“If you build it, they will come.” is a famous line from the movie 'Field of Dreams'. After hearing it a man builds a baseball diamond in his corn field and sure enough, famous baseball players show up from beyond the grave to play. The quote has since been used in more realistic circumstances as a way to inspire action. If you build a homeless shelter, people will move off the streets. If you build a grocery store in a poor neighborhood, people will come for fresh fruits and vegetable. Similarly, if you build a habitat garden, wildlife will come for their survival and your enjoyment.
One way to create a habitat garden is to look at the National Wildlife Federation’s web page for creating and certifying a residential habitat garden ([www.nwf.org/certify](http://www.nwf.org/certify)). The NWF has listed 5 actions to attract wildlife to an urban garden and greatly increase this wildlife’s survival rate. The California Native Plant Society ([www.cnps.org/gardening/native-design-basics/habitat-gardening](http://www.cnps.org/gardening/native-design-basics/habitat-gardening)) and Bay Nature ([baynature.org/article/starting-a-wildlife-habitat-garden](http://baynature.org/article/starting-a-wildlife-habitat-garden)) also have great tips.

**Food:**
Placing seeds or nuts in a regularly cleaned feeder is only one way to feed wildlife. Plant choices are also important. Planting a variety of plants that flower and fruit at different times will ensure natural sources of food for long periods of time. Allowing the seeds to mature by not cutting off the dying flowers will provide nutrition. Making sure to plant a diversity of native flowering plants will benefit local insect, bee, and butterfly populations. The foliage might provide the nourishment for hungry larvae in some cases so it is OK if the plant gets devoured.

**Water:**
This is crucial for wildlife especially in drought years. Few urban gardens in the Bay Area have natural ponds or streams flowing through them. So, water must be provided to wildlife using birdbaths, fountains, or other water features. Placement is important. A water source placed at ground level is great for larger wildlife such as squirrels, opossums, frogs, and lizards. Water sources for bees and butterflies should be higher off the ground and clear of hiding places for predators. Stones should be placed in shallow baths so beneficial insects like bees can climb out if they fall in. Branches placed in larger features will allow lager animals to climb out if they fall in.
**Cover:**

Wildlife needs options for shelter and also protection to raise their young. Mature trees can keep birds, squirrels, and other wildlife safe from ground and or aerial attacks. Different levels and density of foliage can also provide protection for different mammals, reptiles, and birds of varying sizes. Evergreen plants provide protection all year long. Insect hotels that contain an array of different size twigs, branches, and other beneficial materials will provide homes for native bees as well as many other beneficial native insects. So too will the occasional stump or log placed in the garden. Leaving a small percentage of non-covered space is important. Open space around food and water sources can protect wildlife from predators and ground nesting bees need mulch-free areas to build their nests.

**Sustainable practices:** Sustainable practices are important because they more closely mimic the balance of nature. Chemicals and pesticides can create an environment void of insects and can poison wildlife. There must be insects at the bottom of the food chain in a wildlife habitat garden for it to support animals higher up. An insect free garden will not attract Bay Area bats which are amazing to watch at twilight. There would be no enjoyment from the singing of frogs and toads because they would have no food source. Many pesticides kill bees, ladybugs, dragonflies, and many other beneficial insects which protect vegetable and ornamental plants from predators.

Wildlife will begin to show up within days of creating a habitat garden. You will see the garden transform into a vibrant and fascinating urban ecosystem and you will be happy you built it and they came.
Hello all you happy gardeners. I heard a really great question that I have now incorporated into my repertoire. But first I have a short story. A few years ago, I had the opportunity to come across a piece of property that was not being utilized and I was invited to garden there. I planted a variety of vegetables and the results that year were nothing less than spectacular. That land was just incredibly fertile, and I had some huge produce. People would look at some of that produce and comment on my gardening skills but in fact I really didn’t do anything besides plant and water.
Sorry folks, no big secrets to share there. But here’s the thing, I gardened there for two more years and apparently, each year, my gardening skills not only did not improve but actually got worse each year. To explain, after that first incredible year I never did anything to maintain the health of my soil. I just took it for granted that each year would continue to produce the same as in previous years. Produce takes a lot of nutrients to grow. Each year my vegetables were removing nutrients out of the soil, and I was doing nothing to put anything back.

