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Photos by Shelley13 &	۵14 ة

Featured Article by Carol Bruch, Lake Havasu City Master Gardener

# **Destructive Straight-Line Wind Events**

If you've ever spent any time in Mohave County, you know wind events are quite common. We all may be aware of the damage and destruction from hurricanes and tornadoes, but we may not be as familiar with straightline wind events, though we are more likely to experience them. I've had personal experience with two different types of these destructive straight-line wind events in Lake Havasu City and my home in Iowa.

You may be asking, what is a straight-line wind? A **Straight-line wind** is a term used to define any thunderstorm wind that is not associated with rotation, and is used mainly to differentiate from tornadic winds.

**Types of Straight-line Wind** (https://www.nssl.noaa.gov/education/svrwx101/wind/types/):

A **downburst** is the general term used to broadly describe macro and microbursts. Downburst is the general term for all localized strong wind events that are caused by a strong downdraft within a thunderstorm, while microburst simply refers to an especially small downburst that is less than 4 km across.

A **downdraft** is a small-scale column of air that rapidly sinks toward the ground.

A **macroburst** is an outward burst of strong winds at or near the surface with horizontal dimensions larger than 4 km (2.5 mi) and occurs when a strong downdraft reaches the surface. To visualize this process, imagine the way water comes out of a faucet and hits the bottom of a sink. The column of water is the downdraft and the outward spray at the bottom of the sink is the macroburst. Macroburst winds may begin over a smaller area and then spread out over a wider area, sometimes producing damage similar to a tornado. Although usually associated with thunderstorms, macrobursts can occur with showers too weak to produce thunder.

A **microburst** is a small concentrated downburst that produces an outward burst of strong winds at or near the surface. Microbursts are small — less than 4 km across — and short-lived, lasting only five to 10 minutes, with maximum windspeeds sometimes exceeding 100 mph. There are two kinds of microbursts: wet and dry. A wet microburst is accompanied by heavy precipitation at the surface. Dry microbursts, common in places like the high plains and the intermountain west, occur with little or no precipitation reaching the ground.

A **derecho** is a widespread, long-lived wind storm that is associated with a band of rapidly moving showers or thunderstorms. A typical derecho consists of numerous microbursts, downbursts, and downburst clusters. By definition, if the wind damage swath extends more than 240 miles (about 400 kilometers) and includes wind gusts of at least 58 mph (93 km/h) or greater along most of its length, then the event may be classified as a derecho.

A **haboob** is a wall of dust that is pushed out along the ground from a thunderstorm downdraft at high speeds.

A **gust front** is the leading edge of rain-cooled air that clashes with warmer thunderstorm inflow. Gust fronts are characterized by a wind shift, temperature drop, and gusty winds out ahead of a thunderstorm. Sometimes the winds push up air above them, forming a shelf cloud or detached roll cloud.



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#### **Destructive Derecho**

On August 10, 2020, a Derecho 20 miles wide with sustained wind speeds over 70 mph traveled over 700 miles across Iowa. As it got to the east central part of Iowa it picked up velocity. When it struck the Cedar Rapids area, it devastated the landscape. At least 23,000 city owned trees were destroyed which doesn't include trees owned by homeowners. It is estimated the 75 square miles of Cedar Rapids city alone lost 65% of their trees. That doesn't include the damage to buildings and homes or the surrounding smaller communities that were impacted.

Below are a couple photos of the storm as it approaches the Cedar Rapids area. We had only a few minutes notice before it struck when the tornado sirens were triggered. It acted like a category 4 hurricane with winds clocked at 126 to 140 mph, and lasted 1 ½ hour with a boatload of driving rain. How would you like to see this approaching your home??

08-10-20 Derecho Approaches Hiawatha, Iowa



08-10-20 approaches Cedar Rapids



Fortunately, our condo was not radically damaged by this storm. We had some shingle & vent damage, a couple siding panels were damaged when hit by flying debris, our grill went tumbling and is now history. Not all the condos in our development were as lucky. We hunkered down in our basement until the storm passed and sopped up water coming in & around the windows & doors.





#### (Featured Article -continued from page 2)

The 3-acre property we sold in 2018 was badly damaged. I had spent 24 years carefully grooming the grounds with unusual species of perennials, trees & shrubs.

