinto' Tomato / Solanum lycopersicum Canyon Grape / Vitis arizonica					

REFERENCE NOTES SCHEDULE HARDSCAPE

SYMBOL	DESCRIPTION	QTY
	CONCRETE	1,789 sf
	NEW CONCRETE	91 sf
	PATH	414 sf
	WOODCHIP MULCH 3" Minus, 4" Depth Color: Natural	1,266 sf

September 24th: Food Forest Info Session

- Presentation from **Food Forest Cooperative** on what a food forest is and what a local food forest looks like.
- Presentation of initial plans from **Werk Urban Design**.
- Students and teachers discussed what the space might be used for.
- Overview of next steps & what the long-term plans looks like.





EnVision Food Forest Planning

- Design contract approved by City Council
- Rezoning in process
- Developing programming to activate space for food forest
- Community feedback at EnVision Grand Opening Celebration

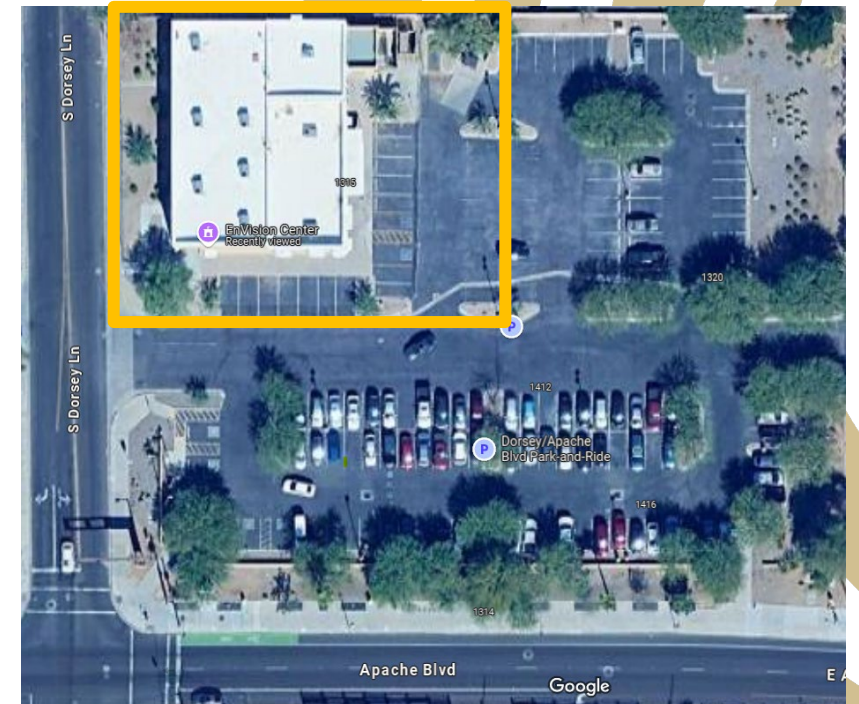


What would you like to grow in the food forest?

- Herbs
- Nuts
- Citrus & Other Fruits
- Vegetables
- Cultural & Ancestral Foods

How would you like to use the food forest?

- Nutrition & Wellness Workshops
- Water Harvesting Demos
- Girl Scout Opportunities
- Pollinator Habitat





Questions & Prompts

- What other kinds of programming might you want to see in conjunction with the development of the food forests?
- Do you have any suggested programs and/or presenters that might be a good fit for the food forests, and/or the EnVision Center more broadly?





Comments and Questions Welcome

Richard Adkins
Urban Forester

Kaci Fankhauser
Community Greening Program Coordinator

Parks & Recreation Division
Community Services Department

Sustainability & Resilience Division
Transportation and Sustainability Department

