



**Mohave County Master Gardener Program**

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## Featured Article

*"Potted Plant Primer"*

by

*Dennis Lesowsky, Bullhead City Master Gardener*

Some of the most asked questions pertain to proper care of potted plants. It is a basic contract between you and that plant. You agree to provide that plant with all its needs in return for it to provide to you its beauty, fruit, or flower as you want. This starts at the store or nursery where you select the healthiest plant with a good root ball. The growers push a plant right up to its very best in the pot it is in, no matter the size. If it is not sent to the market, the grower will need to transplant it into a larger pot and care for it until it is maxed out in that size pot. The smallest plants to the largest trees are all grown this way. To purchase a plant and not move it to a larger pot size begins the first step in plant quality deterioration. By the time you realize it, the plant is in stress from lack of root space or the pot cannot hold enough moisture. Now what? A much needed transplant to a larger pot with some loss of growth and health but survivable. If you had transplanted right after acquiring the plant, growth would have continued unabated and a larger more luxuriant plant is your reward.

Most potted plants will do nicely in a pot for one year if fed and watered regularly. We will discuss this later. Now we move on to a plant that has been in the same pot for that year. At this point, you need to make a choice. To move the plant into a larger pot or to operate to allow this plant to live in the same size pot. To do this, you must remove the plant from the pot and trim one inch of depleted soil and some roots in that soil. Cutting off one inch from all around and off the bottom. The plant is ready to go back in the same size pot or even the same pot that has been thoroughly cleaned and sanitized. After adding soil to the bottom of the pot to achieve the right soil height, place the plant in the center and add soil all around to the same level as plant soil.

When looking at a potted plant, one of the signs for when care is needed is low soil level. As a plant is watered, the soil will start to compact over time. This is also caused by the breakdown of larger composted material into smaller and smaller pieces. This combo of soil breakdown and compaction is manifested in the soil level in the pot dropping. If it is noticeable, it is a sure sign repotting is needed.

In the pact you make with your plant to provide care, you become sort of a "mother nature." To counteract soil depletion, a monthly feeding with a complete fertilizer is needed. On the other hand, I am a firm believer and follower of "weakly weekly." This means fertilizing with a percentage of the monthly dose every time you water. I refer to it as a dose because it is plant medicine. It acts like a daily vitamin to keep the plant healthy. A healthy plant takes



far less care than a sick one. To minimize my efforts and make house or patio plants sort of effortless, pay attention to their needs before the problems start.

Another area of care that is unique to our area is salt in our water. These dissolved minerals in our water build up in the soil and can become toxic to your plants. One way to avoid this is to water with filtered water. This can be expensive if you have many potted plants. So, a good flushing may be needed to remove the salt built up in your plant's soil. Just over-water every 5-6 months until maybe three to five times as much water is used compared to a weekly water. Salt build up can be identified

by a white coating on the soil surface. Flush it through but make sure you allow the pot to drain afterwards, so as not to cause root rot.

Lastly, but still very important, is light. Make sure to know the plants needs and cater to them. Plant selection for a given need is the way to choose. Don't make the mistake of trying to make the plant adjust to your needs. Choose the right plant for the right location and avoid a losing struggle. When you fail a plant, the plant fails. Good luck with potted plants is not luck but good choices and better execution of care.



## *Savannah's Corner*

### **A Quick 'Hello' from the New Master Gardener Program Coordinator**

While I have already had the pleasure of meeting a handful of you at business meetings and orientations for new Associate Master Gardeners, I would like to take this opportunity to officially introduce myself. My name is Savannah Voss, and I am a resident of Kingman. I graduated from the University of Arizona in May 2021 with a Bachelor's in Nutritional Science, and I have recently taken on the position as Program Coordinator of Mohave County Master Gardeners. I work out of the Mohave County Extension Office in Kingman. My primary role is to oversee the Master Gardener Program for Kingman, Bullhead City, Lake Havasu, and surrounding areas. I am responsible for coordinating activities, functions, and general operations of the program. Although I have only been here since May, I am already learning much about gardening and the amazing people that make up this program. I am eager to get to know many more of our volunteers and see all the ways the Master Gardener Program impacts our communities.

I have heard of the many changes that have been made over the past couple years as a result of the pandemic. Currently, we are working to return to our normal Master Gardener program. We are planning to host coordinator meetings again and will be rescheduling the Volunteer Recognition Luncheon to the fall so that we can include more of our seasonal Master Gardener volunteers.