#### Below is the back yard in 2016





Here's all I could see from the same vantage point on 08-12-20. The mature trees were impacted the most. In this photo you can see the Swiss Stone Pine that survived.

A 70-year-old Douglas Fir was cut in half in this area. A very large locust, Thompson spruce trees & maple tree were uprooted. A couple of arbors are a tangled mess of iron.

Our property had so many trees, it was designated a forest preserve by the city assessors. We can't even count the number of trees lost because the existing paths are covered with debris.

The worst part of the derecho was the lack of communication, we had no power for a week, other parts of town had no power for over two weeks, no cell phones towers, no landline, no internet, even if

attempting to hear news on the car radio, the broadcast stations weren't transmitting on Tuesday. Our city leaders did NOT have a plan for the type of widespread damage we had. The Red Cross volunteers had been sent to the East Coast for their hurricane, so the homeless had no help except for family, neighbors or friends. It was a week before the city had help in place for the displaced residents. We couldn't drive around, if low on gas there weren't any stations with back-up generators, even if you had gassed up before the storm, the streets were not yet passable. No stores were open, not even grocery stores until they acquired generators. Even as of a month later, there are 5,000 residents without internet. We often have our internet signal go down when they are attempting to bring up another group of clients.







#### I hope this never happens to any of my fellow Master Gardener friends.

According to Extension Climatology Specialist, Dr. Mike Crimmins, Arizona doesn't see these types of thunderstorm events. Derechos are straight-line wind events that form on weather disturbances that move south out of Canada into hot, humid air that pools in the upper Midwest during mid-summer. These thunderstorm events require strong wind shear which doesn't typically occur during our Arizona summer monsoon season. Individual monsoon thunderstorms can create destructive straight-line wind events, but often in much smaller extent than observed with Derecho events.

Arizona residents are much more likely to experience microbursts. Individual monsoon thunderstorms can create destructive straight-line wind events through wet and dry microbursts, but often in much smaller extent than observed with Derecho events. Microbursts occur when the downdrafts in thunderstorms hit the ground and spreads out in every direction.

#### **Destructive Microburst**

So not only was I impacted this summer by the Derecho, I was notified by my Havasu neighbors that during a microburst in our Lunar neighborhood, my beautiful Saguaro had toppled. How many years do you think it took for this specimen to become this large? It was probably 10'- 12' tall. We stayed in Havasu late enough this year for me to see it bloom for the first time but it had NOT developed it's first arm. It can take 10 years for a saguaro cactus to reach 1 inch in height. By 70 years of age, a saguaro cactus can reach 6 and a half feet tall, and will finally start to produce their first flowers. By 95-100 years in age, a saguaro cactus can reach a height of 15-16 feet, and could start to produce its first arm. I'm guessing that it was planted by the first owners when the house was built in 1999 but it already had to have been many years old.



Here is the saguaro in 2009 when the home was purchased











# Andrew's Corner

First, I hope you are all doing well during this pandemic and continue to be happy, safe, and healthy. Next, welcome back me!

At this time, I'm sure you have all received the news that Amy accepted a full-time position teaching for an online outlet. While we congratulate her and wish her well on her new journey, we weren't quite ready to let her go completely free. Amy will stay with Extension and MGs in an oncall capacity and I'm sure I will ask for more hours from her than she has to give.

I've seen through many emails that many of you are a bit frustrated and anxious to get back into the swing of things. So am I. However, the health and safety of our volunteers and the public are our first priority. We have not yet reached some of the benchmarks required through our UA Extension re-opening plan that we need in order to open the office, much less host in-person events. I would encourage you to enjoy your fall gardens as best as you can and not worry about accumulating volunteer hours. Which brings me to...

Do not worry about Volunteer hours. Obviously, they're difficult to get through our current circumstances. I will reduce the number of hours required. But I haven't made a judgment of by how much because we are still in a situation where hours are difficult to get. When we move forward with more regular programming, I will let you know. I am not reducing the number of continuing education hours. There are many online resources available that qualify as continuing education, so I don't see a reason to reduce them. Unless of course (there are always exceptions), you have special circumstances and, in that case, you're probably not receiving this email anyway and you can always talk with me about your circumstances and alternative solutions.

Thank you for continuing to answer calls/emails. While our office and events are closed, questions still come in and I still punt them your way because you know much more than I.