So the lesson I learned was that no matter how good my soil is when I start, it is imperative that after each harvest I add organic matter back into the garden. After all, soil is alive.

Adding organic matter is typically accomplished by adding compost or manures. I use both myself. There is a lot of information available on the web about how to amend your soil but just do something! I now never go a season without adding some kind of organic matter back to my garden. Which, finally, brings me to my last question to you that have gardens. What have you fed your garden?
HOW TO ELECTRIFY AND SAVE MONEY IN THE LONG RUN HEAT PUMP FOR YOUR HOUSE?

BY STEVE SKALA – ENVIRONMENTAL SUSTAINABILITY COMMISSIONER

Now is the time to convert to a heat pump. Local rebates combined with tax credits from the Inflation Reduction Act make heat pump conversion cost effective especially if your existing HVAC system is at the end of its life, which is about 20 years.

Heat pump basics. A heat pump works like an air conditioner or a refrigerator and is fundamentally more efficient than directly burning fossil fuels or running a conventional resistive-based electric heater. In summertime, a heat pump works exactly like an air conditioner and will use outside air to cool a compressed working fluid and then evaporate the fluid in the inside coils to cool the house. In wintertime, the heat pump simply works in reverse. The working fluid is evaporated in the outside coils, and it then is heated by the outside air. The fluid will be heated even if the outside temperature is below freezing. The heat pump then compresses the fluid raising its temperature to above 100F and pumps it to the coil inside the house. Using a heat pump to heat your house is about 4 times more efficient than using natural gas. So even if electricity to run the heat pump is generated by natural gas, less gas is needed to power the heat pump than would be burned in your existing furnace. This gives a reduction in greenhouse gas emission. Moreover, as the electric grid converts to renewable generation sources, the carbon emission will drop further. The higher efficiency of a heat pump results in cost savings compared to the traditional furnace.

How to convert to a heat pump? The simplest heat pump will work just like a central AC system. Conversion to a heat pump is straightforward if you have existing central AC. One simply replaces the compressor unit outside with a heat pump, as well as the inside coils, blower, and an advanced thermostat.
Electrical and refrigerant plumbing for the central AC can be reused as is. Don’t have central AC? You can install a central unit much like a central AC system, or use ductless heat exchangers inside, typically one per room. The difference is this. A central uses your existing ducts to distribute the warm or cool air to the rooms. A ductless system will install a heat exchanger in each room such that each are plumbed to a central compressor.

Heat pumps have some disadvantages compared to a traditional furnace. The heat output is typically not as high. Your contractor will always size the heat pump to provide adequate heating, but the time needed to warm the house if you turn up the heat is longer with a heat pump. Because of this, many will install strip heaters in the blower that work like a big space heater but run on 220V.

How much does a heat pump cost and what are rebates and ROI? You can call and request quotes from a contractor for costs. BayREN (www.BayREN.org) is the local agency that provides rebates and is a great source of information. They have lists of contractors that are approved to install heat pumps for rebates. Costs vary depending on the system you decide on. A central heat pump system will be about $8k more than a new traditional furnace and central air. That’s before rebates. IRA tax credit and local rebates remove at least $3k from the cost. A heat pump has a 20 year lifetime, similar to a central AC unit, so you’re paying about $250 a year in upfront expense for a heat pump as opposed to a traditional furnace, but this can cut yearly fuel cost in half. The cost of natural gas was high this year and many people pay more than $250 per month. So, savings can add up quickly. If you have solar, it cuts your operating cost even more, if you have enough coverage for the heat pump. Expect the pump to consume between 5 to 10 KWHrs of power a day during the winter season.
The bottom line? Do some homework and work with a contractor to meet your needs, and check BayREN for rebates. You can be on your way to cut heating costs and save the environment!
Lynn Miller Receives Award

On March 27th Lynn Miller received the Honorary Service Award for the year at the 55th Founders Day celebration of the Fremont Council PTA. She was nominated by the PTA at Parkmont Elementary School where her organization, Urban Forest Friends, planted 10 trees in front of the school. Multiple families from Parkmont volunteered to help plant the trees and several Niles Discovery Church members were the team leaders for those volunteers.