There have been some recent changes in Kingman's Master Gardener group. We would like to congratulate Nancy Sandy, our new Coordinator; Cathy Bryan,

our new Co-coordinator; and Linda Loven, our new Treasurer. We also want to extend a huge thank you to Izzy Brood for stepping up and taking on the role as Coordinator for the past several months after Linda's passing.

In other news, as a state-wide Arizona Master Gardening Program we are looking to standardize in several different areas. Other Arizona Master Gardener Administrators have been exploring an online reporting system for volunteer and continuing education hours. We still have a number of issues to work out but hope to launch a new reporting system by the end of the year. If you have concerns about an online reporting system, please let us know. Additionally, we are looking to standardize the reporting year (Fiscal vs. Calendar Year) and the number of required volunteer hours for Associates and Certified Master Gardeners in order to maintain certification. There may be a few changes on the horizon but we hope to make some of these transitions as painless as possible.



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## Bullhead City Master Gardeners

**Dennis Lesowsky – Coordinator**

**Debbie Miller – Co-Coordinator**

**Bill Stillman - Scribe**

Master Gardeners in BHC are still working on community garden set up for three new gardens being discussed in Bullhead City, Fort Mohave, and at Mohave Community College. Only the Bullhead Community Garden is actively moving forward at this writing. We are involved with planning and set up of that garden (See Wind and Weeds Article “*Bullhead Community Garden*”).

Right now, our school garden programs are on hold for summer break. Some of our new associates have shown an interest in participating in these programs, which should allow us to pick up another school or two.

Pertaining to our topic-specific Library presentations, compared to pre-pandemic times, we are still experiencing a lower audience attendance. Hopefully, our attendance will come back closer to normal this fall. Our April Library Presentation about chickens was presented by Sandy Hampson from the Dig It Community Garden of Kingman. Sandy had her “All About Chickens” presentation dialed in, keeping the audience enlightened in the aspects of raising and caring for chickens. Some of the audience members asked specific questions about acquiring chickens and the rules in Mohave County about raising poultry in a residential neighborhood. Normally, Sandy would use one of her chickens in the presentation. However, our Mohave County library system has a “service animals only” rule and chickens don’t qualify. (See Photo #1)



Our presentation in May had Becky Leisle, Dennis Lesowsky, and Bill Stillman each present a separate topic. Becky gave a brief talk on how to plant and care for the free Aloe Vera she brought in from her home garden and was giving away at this event. Dennis gave a primer on bulbs – from storage, into the ground, and care after planting. Bill’s presentation was on animal pest control in the garden and around the household. As usual, May is our last formal topic library presentation until we start back up the third Thursday in September. (See Photos 2 & 3)



# Critter Control, Part One

by

Bill Stillman, Bullhead City Master Gardener Emeritus

This article on “Critter Control” is Part One of a series of two articles. This article is about Ground Squirrels. Planned for the next Wind and Weeds is some thoughts about much larger animals and the havoc they can cause on one’s property.

If you decide to use live traps to catch your pesky critter – what do you do with it? Some consider trapping and relocation a bad option for the animal, since you are placing the animal in different surroundings and an environment the animal is not used to.

Is it against Arizona law to catch a wild animal and release it at another location? I am betting some do not know what I am about to say. Unless you are registered with Arizona Game and Fish, and have a special “Wildlife Service License,” it is against the law to trap a wild animal and then release to a different location.

What is the solution? One of my major problems lies underground. The dreaded ground squirrel. In the low desert areas of Arizona, the Harris Ground Squirrel or Yuma Antelope Squirrel are present. They are cute, very fast movers that live underground. They eat vegetation both above and under ground. They can walk the rim of a prickly pear cactus, then go underground and eat the roots. (See Photo #1)



How do you stop them from killing off prized golden barrel cactus? You might be able to hire

Ralphie Parker from “A Christmas Story” to handle your ground squirrel problem, or you can protect the plant roots from damage another way. I have used chicken wire in the past to save a few plants. The chicken wire holes are large enough for the ground squirrel to get through. However, if you crush the wire, squirrels will not be able to squeeze through. I had tried stainless steel wire mesh and found it too hard to form into a basket.



