

FIVE STEP GUIDE TO AN URBAN FORESTRY PROJECT



change **X**

WELCOME

“More trees in our neighborhoods provide so many benefits and help to create a healthier environment for all of us. We’re here to support and empower you to share these benefits with others in your neighborhood. This guide walks you through the basics and we’re excited to help you get started!”

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- Arizona Sustainability Alliance



Introduction to the Idea

What is Urban Forestry?

Community tree plantings provide many benefits for the communities in which they are planted. Shade reduces the urban heat island effect, reduces cooling needs for surrounding areas, and provides shade for walking, living, or playing. Trees filter many pollutants from the air, helping create a healthier environment. Trees help control water in the ground/soil, providing shade that helps prevent evaporation and helping to control flooding during storms. Trees can also provide food. There are many studies on how trees positively impact our health and the urban environment.

A typical community tree planting project would involve approximately 25 trees and this can be in a public space or a privately owned space that would benefit the community. Suitable locations might be a local park, a local school or the grounds of a community center. This guide walks you through some of the practical information and steps you need to take to get a project like this up and running locally.

Why it's Important?

Climate change and its causes create many problems for communities, including increased temperatures

and urban heat island effect, increased air pollution, increased storm intensity, and water scarcity. In the desert of Arizona, the urban heat island effect is a significant health risk. At night, the natural desert drops below 90 degrees Fahrenheit, even in the summer. However, our urban environment no longer does so for longer and longer each year. This drop in temperature is crucial for the health of the human body. As temperatures increase, the need for additional energy to cool indoor spaces also increases. Vulnerable populations are highly affected by both of these temperature challenges.

The Background

Arizona Sustainability Alliance is a non-profit action and advocacy alliance who aims to create and support cutting-edge, project-based sustainability solutions in Arizona through civic engagement, collaboration and education. We empower Arizona citizens to work together toward more verdant, equitable and sustainable communities. Urban Forestry is one of our key priorities and we work with local communities to help them plan a community tree planting in a way that is most beneficial for that local area, working with the City and any other relevant local partners.

STARTING AN URBAN FORESTRY PROJECT

EVERYTHING YOU NEED

TIME



You'll need to start planning, researching and building your team a couple of months in advance. This will involve 2-3 hours per week. Your tree planting should take place in early fall. This will be one full day.

PEOPLE



You'll need a strong organizing team of 5-6 people to get started. You'll need 1-2 volunteers per tree for your tree planting day.

FUNDING



Tree plantings typically cost approx \$100 per tree. Funding available through ChangeX is \$4,000. This should cover the cost of trees, tools and any other costs associated with your planting day.

Who typically starts an Urban Forestry project?

Someone who:

- is a community organizer
- is passionate about your neighborhood
- ideally has some knowledge or experience planting trees
- can build and manage a team of volunteers

5 Step Summary

- 1 Complete the 30 Day Challenge
- 2 Set a Goal & Research
- 3 Agree with Property Owner & Order your Trees
- 4 Plan your Planting Day
- 5 Ongoing Maintenance

Support and Additional Resources

Aubrey from the Arizona Sustainability Alliance will be on hand to help answer questions Reach out to her any time at:

aubrey.coffey-urban@azsustainabilityalliance.com

Check out your City's Urban Forestry Plan

More info on ChangeX at <http://www.changex.org/urban-forestry> or email us any time at info@changex.org

STEP 1: COMPLETE YOUR 30 DAY CHALLENGE



The 30 Day Jumpstart Challenge has been designed to get your project off to the strongest possible start by building momentum in the first month. Once you have completed your challenge your first funding payment will be unlocked.

- Learn more about the idea you're starting**
This '5 Step Guide' includes all you need to know about the specifics of starting your project.
- Schedule a Call**
Pick a time that works for you to talk to a ChangeX team member about what's involved in your chosen project as well as to ensure that you understand the Guidelines & rules associated with the Challenge.
- Find 5 interested people**
You already have your own project page on changex.org. Use the site to share the project with others in your school to get started together.
- Set up a casual kick-off meeting**
Host a meeting with your team at your school, at a community center or in a coffee shop and come up with an action plan. You can use your page on changex.org to set up an event and invite people.
- Share a team photo and your plan of action**
Upload a team photo taken at your first team meeting to changex.org. In addition, provide us with a narrative on what you will spend the funding on, what your next steps as a group will be, and how you hope the project will ultimately benefit your school community.