I have not made a decision about next year's MG class in Bullhead City, but I probably need to in the next couple weeks for planning. Again, it's difficult to know where we will be in Jan./Feb. of next year. We made the best of what we could at the end of this year's class (sorry class of 2020), but I don't think I want to do an entire 13-week class via Zoom. I'd be happy to take any input you have about our 2021 class.

Stay safe, healthy, and do whatever you do to get some rain. Cheers,

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### **Bullhead City Master Gardeners**

Debbi Miller, Coordinator Dennis Lesowsky, Co-coordinator Bonnie Muir, Secretary Bill Stillman, Scribe

The good news: all of our Bullhead City Master Gardeners thus far seem to have avoided getting the virus. The bad news: it is the same in Mohave County as it is in the rest of Arizona and the world-we're pretty much spending a lot of time in solitary confinement and not participating in many of our normal activities. When the highlight of the week is a quick trip to the grocery store you know these are seriously abnormal times!

Add to the equation the unrelenting heat from dawn to dusk (and overnight temperatures in the 90's), even going out to tend the garden seems like something better put off until it is cooler. An August wind storm which broke branches and uprooted trees necessitated some major clean-up efforts, heat or not. Except for having to repair such unexpected damage, even the most dedicated gardeners, including myself, have rationalized all kinds of reasons to stay indoors. And most of us have plants which are severely stressed, so we'll have to deal with those soon.

Many of us have learned to use Zoom, and have enjoyed the variety of creative broadcasts available on our computers. At least we're getting educated while we wait for this to be over! Though the Laughlin Library has reopened, ours is still essentially closed, as are the meeting rooms we use for our workshops and presentations. At this point we can't even schedule anything, so our planned programs for the 20-21 year are in limbo, and the topics will require rearranging once we are able to book future space.

Hotline calls were few and far between this summer as well. One homeowner had lost some golden barrel cacti. The golden barrels seem to be a little more temperamental than other types of barrel cacti, and really do better in climates with less heat and sunshine. This situation was exacerbated by improper watering as well, and irrigation instructions were offered. A second call involved a dwarf Meyer lemon planted in late April which was showing signs of stress. It really hadn't had time to become established before the temperatures soared, but it hopefully will survive with proper sunburn protection and proper irrigation, instructions for which were given the homeowner. Another call was from a recent transplant to the area who was bound and determined to plant some Vincas this summer. We recommended she do so only in pots on a patio where they could be moved into the shade, and we don't know how long they survived.

Our big Fall activity, Cool Shade (the distribution of trees sold by Mohave Electric Cooperative to their customers) will occur November 14, with a limited number of volunteers helping to hand out the trees. The Master Gardeners are still included on their volunteer team, and the "How to Plant Your Desert Tree" presentation we did at the Library last October is available on their website. However, we are expecting more questions than usual on tree pickup day, since we won't be able to do the program "live" this year. Mohave Electric is also offering trees for sale this year to their Kingman customers, but the number sold is small enough that they can easily be distributed by their own staff.

I'm sure we've all caught up on all the indoors tasks we've been putting off. Our closets and drawers are most likely all straightened up, and may even have had time to get messy again! We all look forward to focusing on the outdoors soon, once the weather is bearable and it is cool enough not to fry whatever we plant. Seeds for tomatoes and other "transplants" should have been started weeks ago, and the soil is still too warm to do much direct sowing, but we're nearly there. Finally!

Stay well, and we all hope life will get back to whatever the "new normal" is very soon.





# Pressure Regulator Reducing Valve

Bill Stillman, Bullhead City Master Gardener

A pressure regulator, in simplified terms, regulates upstream or downstream pressure. In our gardens, pressure reducing valves are used to regulate downstream (outlet) water pressures to a desired pressure level. The regulators used for household irrigation in drip systems are considered "Direct Operated Regulators" (DOR). The DOR are self contained and are normally a "plug and play" type regulator. Some are adjustable while others come pre set with pressures suitable for most drip irrigation systems (about 25 PSI or, for drip tape, 15 PSI). Internally, the regulator consists of a spring, a diaphragm, and a valve assembly. The spring pressure keeps the valve in the open position while water pressure flowing thru the regulator pushes upwards against the diaphragm and, in conjunction to the spring pressure, regulates the outlet pressure to the set level. Slightly different in its design, still having a spring and seat assembly, is the straight thru design (Photo 1).