Another alternative is using a stainless-steel fine wire mesh basket, sold from several online retailers.

These baskets, made of a flexible wire mesh, are available in many sizes. Dig your planting hole as normal. Place the basket around your

plant, place the basket, and plant it into the hole. The basket is extra large. Fill the basket with soil as you can, then fill in the planting hole. Now, any plant roots growing inside the wire mesh will be protected. You might still need Ralphie Parker to take care of the top of the plant.

Contact your local Arizona Game and Fish for further information. <https://www.azgfd.com/>



# Bullhead City Community Garden Progress

by

Debbie Miller, Master Gardener Emeritus and William Stillman, Master Gardener Emeritus

Our involvement with the Bullhead City Community Garden continues. The committee members include several city staff personnel, one local restaurant owner, several other interested local residents, and several Master Gardeners. We have been meeting several times per month. A spin off committee from the group, including us, are involved with the layouts of the beds and overall design.

The officers for the Board of Directors for the Community Garden have been chosen. Other accomplishments to date have been the land acquisitions from the Bureau of Land Management, and we are close to receiving the 501(c)(3) tax-exempt status.

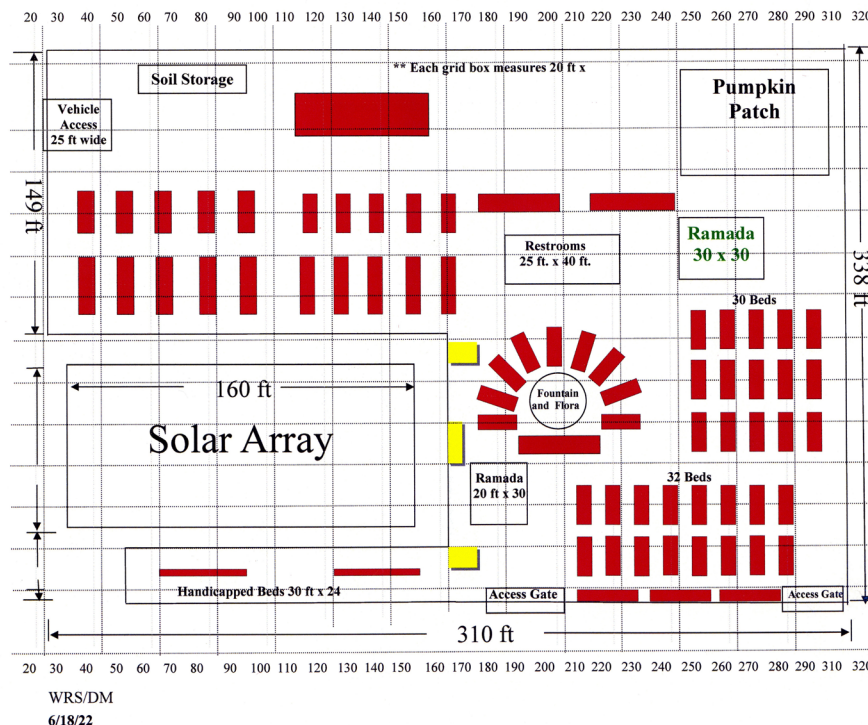
Originally in the design was 8 ft tall chain link fencing. There were no trees in the original design, and according to a Bullhead City police officer who attended one of the meetings, a clear view design was needed for proper property surveillance. At the last committee meeting, with only six board members attending, trees were added to the design, as was the removal of the chain link fencing – to be replaced with block walls with wrought iron inserts.

Our views on these two items are as follows:

The chain link fencing is cost effective, and it would keep out animals as well as human intruders. The suggestion of using block and wrought iron is very expensive, and it will allow rabbits and other critters to enter.

As for the dozens of perimeter trees, the Master Gardeners believe the tree roots will be invasive to many of the beds and will significantly increase water usage. Further, who will maintain these trees since the maintenance of the beds will be by the center of each bed? How will they handle crops from any fruit-bearing trees, fertilizing these fruit trees, and overall maintenance of these trees? These changes have greatly increased the overall budget of the garden.

The Master Gardeners are serving in an advisory capacity. However, at the moment, our concerns seem to be ignored in favor of turning the Community Garden concept into yet another grand and glorious park, of which Bullhead City already has many.