MORE INFO ON BUILDING YOUR TEAM



Planting trees is an opportunity to engage with lots of people in your neighborhood and getting a strong team onboard from the outset will be critical to your success. One of the most important parts of your 30 Day Challenge is building your team and getting them together to kick-start this project. These are just some things to keep in mind as you get your team together:

Your organizing team will **ideally** include:

- An arborist or other tree expert (who can advise on tree species, specimens, and planting locations) - If you don't have this expertise in your group, AZSA can help give you this advice or connect you with someone else who can provide this advice.
- Someone who can be there on the day to do a safety training and tree planting demonstration - AZSA can also help with this if needed.
- If you are running a social media campaign to either gather volunteers or to publicize the planting after it occurs, you may want a dedicated person or two to work on this. You may also want someone who can document the event (photos, video, blogging, etc)
- For a tree planting of 25 trees, ideally you would have 5-6 people who have planted trees before and can either help do a planting demonstration or at least act as a team leader and give additional information/corrections to volunteers.
- If you are pre-digging holes for volunteers, determine special equipment needed and a person who can safely run that equipment.
- At this stage, it's also helpful to identify local groups you may want to involve (neighborhood associations, community organizations, etc.) These may help you to recruit volunteers later in the process but will also be a helpful ally in getting the project off the ground.
- You'll need approximately 1.5-2 volunteers per tree for the day of the planting. You don't need to have all of these on board from the initial planning stages but keep in mind where and how you might recruit these volunteers as you plan and get your initial organizing team together.



STEP 2: SET A GOAL & RESEARCH



Setting a goal for your project will determine what type of location you choose and how many trees you plant.

Once you have your organizing team together, you'll need to decide on the goals of your tree planting project - discuss with your team why you are interested in doing this planting and decide on what you want to accomplish, or what you want to improve in your neighborhood.

One of the most critical considerations in undertaking this project is the planting location - based on the purposes of the planting, determine where to look for a planting location and set out some requirements as to how it will be selected. For example, if you want to increase walkability, you will want to look for areas where there is room for trees that could help cool/shade a walkway/street. If you want to increase trees in parks, you will need to look for parks in your area that have room to plant additional trees. If you want to increase tree canopy overall, you may want to look at a tree shade map.

An important part of choosing a suitable location is getting to know / working along with the property owner. Maybe you already have a location & property owner in mind? What do they think of your project and what concerns or challenges do they have that affect the project? What are the needs of the property and how do they intersect with your goals?

Research

Do you know if your City have an urban forestry master plan that your planting might further and align with?

In preparing this guide, we've referenced the Tempe Urban Forestry Plan - this is a good resource for information about desert-adapted trees that are also good choices for the Phoenix metro area. It includes information on naming and quantifying the community benefits of those trees. The info in this report can be used outside of Tempe, but it's also a good idea to see if your

city has a similar master plan with even more customized information. This can help you wrap your private planting into the City's broader goals.

You can find the Tempe Urban Forestry Plan here:

<https://static.sustainability.asu.edu/giosMS/uploads/sites/15/2017/04/Tempe-Urban-Forestry-Final-Report-v3.pdf>

You can find the Phoenix Urban Forestry Plan here:

https://www.phoenix.gov/parkssite/Documents/PKS_Forestry/PKS_Forestry_Tree_and_Shade_Master_Plan.pdf

These links are also in your guide on your ChangeX Project page.

At this stage, it's also good to do some research into where you might source tools and trees locally. Often, you can borrow tools from a tool library or tool bank, this eliminates waste associated with buying tools if you don't plant to use them again in the future or do some research on local nurseries where you can purchase your trees.

STEP 3: AGREEMENT WITH YOUR PROPERTY OWNER AND TALK TO YOUR ARBORIST

Some things to consider to reach agreement with your Property Owner:

- Determine if irrigation is an issue and whether that will be solved by the planting project or separately by the property owner prior to planting
- Make sure to discuss ongoing maintenance with the owner. Generally, the owner would take on responsibility for any ongoing maintenance including watering, trimming etc.
- Once the needs of the owner and project are met, the agreement between you and the property owner can be summarized in a short document, like a Memorandum of Understanding, to ensure clarity on both sides of the scope and impact of the project.