Lynn graciously accepted the award acknowledging her hard-working husband, Eric, the parent organization Tri-City Ecology Center of which many NDC people are members, and all of the volunteers who help plant and maintain trees in Urban Forest Friends. She noted that studies have shown trees are advantageous to students’ learning, and Urban Forest Friends, with the help of our NDC volunteers and FUSD, hopes to plant many trees on FUSD campuses. Congratulations Lynn!
Honorary Service Award

Presented To

Lynn Miller, Urban Forest Friends

for recognition of outstanding service to children and youth. This contribution to the Honorary Service Award Program Fund enables the California State PTA to provide scholarships for students and individuals to further their education, as well as grants for Units, Councils and Districts.

Presented by

Fremont Council PTA

State President Carol Green

Date March 2023
James Colby Peters from Eagle Scout, Troop 120 was given a grant last August. We are pleased to inform you that he has completed his greenhouse.
August 5th & 6th, 2023

Tri-City Ecology Center’s Annual Lemonade Fundraiser.

The 2023 Fremont Festival of the Arts will again be on the first weekend in August and the TCEC will also be sponsoring our Lemonade Fundraiser at this wonderful event.
BEFORE EARTH DAY VOLUNTEER ACTIVITIES

NEWARK SHORELINE CLEAN-UP

April 15
Starts at
9am

Don Edwards
Refuge

The Urban Friends of the Forest Team – Warwick Elementary School

WE’LL PROVIDE THE GLOVES, TRASH BAGS, COFFEE AND TREATS.
JUST PACK YOUR WILLINGNESS TO CLEAN UP THE SHORELINE AND IDEAS FOR CHANGE!

MARK YOUR CALENDARS!
As the sun returns, days warm, and Spring comes into full force it is certain that swarms will return as well. There were around 600 swarms and colony extraction reports in 2022 in the Bay Area at large, and likely there will be more in 2023. What to do if you discover a swarm in your backyard or neighborhood? Here’s the Swarm call number – 510 898-6696
INTERVIEW WITH A TOMATO

TCEC – Hello, would you have time for an interview?

Tomato – Well, it’s not like I have anywhere to go, unless you decide to eat me.

TCEC – no, no, just a few questions. Like, are you really a fruit or a vegetable?

Tomato – Why does everyone ask that? Yes, I’m a fruit, but the courts decided to say I was a vegetable because I’m served on the main course and not for dessert. I’m just not all that sweet.

TCEC –– Sure, the umami flavor, it’s famous and we can’t get enough. In fact, we’ll be planting you soon, when it warms up and there’s no frost. You take a hundred days before we harvest, so we’re anxious to start!

Tomato – Glad to be of service. Everyone likes to say how much better we taste when grown in the back yard. Truth is, we started out in South America as a raisin sized fruit that was only used for ornamental purposes in England. But we adapt anywhere. In fact, we have more genes than you do!

TCEC – What? How can that be?

Tomato – Well, we don’t have as many chromosomes, only twelve, but we need to adapt, so we have many more genes than you – 35,000 to your 20,000.

TCEC – I guess we have a long way to ketchup.

Tomato – Oh, that’s terrible! Go ahead and cut me up!
Orders may be picked up at 3375 Country Drive, Fremont, on Thursdays between 11 AM – 2 PM, or by special arrangement. When purchasing please fill out an order form and pay by cash or check. Sorry, we don't have change. Questions? Call Dee Miner at 510 940 6272 or email her at muskox44@hotmail.com, and please cc Caroline Harris at caroline.harris@earthlink.net.

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*All prices reflect our nonprofit discount and tax. This benefit is for TCEC members only.*
Do you have news or events you would like to share with Tri City Ecology’s members?

Do you have any ideas on what would make Eco-Logic an even better publication?

Let us know!

We would love your feedback and are always looking for Fresh faces and ideas!

Email us @ richgodfrey77@gmail.com

Please check out our website – www.tricityecology.org and Face Book

You can always call and leave a message at 510 793 6222

And if you haven’t joined TCEC yet, here’s how
WANT TO JOIN TCEC?

If you want to become a member please click HERE to fill out this form and mail a check to 3375 Country Drive, Fremont, CA 94536. To know more about TCEC please visit our website at http://www.tricityecology.org

Board meets on the first Thursday of each month on Zoom due to Covid-1. Please call to verify. If you wish to speak on a subject, please call 510.793.6222 or 510.790.1685.

If you have any suggestions or want to contact us, please fill out THIS form.

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