Here is the catch. In a typical drip system (without an air bleed VENT) the drip line could be devoid of water, leaving the line filled with air when not in use. Additionally, when initially pressurized, the regulator valve is in the full open position. During initial operation, you might hear and/or see the emitter make a spitting sound before it has a continuous flow. This is a hydraulic fluctuation, also known as water hammer. It can result in the various types of system failure, including the splitting of some manufacturer's poly tubing, damaged emitters, split plastic risers pipes, damaged pipe to poly tubing adaptors and 1/4 micro tubing manifold failure.

I have had many of the pressure compensating 4gph and 2gph drip emitters come apart leaving an unrestricted flow through the end of the emitter. When I placed the emitters they were located in a position to precisely irrigate the plant. When the end comes off, the water flows past the plant, resulting in the loss of the plant material.

More about leaks. I live in an area populated by coyotes, skunks, raccoons, feral cats and so on. Let's not forget the rabbits and ground squirrels, field mice and rats. All of these can and will damage drip tubing. When such damage occurs to the larger 1/2 inch poly tubing the damaged tubing soaks the surrounding area. The 1/4 inch tubing has been found chewed off near the emitter. What is the big deal? Three things: The plant is not getting the irrigation it needs and water usage and water costs are up. Our water rates in Bullhead City are beyond reasonable. We have a 3 tier cost system. The more you use, the higher the cost per gallon. It makes it very expensive to grow large fruit trees, have a garden, or grow plant life in general. For an example our water rates used to range about \$1.10 per 1,000 gallons. Now at the top tier with the "interim rate surcharge" it is \$4.49 per 1,000 gallons.

#### Things will and can go wrong.

**Example 1:** The 1/2" PVC pipe to 1/2 poly tubing adaptors, sold at some box stores, can fail. Two of them came apart at the insert to the PVC fitting itself, leaving the clamping ring still attached to the poly tubing but not fastened into the pvc side of the fitting. Water loss through the non-regulated 1/2" poly tubing tested at 22 GPM (Photo 2, failed fitting).





(Pressured Regulator continued from page 7)



**Example 2:** Pressure compensating emitter with missing end (Photo 3).



**Example 4:** Riser pipe damage. I have had several of these adjustable 1/2" riser pipes fail in service, splitting vertically. I used these risers for the convenience of being adjustable and being semi flexible protecting the hard piping below (Photo 5)

**Example 5:** Multiple 1/4" drip tubing outlet manifold (aka Octopus) to 1/2" threaded pipe. These manifolds allow for multiple  $\frac{1}{4}$  micro tubing hook-ups to a single supply source. Most of these manifolds attach on the other end to a  $\frac{1}{2}$ " pipe. Some are adjustable flows for each of the  $\frac{1}{4}$ " tubes; others have pressure regulated flow rates. Some have barbed fittings for the  $\frac{1}{4}$ " tubing attachments, others have push-in and lock type connections. I have experienced one failure with the manifold splitting in half, allowing a full 1/2" pipe flow of water for its 45 minute run time.



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**Example 3:** Coyote puncture damage to 1/2 inch poly tubing. It is amazing how much water can pass thru a little puncture split in the tubing. Actually tested at 4.9 GPM. The photo shows the damaged section of tubing under test conditions (Photo 4).





