



Las Flores Learning Garden (LFLG) June 24, 2023 Low-water Gardening event.
Botanical teaching garden established 2020 in partnership with the City of Napa.

What Today Is All About

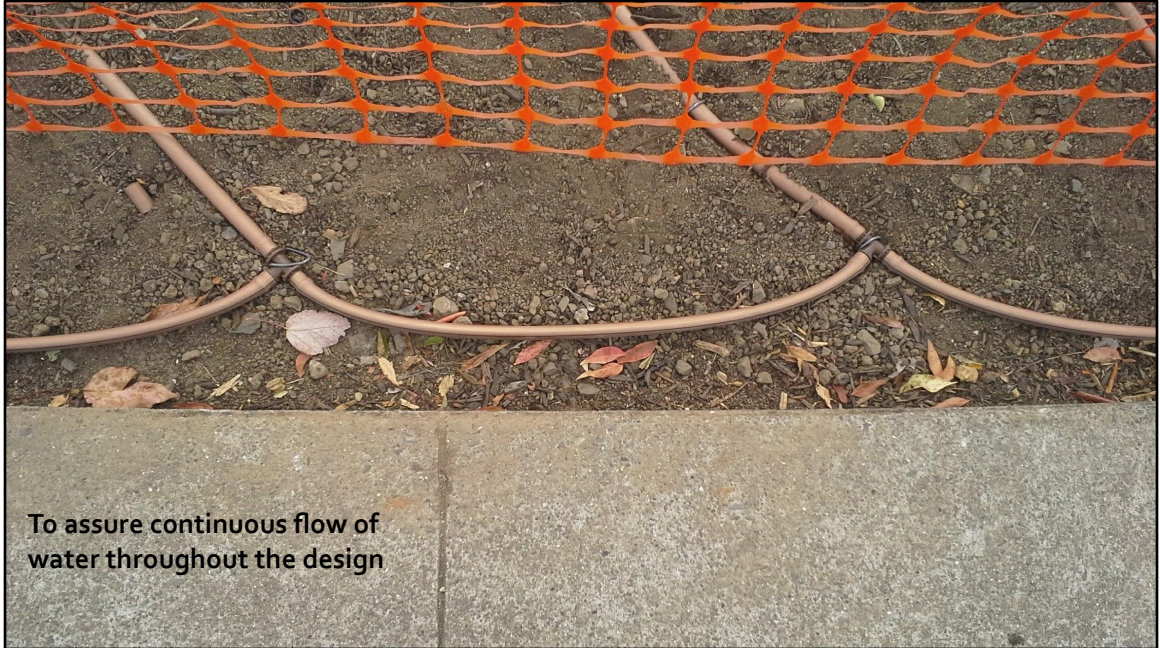
“Low water and maintenance gardens don’t have to be sparse or unattractive. Gardening with plants that use less water and nutrients, and as well don’t demand regular pruning can be rewarding and beautiful. See how the Las Flores Learning Garden’s Low Water and Maintenance Botanical Garden has developed now that it’s in it’s 3rd year and learn from our mistakes and successes.”



Watering system



The Drip system in the Low-water Garden at LFLG. $\frac{5}{8}$ inch line spaced in 18 inch rows with 2 gph emitters every 18 inches.
6/24/23 current watering schedule M W F 15 min.



To assure continuous flow of
water throughout the design

Method to deal with the ends of the lines to ensure continuous water flow. Each line is attached to the next and so on to allow uninterrupted water flow.

WATER NEEDS

LOW	LOW-MED	MEDIUM	MOD-WET
LITTLE OLLIE OLIVE LITTLE SUR MANZANITA LITTLE JOHN BOTTLEBRUSH PINK MUHLY GRASS RAYWOOD ASH STAR JASMINE	ARBUTUS	MEYERI FERN GLOSSY ABELIA CARPET ROSE RED LOROPETALUM	CREPE MYRTLE YELLOW TWIG DOGWOOD

Moderate water-use plants (everyday ornamentals) need watering 2 times per week.

Low water-use plants need only 1 watering day per week.

Very low water-use plants will need no more than 1 watering day every other week



This is a list of the water needs of the plants in the LFLG Low-water garden.

The plants listed in **Bold** are currently in the garden as of June 2023. The **Little John Bottlebrush** will be installed by the end of June 2023.

Note the two plants in the 'mod-wet' category.....why are they in this 'low-water' garden?

The Crepe Myrtles were already in place when the garden was cleared and were 'rescued' and left in place. They are very adaptable trees and can be found in many neighborhoods in the parking strips as street trees which, historically, get little or no water.

The Yellow Twig Dogwoods are also very adaptable and do quite nicely on low-med water applications.