## Kingman Master Gardeners

### Izzy Brood, Coordinator

Summer has started – and not by the calendar date – but by the hot, dry weather. Between the wind and the high temperatures, it is amazing anything is surviving. We would like to welcome several new Associate Master Gardeners into our group, and they have already started volunteering. Thank you for joining us. We look forward to getting to know you all.

The Kingman Master Gardeners have held several workshops at the Kingman Library and at the Dig It Community Garden. Topics included “Propagation Part 1 & Part 2” and “Birds, Butterflies, Bees, and Beneficial Insects.” There are more workshops coming up at various sites in the summer, including one in August called “Prepare for the Fair” about preparing your produce entries for the fair. See the calendar for upcoming workshops.



It looks like there will be a county fair, September 15<sup>th</sup> - 18<sup>th</sup>, at the Mohave County Fairgrounds in Kingman. At least, it is currently scheduled and in the planning phases. I have been to an informational meeting, and I am sure there will be more meetings in the coming months.

Several Master Gardeners have been available for questions from the public at the Open House events at the Dig It Community Garden.

The school garden beds planted in March at Hualapai, Manzanita, and Cerbat elementary schools are growing well. Each school has a different microclimate due to its location – totally exposed to the elements or protected on one side by a building. They all planted tomatoes, peppers, and marigolds from seedlings. From seeds they planted pumpkins, watermelons, cantaloupes, and sunflowers. Currently the tomatoes and peppers are blossoming. Some have blossoms on the pumpkins, watermelons, and cantaloupes. There are even tiny, baby pumpkins forming at Hualapai. However, there are no baby watermelons yet. The sunflowers are getting taller, close to three feet now. By the time the students return to school, there could be some pumpkins ready for exhibit at the county fair.

(See Photos on the next page)





## Cerbat Elementary



## Hualapai Elementary



## Manzanita Elementary





## Lake Havasu City Master Gardeners

**Sharon Gomez, Coordinator**

The year 2022 continues to fly by and Lake Havasu City Master Gardeners have been busy.

April began with a presentation by Jan Emming on “The Education on the beauty and diversity of using Dryland plants in Air, Desert Regions.” This was held on a Saturday at the library with a great turnout of over 75 residents. Of course, Jan was a big hit with the residents and Master Gardeners alike. We followed up two weeks later with a tour of Jan’s cactus ranch in Yucca. Of course, many went home with a few of Jan’s plants!

Home Garden Days have been super busy since the beginning of the year. More and more residents are attempting to veggie garden and need LOTS of help. Lake Havasu Master Gardeners have a number of very successful veggie gardeners, so we are able to give excellent advice to our residents. This also gives our fellow Master Gardeners the opportunity to learn right along with the residents!

The Master Gardeners also participated in the April Library Appreciation Day with a booth for residents to stop by, ask questions, and receive handouts for gardening in the desert.

Each month, we have had several home visits to help residents with problems that can’t be resolved with a phone call or email. We are averaging approximately 2-3 visits per month. One particular visit in May was to a home of one of the original settlers of Lake Havasu. The property was over an acre and a half of heavily planted areas – lots of older trees and shrubs and some unique varieties. The homeowner had died in October and the daughter, a resident of New Hampshire, called us for help. It was a treat to walk through this garden and give some very helpful advice on gardening in the low desert. We will probably need another visit or two in the future to help the daughter with reviving the garden.

With spring in the air, residents were thinking about their gardens and wondering what had gone wrong. Lots of questions about growing veggies, citrus, palms, shrubs, and mesquite trees. Plants dying or close to dying, overwatering, fertilizing, and pruning are just some of the pertinent questions asked. We have stocked up on handouts to give to our residents to take home for future reference and referral.

Home Garden Day in May and June continued to have excellent attendance. Home Garden Day in May was overwhelmed with residents. We had standing room only and had to work our way through the sign-in sheet to be able to cover all the attendees.

We finally have some Master Gardener Associates graduating this Spring! Lake Havasu’s 2020 Horticulture class had eight attendees who showed an interest in becoming Master Gardeners. However, COVID hit in March and we all went dark. Volunteer time was not happening, but education hours could be earned via Zoom classes. Over the past year, the Associates have been able to complete all their volunteer and education hours to qualify for graduation. We have managed to keep four of the Associates, and we hope to have a luncheon in the next few weeks to hand out name badges (they will be so happy to be rid of those temporary badges!). We also have Irene Rose, our Hotline Coordinator, receiving her Emeritus status! Congrats to the Associates and Irene on their accomplishments.