Irrigation Flow test for damaged piping							
Regulated, 70 psi inlet	Actual GPM	Run Time	Gal. Used	2 x Per Week	8 x Per Month	One cost ( per 11	One month cost @ \$4.49 per 1000 gal
1/4 micro tubing, open ended, representative of damaged drip emitter with missing end.	2.07 GPM	90. Minutes	186.3	373 GPM	1490 GPM	ல	6.69
1/2 irrigation poly tubing (coyote puncture 1/2" slit), hose bib regulator, pressure fixed at 25 PSI.	.86 GPM	90. Minutes	77.4	155 GPM	619 GPM	φ	2.78
1/2 irrigation poly tubing (coyote puncture 1/2" slit), 1/2" piping connection adjustable regulator set at 25 PSI.	1.94 GPM	90. Minutes	174.6	349 GPM	1397 GPM	မ	6.27
Non-Regulated, 70 psi inlet, direct flow at 70 psi inlet	Actual GPM	Run Time	Gal. Used	2 x Per Week	8 x Per Month		
1/4 micro tubing, open ended.	2.59 GPM	90. Minutes	233.1	466 GPM	1865 GPM	မ	8.37
1/2 irrigation poly tubing (coyote puncture 1/2" slit).	5.45 GPM	90. Minutes	490.5	981 GPM	3924 GPM	မ	17.62
PVC pipe to Poly Tubing (separated at glued joint).	22	45	066	1980 GPM	7920 GPM	မ	35.56
1/2 octopus multiple micro tubing outlet. End cap and seal complete failure.	19. GPM	90. Minutes	1710	3420 GPM	13680 GPM	φ	61.42
1/2 plastic riser pipe supply to bubbler piping split (tested with bubbler head attached).	17.6 GPM	20. Minutes	352	704 GPM	2816 GPM	မ	12.64
The regulators used in these test are typical of what can be found in the box stores for the homeowners use. For commercial or large drip system	stores for th	ne homeowners	s use. For	commercial or	large drip syste	E	

iaige uip systerii applications, regulators are sized according to flow and pressure requirements. The line items and charts above are separated into two categories. Regulated and Non-Regulated. Regulated testing is done at 25 psi. Non regulated is using full piping pressure at 70 psi for the test B. Stillman 9/20/2020

Cost is based on current cost per 1,000 gallons including the newly applied surcharge (rate increase).

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# PROS AND CONS OF 7 PLANTER TYPES

By

Geneva Carreon, Bullhead City Master Gardener

Although we may focus on a plant's soil and sun exposure, the correct container is also essential to a plant's success. Three important considerations in selecting the perfect container are size, drainage, and moisture. For containers, bigger is not necessarily better. Pots that are too large for a plant can be detrimental because the excess potting soil will dry out too slowly, and may cause root and stem rot. Drainage is critical to also avoid root rot. Some pots have merely one or no drainage holes that may not be sufficient to provide a plant the required oxygen for plant roots to grow. Be aware different container materials retain various levels of moisture. Fortunately, one is not limited to using merely one type of container for one plant. Double potting allows the use of one pot inside another to ensure the necessary insulation to retain more moisture and keep those precious, plant roots cool.

Below is a short list of the pros and cons of terra cotta, ceramic, wood, plastic, concrete, metal, and wallmounted, plant containers for outdoor use with basic tips for all.

#### 1. TERRA COTTA.

Advantages

- Relatively inexpensive.
- Porous material allows for air and water to move through walls preventing soil disease and root rot.
- Good for cactus, succulents and other plants that prefer drier soils.

TIP: Soak a terra cotta pot overnight in water before potting new plant to help clay retain moisture.

#### 2. CERAMIC.

Advantages

- Coat of lacquer prevents soil from drying out
- Many available shapes, colors and textures
- Ideal for plants that prefer dry soils.

# Disadvantages

Disadvantages

more frequently.

•

• Usually only one single drainage hole.

Plants requiring moist soil need to be watered

Hard water causes salts to build and discolor.

Pot's color eventually fades over time.

• Prone to cracking during winter.

*TIP: Drill additional holes for extra drainage and choose glazed ceramic pots that are waterproof, trapping water and moisture.* 

#### <u>3. WOOD.</u>

Advantages

- Good heat insulation for the soil.
- Stands up well to cold weather.
- Usually lightweight depending on size.

#### Disadvantages

- Rots and splits.
- Some pest insects are attracted to wood.
- Not all chemical preservative treatments to wood are food safe.

*TIP: Allow 2 inches of space for air circulation under wood to prevent rotting, and choose cedar and redwood that resist rot and pest infestation. Line inside of wooden container with thick plastic and seal wood for protection from the elements.* 







#### 4. PLASTIC.

Advantages

- Usually has more drainage holes than terra cotta, ceramic, and metal pots.
- Attracts and stores heat better than terra cotta, ceramic, and wood pots.
- Easy to add more drainage holes.
- Better quality plastics can resemble natural materials.
- Very lightweight and easy to move.
- Less expensive generally than concrete, ceramic, wood, and metal pots.

#### Disadvantages

- Plastic fades, chips, and cracks.
- Certain plastics leach toxins #3 PVC, #6 PS, and #7 polycarbonate.
- Black plastic heats-up quickly and provides little insulation.