The AZSA team can give you some advice on drafting an MOU if needed.

The next thing you'll need to do is talk to your Arborist.

An Arborist or a tree consultant can help you choose suitable tree specimens from your local nursery and also advise you on planting locations.

You should decide where you will source your trees and make sure your tree expert can go to pick out the specimens at least 1 month in advance. Don't forget to ask about delivery cost and timing options as you'll need them delivered to the planting location as close as possible to the planting day / time.

Once you've made a decision on the size of trees you can decide whether holes will be pre-dug and which tools will be needed (don't forget a caliche or digging bar) - these are both important decisions for your Planting Day plan!



STEP 4: PLAN YOUR PLANTING DAY

Your planting day will be a fun day out for all of your team and you'll finally get to see all your hard work in planning and research pay off!

What you need to know to plan your Planting Day



- Schedule in Fall or early spring (avoid the coldest and hottest months; give trees at least a month between planting and hottest time of year)
- Make sure to have 1.5-2 volunteers per tree for the day of
- If you have the above volunteers available, plan to be at the site for 4 hours - about one hour of set-up (tree delivery, placement, tool delivery, food/water set-up, etc), 2-2.5 hours of planting, and 0.5-1 hour of clean-up.
- Make sure volunteers include people who have planted trees before that can act as team leaders, helping check on volunteers who have not done this before
- Secure a volunteer that can give a demonstration at the beginning of the event, both in safety and in proper tree planting technique
- Decide size of trees, whether holes will be pre-dug, which tools will be needed (don't forget a caliche or digging bar)
- Decide on source of trees and make sure tree expert can go to pick out the specimens at least 1 month in advance. Don't forget to ask about delivery cost and timing options
- Plan to provide some water and snacks for volunteers. (This helps people remember to drink water and take breaks when they need to.)
- Determine method of recruiting/communicating with volunteers
- Don't forget to get utilities and irrigation marked before digging!
- Think about the property you are planting on when designing the project. (Are there streets you will need to close for volunteer safety? Is parking going to be an issue? Are you planting outside of operating hours of the location, as to require additional staff on site from a business or organization? Are you planting at individual homes? Will the homeowners be there?)
- You'll also need to get a waiver of liability signed by each of the volunteers for the planting day- this is something AZSA can help with if you haven't worked on something similar before.

STEP 5: ONGOING MAINTENANCE

The ongoing maintenance of the trees is generally the responsibility of the property owner. However, there is initial maintenance needed until the trees are established. You or some of your volunteer team might want to help with this or to ensure that the property owner is aware of what needs to happen:

Watering Advice

The information below is for desert-adapted trees. This means trees like palo verde, palo blancos, acacias, eucalyptus, and desert willows. If you are planting a new tree, the amount of water it takes will vary as it grows and what season it is. See the below table for estimates of how much to water a tree, so that it is watered to a depth of about 3 feet, based on its canopy size. We take a few of these numbers to create estimates for how much water the tree will need to be watered as it increases in size. It takes 2-3 years for trees to become established.

Gallons of water required to wet root zone

	Tree canopy diameter in feet									
	1'	2'	3'	4'	5'	6'	8'	10'	12'	
gallons	1.5	5	11	15	22	25	36	59	85	

Newly planted:

Week 1: 1-2 days per week (summer) 3-4 days per week (winter)

Week 7: water every 7 days (summer) 10-14 days (winter)

After 8 weeks gradually increase the amount of days in between waterings until established

Below is an estimate for how many days the trees need to be watered once established. This is a high estimate, as some of these trees may need no water at all in certain years.

Established trees

March - May: 14-30 days

May - October: 7-10 days

October - December: 14-30 days

December - March: 30-60 days

Lots more detailed Information available from:

Arizona Municipal Water Users Association:
<http://www.amwua.org/what-you-can-do>

Water Use it Wisely: <https://wateruseitwisely.com/100-ways-to-serve/landscape-watering-guide/>

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