Now, we all look forward to a few months of hibernation to stay out of the extreme heat that seems to have started earlier and HOTTER. Some of us have plans to get out of town for a short while to enjoy a cooler climate. Then, some of us will stay the course to make plans for our fall planting and maybe stay cool with a frosty drink, binging on movies, or reading some favorite books. Stay cool all!



# You Can Grow Almost Anything in Mohave County

by

David Glenn, Lake Havasu City Master Gardener

The problem may not necessarily be the heat; but a problem with pH. The pH in our desert soils is rather alkaline where plants prefer more neutral or slightly acidic soils.

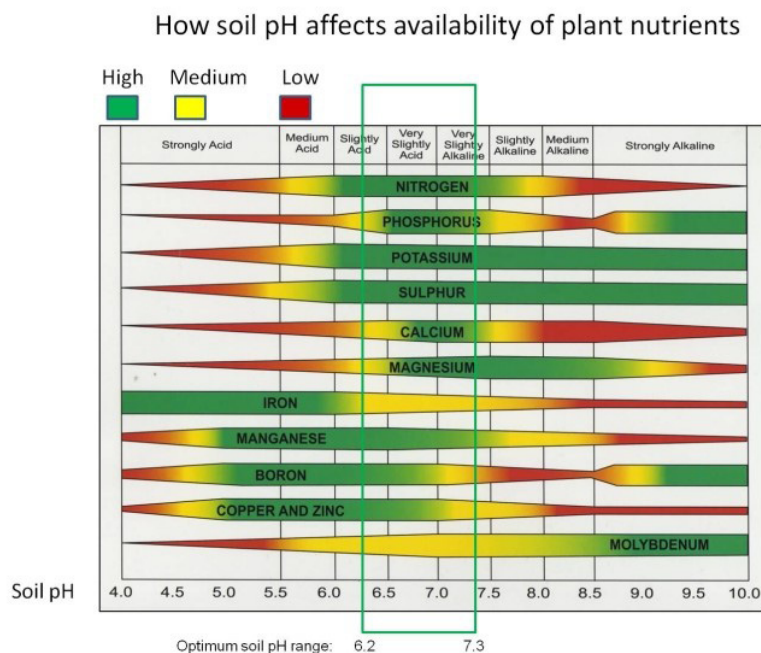
## What is pH?

The abbreviation “pH” stands for potential of hydrogen,” thus pH is the measurement of the amount of hydrogen ions in a solution. The pH scale ranges from 0 to 14, where 0 is extremely acidic, 7 is neutral, and 14 is extremely alkaline. The pH scale is not linear but logarithmic where a soil with pH of 8 is ten times more alkaline than a soil with a pH of 7. For the point of reference using common liquids, lemon juice has a pH of 2, vinegar is 3, milk is 7, sea water is 8.5, milk of magnesia is 10.5, ammonia is 12, and a solution of lye is 13.

Knowing the pH of your soil is most critical with respect to nutrient availability. Each nutrient has

an optimal range of pH where they are the most available for plant uptake (Figure 1). Likewise, each plant has an ideal soil pH range. With some notable exceptions, most plants prefer a soil pH range of around 6.2 – 7, or slightly acidic and typically do not require special cultural practices to improve growth.

Regardless of how much water or fertilizer you may provide plants, they may become nutrient deficient or even die if the pH is not in the proper range. Plants are more likely to flourish and require no special cultural practices to improve growth if they are within that slightly acid to neutral range. However, as mentioned before, most of our desert soils in Arizona are more alkaline and have a pH range between 7 – 8.5. Native plants are adapted to these conditions but introduced landscape and garden plants often struggle when soil pH approaches 8.5.



Adapted from AgroBest

Figure 1. Soil nutrient availability at various pH levels.





Remember that climate and parent material play a major role in soil formation. Alkaline soils are formed because of our low rainfall (rain is slightly acidic) and high evaporation rate. When water evaporates from our hard desert surfaces, nutrient salts such as calcium, sodium, and magnesium are leached up through the soil profile and left behind in the soil surfaces.

Acidic soils are formed through rainfall and downward leaching through the soil profile, acidic parent material, and organic matter decay which release hydrogen ions; conditions we do not have for our Arizona soils.