*TIP: Choose light-colored plastic pots and if uncertain plastic contains toxins, avoid using for food-based plants. Thick plastic pots will last longer than thin plastic pots.* 

#### 5. CONCRETE.

Advantages

- Good insulator for severe changes in weather.
- Long-lasting and durable.
- Sturdy for large plants.

#### Disadvantages

- Leaches lime into the soil that's toxic to many plants.
- Heavy to move.

*TIP: Be sure concrete is properly cured to avoid impacting the soil's alkalinity. Use portable trolleys with casters to move large concrete pots.* 

#### <u>6. METAL.</u>

Advantages

- Weather resistant.
- Durable and doesn't crack or chip like other pot materials.
- Adding drainage holes is easy.

#### Disadvantages

- Prone to rusting.
- Very little insulation.
- Heats-up rapidly causing roots to overheat in direct sun.
- Some metals have toxic lead.
- Retains more heat that may kill needed microorganisms and burn plants.

*TIP: Use clay or plastic pot liners for insulation and spray metal with a clear enamel, rust-resistant coating before planting. Since metal is nonporous be sure pot has plenty of drainage.* 

#### 7. WALL-MOUNTED.

Advantages

- Makes use of otherwise unusable space.
- Ideal for small size plants.

Disadvantages

- Soil dries-out quickly.
- Drained water can stain walls.
- Depth for soil is usually shallow.
- Cocoa or burlap liners usually don't last more than a year in extreme weather.
- Metal frame quickly absorbs heat that can be detrimental to plant.

TIP: Avoid plants that require moist soil, and opt for slow-growing and short-rooted plants.









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# **Kingman Master Gardeners**

#### Linda L Reddick, Coordinator Melissa Palmer, Co-Coordinator

Wow, what a hot, dry summer, setting record lows for moisture and record highs for temperatures. Together it made growing anything in the Kingman area very challenging. I know all of us were very disappointed that the Mohave County Fair was cancelled. However, considering the terrible growing conditions there may not have been very many quality fruits or vegetables to enter. So we will look forward to a bigger, better fair in 2021.

We may have been out of sight, but not out of mind to the public. There were client inquiries on apricot and pistachio trees, butternut squash, bulbs, and cacti identification. The clients all recognized that we could not make house calls, therefore everyone made email and phone contact to assist each person. Amazing how a picture can answer 50 questions! Personally, I think it is fantastic that people know the Mohave County Extension office and Master Gardeners are here to help. For all of you that assisted with these calls: Great Job! Thank You!

Unfortunately, the outlook for the next three months is not much better than the last three. No indications

of when we can resume regular in-person meetings and activities, so we will persevere, continuing to answer calls and stay in touch with each other via phone and email.

The worst news we had this month was that Amy Nickel, our County Coordinator, is leaving us. Amy is returning to teaching in a charter school. Amy, we hate to see you go. Working with three groups of Master Gardeners in three different locations had to be somewhat of a challenge, which you took on and handled perfectly. Needless to say, you will be sorely missed -- Best of luck in your new position.

I am sure we will see our way through this Covid-19 virus and together we can conquer it, along with all of the gardening challenges that come our way. You can restrain a gardener, but you can't keep one down for very long.

Be Safe, Keep Growing: Together we stand.

Linda L Reddick Kingman Coordinator Melissa Palmer Kingman Co-Coordinator





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# Lake Havasu City Master Gardeners

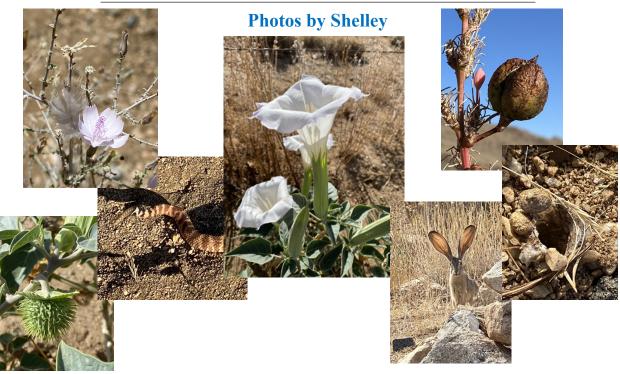
#### Dan Alberts, Coordinator Sharon Gomez, Co-coordinator

Autumn greetings to all of the Master Gardeners of Mohave County. I hope that all have stayed healthy in regard to COVID 19.