Rule of thumb



Rule of thumb.....if the soil feels moist to the touch.....don't add water.

Wait until the soil is dry to a depth of at least 2 inches before irrigating .

To dispel all doubt use a moisture detecting device to test the existing moisture in the soil.



Over watering is just as lethal as under watering a plant. To put it simply if there is too much water the plant just can't breathe. If there isn't enough water there isn't enough liquid for the plant to keep itself hydrated and thus the wilted leaves.

Plants display differently when water stressed.

Under Watered plants display wilted or drooping leaves that do not perk back up once temperatures cool at night. The leaves may be curled and yellowed then fold and drop off the plant. Sometimes the leaves turn greyish or bluish in color and are smaller than normal. Turf grass will show footprints for several minutes if it is need of water.

Overwatered plants display turgid but yellowed leaves often with brown tips and yellow margins. The soil in overwatered potted plants will smell sour.

So how can you tell if your plant needs water? Remember the rule of thumb: if the soil feels moist to the touch.....don't add water. A foolproof way would be to use a moisture detecting device to test the soil's moisture content.

Can you save these plants?

Overwatered plants can be saved if the situation is caught quickly.

Repot container plants immediately.

For in ground plants start a calculated and precise watering schedule.

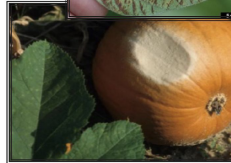
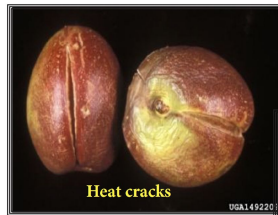
Test both often to assess progress of recovery and soil water content.

For under watered plants do an immediate water soak. Then start a calculated and precise watering schedule and assess plant and soil water content often.

[Information on overwatered plants.](#)

SIGNS OF HEAT STRESS

- * Leaf drop
- * Plants stop flowering (blossom drop)
- * Mottled leaves
- * Heat cracks
- * Blossom end rot
- * Bolting



What is heat stress in plants? Basically the temperatures are so hot that the plant's circulatory system can't keep their outer leaves hydrated fast enough so the leaves droop and in serious cases turn brown and fall off.

As discussed before overwatering can be just as damaging as under watering so wait until after the temperatures drops in the evening before watering these wilted plants. Most often they will recover once things cool down and their systems catch up. If, after the temps have dropped the plants are still wilted, check the soil moisture and water accordingly.

One of the most important things to help your plants avoid heat stress is for them to have a calculated and precise watering schedule.

[Signs of heat stress](#)

The plants we chose for the Low Water & Maintenance Garden



Let's look at all the wonderful plants in the LFLG low-water/maintenance garden.

These plants were chosen with the following criteria:

- Similar low-water and maintenance needs
- Varying shapes/sizes as they mature
- Alternating bloom times and foliage coloration to provide interest throughout the year
- Varieties that are pest and disease resistant

Crepe Myrtle (*lagerstroemia indica*)



- Flowers: pink, white, purple
- Foliage: bronze, purple, reddish
- Water: moist to dry
- Light: full to part sun
- Dimensions: 5-15'
- Attracts: birds
- Bloom Season: summer
- Plant Type: tree
- Comments: beautiful showy, short-lived flowers that make a mess



[Plants in the LFLG Low-water garden](#)

Yellow Twig Dogwood (‘Silver and Gold’ *Cornus sericea*)



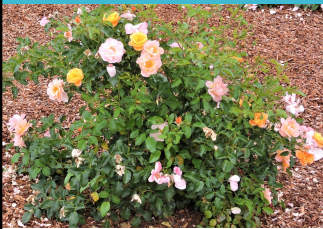
- Flowers: white
- Foliage: variegated
- Water: moderate to wet
- Light: full to part sun
- Dimensions: 5-7' X 6-8'
- Attracts: birds
- Bloom Season: May-June
- Plant Type: deciduous shrub



[Plants in the LFLG Low-water garden](#)

Flower Carpet Rose

(NOA97400A
PPOA PP #17,098)



- Flowers: orange fading to pink
- Foliage: green
- Water: moderate
- Light: full sun
- Dimensions: 2.5' X 3'
- Attracts: birds
- Bloom Season: spring-fall
- Plant Type: deciduous bush
- Comments:



[Plants in the LFLG Low-water garden](#)

Glossy Abelia (Kaleidoscope Abelia x grandiflora)



- Flowers: white
- Foliage: variegated
- Water: regular
- Light: full to part sun
- Dimensions: 2-3' X 2-3'
- Attracts: hummingbirds
- Bloom Season: summer-early fall
- Plant Type: evergreen shrub
- Comments: leaf color changes with season