Richard_Adkins@tempe.gov
480-350-5227

Kaci_Fankhauser@tempe.gov
480-350-8864





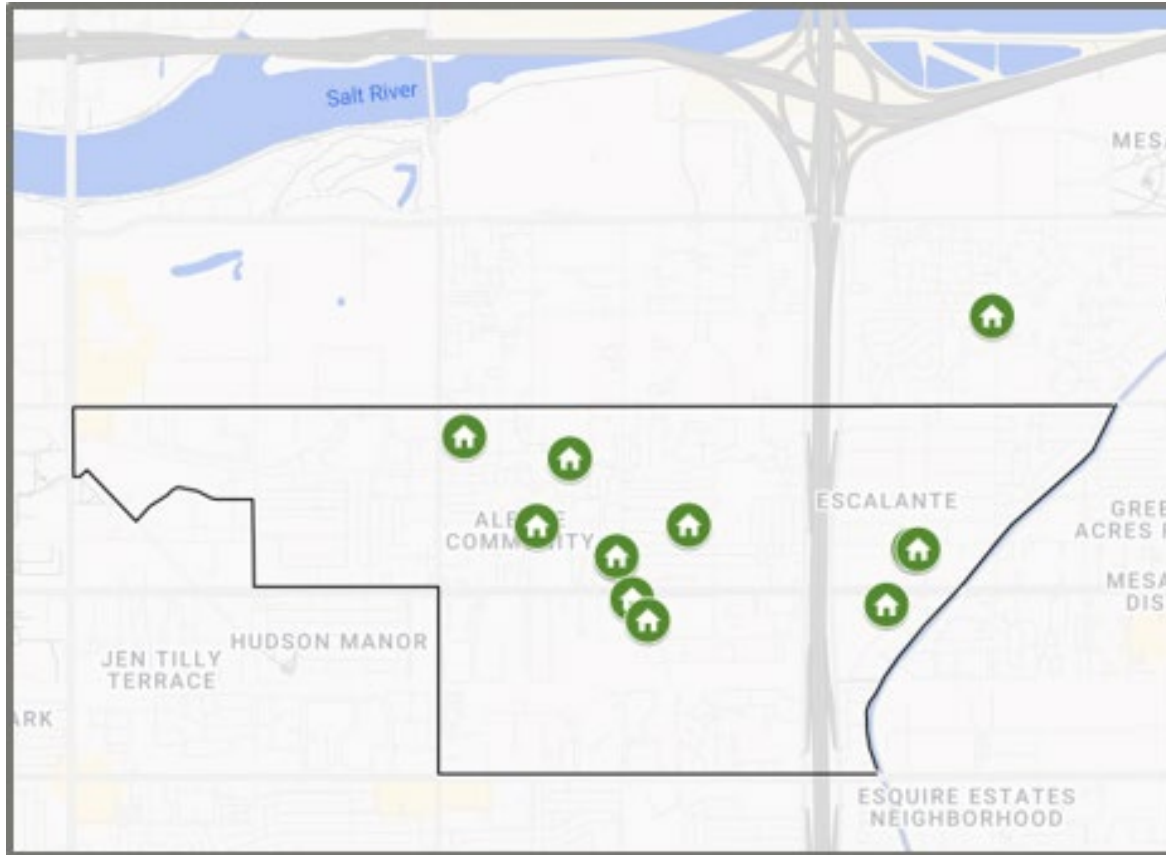
Growing Together - Goals

- Expand (and maintain) Tempe's urban **tree canopy**.
- Promote **equitable urban cooling** and **resilience** to extreme heat.
- Create **workforce development** opportunities through on-the-job training programs and professional development scholarships.
- Expand **capacity** for green infrastructure installation and maintenance by creating new temporary staff positions.
- Develop **connections** between the city's urban forestry, green stormwater infrastructure, and urban agriculture initiatives.





Tree Stewards Cohort 1 Map



Month	SRC Agenda	City of Tempe Calendar
January	Budget Overview Energy Equity Roadmap IgCC Status Report w/ Quest	<u>Council:</u> <ul style="list-style-type: none"> January 30 - Solid Waste Program and Landfill Diversion January 31 - Council Retreat <u>Public Meetings:</u> <ul style="list-style-type: none"> TBD: Energy Equity Roadmap TBD: Urban Cooling Developer Forum
February	Rain to Roots Recommendations Vision Zero Update	<u>Council:</u> <ul style="list-style-type: none"> Feb., 24 - Energy Equity Roadmap Feb./ 24 - 5 Year CIP Requests and Long Range Financial Forecast <u>Public Meetings:</u>
March	JOINT: Meeting with Transportation Commission (tentative) (March 17) 1. Transportation Plan & Transportation Equity	<u>Council:</u> <ul style="list-style-type: none"> Initial Recommended Five Year CIP and Acceleration Strategies <u>Public Meetings:</u> <ul style="list-style-type: none">
April	Mobile Home Retrofit Program Update	<u>Council:</u> <ul style="list-style-type: none"> April 24 Urban Cooling Policy Recommendations April 24 Fiscal Year Budget Review Session <u>Public Meetings/Events:</u> <ul style="list-style-type: none"> EARTH MONTH CALENDAR
May		<u>Council:</u> <ul style="list-style-type: none"> May 19 - Joint DRC Meeting <u>Public Meetings:</u>
June		<u>Council:</u> <u>Public Meetings:</u>

July		<u>Council:</u> <u>Public Meetings:</u>
August		<u>Council:</u> <u>Public Meetings:</u>
September	Com Dev - Planning Residential Shade Code Commissioner Calendar Retreat Follow Up Sept 19th new Commission Appt	<u>Council:</u> <u>Public Meetings:</u>
October	ADU - Ryan Levesque Planning Rain 2 Roots Codes and Standards Update Commission Assignments Annual Report	<u>Council:</u> <ul style="list-style-type: none"> Oct 1 - National Clean Energy Month Proclamation Oct 10 - Federal and Legislative Principles Oct 29 - Joint DRC Meeting <u>Public Meetings:</u> <ul style="list-style-type: none"> Oct 19 GAIN
November	Chair Overview/How Commission Works Growing Together Grant Update Microgrid Feasibility Study Federal Funding Update /Calendar Budget	<u>Council:</u> <ul style="list-style-type: none"> Nov., 19 Community Survey and START Tool <u>Public Meetings:</u>
December	Firefly Community Energy Report (confirmed) Public Art Plan Urban Cooling Performance Measure	<u>Council:</u> <ul style="list-style-type: none"> Dec. 12 - Water, Wastewater, Stormwater and Solid Waste Rate Study Dec., 12 - Strategy Tool for Aligning Resources for Tempe (START) <u>Public Meetings:</u>

<p>Other Notes/To Do:</p>	<ul style="list-style-type: none">• Annual Report	<p>KEY: WSS - Work Study Session (starts at 4pm) RCM - Regular Council Meeting (starts at 6pm) Green Highlight - GREEN INFASTRUCUTRE TEAM Orange Highlight - ENERGY TEAM</p> <p>Resources: Tempe Channel - Watch Tempe Council meetings live (cannot participate) City Council Comment Card How to join and speak virtually at a Council Meeting Council Chambers Address - 31 E 5th St, Tempe, AZ 85281</p>
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