After a long, hot, and dry summer, I am looking forward to the cooler weather that will prevail soon. Here in Havasu, the temperature maintained itself at well over 110 degrees for much of June and all of July and August and into September according to my daily temperature journal. There were many days of 120 degrees at my home.

This year the Monsoon season did not materialize for the residents of Lake Havasu City. Actually, the last measurable rain that we received was in April which was minimal. The website for Havasu states that so far we have received 2.91 inches of rain for 2020. Driving around in one area of Havasu recently, I noticed that there were numerous Saguaros that had toppled, some of which were quite large. While I did not investigate closer, I did pursue some factual information via the internet. Bob Morris addressed this on his blog several years ago and what could be the cause. I did not notice any issues such as bacterial necrosis from my vantage point that pertained to any of the aforementioned Saguaros. Did the record breaking heat and no monsoon activity play into their demise? Perhaps it was a factor.

With the current situation that is prevalent, we have been limited to Hotline Calls as you all may know. While we are eager to return to normal, we also realize that public safety is a priority. This shall pass as all things of this nature do. Stay safe and enjoy your Autumn gardening.



Fall 2020 Wind & Weeds Assembled by Shelley, Master Gardener





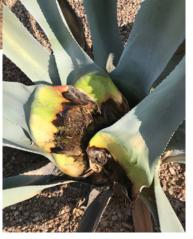
# RANTINGS FROM A MASTER GARDENER!

#### By Sharon Gomez, Co-coordinator Lake Havasu Master Gardener

I'm so over this HEAT! It's not enough that July was the hottest month on record, but along comes August with just as hot and intense heat! We were all hoping for a little relief in August. But NO, same temps and UV intensity. I have lost three of my prized agaves - two big blues and a variegated century agave. I literally cried as I watched as their leaves began to droop towards the ground and then the crown toppled over. Now these agaves were over five feet tall and just as wide! As I picked up each individual leaf, I was reminded of an artichoke as I peeled them away. But it was the smell that really got to me. I thought a rabbit had crawled in between the leaves and died! I'm waiting for the base to dry up before removing and then I will add a fungicide to make certain nothing lingers from unknown or unseen critters.



And then I deal with wildlife – in particular rabbits. I have a large wash across the street from me and State Land is five doors up and goes all the way to the Parker Dam. Of course, I feel so sorry



for our wildlife in this extreme weather. I place water bowls around my property to give them something to drink, plus I leave water in my tree wells. The quail love to scratch and root around and the bunnies dig a hole to lay in and cool off. I don't feed (but I really would like to, especially in this weather). I have chicken wire cages around most of my plants and then shade cloth over the ones more sensitive to the sun. I have had the rabbits work the cages loose in order to attack the plants. My lantana looks like I've taken a hedger to the sides where the bunnies have "pruned". I've even watched them stand up on their tippy toes to reach even higher to attack the leaves.

And, did I forget to mention, the HOT water that comes out of the tap?!! Not only do our plants deal with the sun, but the water we place on them is enough to burn their leaves and roots! I know it burns my face and body every time I step into the shower! And then there's the HOT air with not a drop of moisture! I've even lost some of my potted aloe that usually survive the summers. Lots of \$\$\$ has been lost by Mohave County landscapes over this summer.

As I drive around Havasu, I'm always looking at the landscapes of the homes. I'm not alone with my plant losses. I've noticed many big agaves, bottle trees, tecoma, etc. that have bit the dust in our heat. But that gives me little comfort with my losses :(.

Now, September did come in with a taste of our August heat. But we have had a few days of cooler weather under 110°F. The water coming from the tap is just slightly cooler than scalding and the nighttime temps have finally begun to drop into the 80-degree range. However, as I write this mid-September, our temperatures are climbing back up to over 110°F for a few more days -- just when my fingers were beginning to itch to start some fall gardening!

Whew! That felt good! Now that I have all of that out of my system, I hope all of my fellow Mohave County Master Gardeners have also survived this long, hot summer – and the COVID thing! I know you, too, are all probably itching to start digging your fingers into the dirt to start a new growing season. I have really missed my Master Gardener connections each month with our various activities. Let's hope and pray for a better 2021. A year of reconnection and growth in our gardens!