### **What to do?**

First, simply ask yourself which plants you would like to grow and what is their ideal pH range. Perhaps using more native plants or plants adapted to higher pH soils could be the solution. In some cases, a soil pH range of 7 to 8 is adequate for many plants, particularly arid-adapted plants. If not, then test your soil for pH (there are several different kits or laboratories available to test your soil). If your soil is more alkaline than ideal, amendments may need to be incorporated.

In order to convert our alkaline Mohave County soils into more ideal soils for plants, acid must be added. This can be accomplished through a few different methods but each must be carefully

considered for realistic outcomes. Adding acid, in the form of sulfur, will increase acidity and lower the pH. Soil conditions containing sulfur and aluminum sulfate or fertilizers high in sulfur will lower the pH to a tolerable level. However, these products will only temporarily decrease the pH of your soil so multiple applications may be required over time.

Another solution is to add organic matter. Organic matter not only creates softer soil but also releases hydrogen ions as it decomposes, lowering the pH level. The result is softer, porous, absorbent soil that will allow water to leach down. Peat or sphagnum peat moss are highly acidic and will lower soil pH more than other organic amendments. Gardening in raised beds is another way to avoid alkalinity, since it places the plant above the desert soil. However, you should be mindful of what is in the store-bought raised bed soil.

When soil is at the appropriate pH level, it still must be managed. If products like elemental sulfur or acidifying fertilizers are added they are only temporary. Repeated use may reduce soils pH. Additionally, many water sources throughout Mohave County are also high in mineral salts and can be high in alkalinity, again raising the pH of your soil.



# Mohave County Master Gardener Spring 2022 Calendar

## July

- 5th LHC Home Garden Day, Library, 11am -1pm
- 6th Laughlin Master Gardeners Meeting Zoom?
- 13th BHC 11am All About Houseplants, Dig-It Kingman
- 16th KNG Ask a Master Gardener, Digit Community Garden, Tme: TBD, 2301 Lillie Ave. Kingman
- 22nd KNG Master Gardener general meeting, 1pm at Mohave County Extension office, 101 Beale St. Kingman
- 23rd KNG Ask a Master Gardner, Mohave County Extension office, 10am-12noon, 101 Beale St. Kingman

## August

Kingman School Gardening - Every Tuesday, Wednesday and Thursday  
Laughlin Community Garden, 7am –Tuesdays all month

- 2nd LHC Home Garden Day, Library, 11am-1pm
- 3rd Laughlin Master Gardeners Meeting Zoom?
- 6th KNG Preparing for the Fair, at Digit Community Garden, 8-10am, 2301 Lillie Ave. Kingman
- 18th BHC Solar Sundial Class Dig-It Kingman, 10:30am
- 20th KNG Soil workshop, TBD
- 26th KNG Master Gardener general meeting, 1pm at Extension office, 101 Beale St. Kingman
- 31st Laughlin Ask the Master Gardener, 10:30am-12:30noon Nevada Time

## September

Kingman School Gardening - Every Tuesday, Wednesday and Thursday  
Laughlin Community Garden 7am –Tuesdays all month

**TBD Master Gardener Booth Set-up for Mohave County Fair, lead Dave**  
**September 15-18 - Mohave County Fair, at Mohave County Fairgrounds in Kingman**

- 6th LHC Home Garden Day, Library 11am-1pm
- 7th Nevada Master Gardeners Meeting on ZOOM, 9am to 12noon
- 7th KNG Decorate and setup “Open Class Vegetables” (Veggie Booth) at Mohave County Fairgrounds in Kingman, 9am
- 8th BHC Home Garden Days, 10am-12 noon
- 13th BHC Master Gardener Meeting, 3pm-4:45pm, BHC Library
- 15th BHC Bullhead Library Topic Specific Presentation, 2 pm-4 pm
- 14th KNG Accept “Open Class Vegetables” entries 6am-1pm at Mohave County Fairgrounds in Kingman
- 20th LHC Business Meeting, Library, 4pm
- 26th KNG Master Gardener general meeting, 1pm at Extension office, 101 Beale St. Kingman
- 28th Laughlin Ask the Master Gardener, 10:30am-12:30pm

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Summer 2022 Wind & Weeds Assembled by Shelley Lossing, Master Gardener