[Plants in the LFLG Low-water garden](#)

Little Ollie Dwarf Olive ("Montra" Oleo europaea)



- Flowers: (none)
- Foliage: green
- Water: low
- Light: full sun
- Dimensions: 4-6' X 4-6'
- Attracts: (none)
- Bloom Season: (none)
- Plant Type: evergreen shrub
- Comments: fruitless. Tolerates poor soil, attractive year-round



[Plants in the LFLG Low-water garden](#)

Little Sur Manzanita (Little Sur *Arctostaphylos edmundsii*)



- Flowers: Lt pink w/ red berries
- Foliage: dark green
- Water: low
- Light: full sun (afternoon shade)
- Dimensions: 3-5' X 3-5'
- Attracts: birds, bees, hummingbirds
- Bloom Season: mid-late winter
- Plant Type: evergreen shrub
- Comments: drought tolerant



[Plants in the LFLG Low-water garden](#)

Meyeri Fern (Myersii Asparagus densifloris)

REPLACEMENT PLANT=
Little John Dwarf
Bottlebrush



- Flowers: white
- Foliage: light green
- Water: regular
- Light: full to part sun
- Dimensions: 2' X 3'
- Attracts: birds
- Bloom Season: late winter-spring
- Plant Type: evergreen shrub
- Comments: flowers turn to red berries. Hard to dig up.



The Meyeri ferns we planted in 2020 just aren't thriving. They have dead and dying foliage on a regular basis and several have died out completely. In 2023 we will be replacing these with Little John Dwarf Bottlebrush.

[Plants in the LFLG Low-water garden](#)

Little John
Dwarf
Bottlebrush
*Callistemon
viminalis*



- Flowers: red
- Foliage: green
- Water: low
- Light: full sun
- Dimensions: 3' X 5'
- Attracts: butterflies and bees
- Bloom Season: spring-summer
- Plant Type: dwarf evergreen shrub
- Comments: good cutting flower



We chose the **Little John Dwarf Bottlebrush** as a replacement plant in the Low-water and Maintenance Garden at the LFLG because it checks all the right boxes:

- Has low water needs once established. Note: until they get established they will need extra water for the first year
- Evergreen blue-green leaves that contrast nicely with the deep, blood red bristled flowers. To contribute to the garden's color palette the flowers will appear in the summer and often bloom throughout the year.
- Grows wider than taller 3 ft w x 5 ft. This aspect keeps the height of the garden down for easier maintenance.
- Slow growing so will require little maintenance
- Virtually pest and disease free

[Plants in the LFLG Low-water garden](#)

Pink Muhly Grass (Muhlenbergia capillaris)



- Flowers: pink
- Foliage: green
- Water: low
- Light: full to part sun
- Dimensions: 3-4' X 4-4'
- Attracts: birds
- Bloom Season: late summer-March
- Plant Type: grass-like clump perennial
- Comments: drought tolerant, non-invasive, disease resistant



[Plants in the LFLG Low-water garden](#)

Raywood Ash (*Fraxinus oxycarpa* 'Raywood')

- Flowers: (insignificant)
- Foliage: dark green to red in fall
- Water: low
- Light: full sun
- Dimensions: 50-70' X 20-30'
- Attracts: (none)
- Bloom Season: (none)
- Plant Type: deciduous tall, round tree
- Comments: messy leaf and seed drop



This tree was in the landscape when we started. We had it checked by an arborist and it was declared healthy so we decided to keep it in place.

Plus cutting down such a large specimen would have been a hard decision to make in terms of air quality and Climate change etc.

Choosing plants that would grow and thrive under the tree's canopy was an additional planning decision that we needed to make.

To date the plants under the tree are doing well.

[Plants in the LFLG Low-water garden](#)

Red Loropetalum (Loropetalum chinese)



- Flowers: pink to reddish-purple
- Foliage: dark green
- Water: medium
- Light: partial shade – dappled sun
- Dimensions: 3-6' X 3-6'
- Attracts: honey bees, butterflies
- Bloom Season: March-April
- Plant Type: evergreen shrub
- Comments: beautiful in winter



[Plants in the LFLG Low-water garden](#)

Star Jasmine (Trachelospermum Jasminoides)



- Flowers: white
- Foliage: green
- Water: low
- Light: full sun
- Dimensions: 20" X 8'
- Attracts: bees
- Bloom Season: spring-early summer
- Plant Type: evergreen vine
- Comments: fragrant, drought tolerant, vine can be ground cover
(Milky sap can be a skin irritant)



[Plants in the LFLG Low-water garden](#)

Strawberry Madrone (*Arbutus unedo*)



- Flowers: white w/pink flowers
- Foliage: dark green
- Water: low to moderate
- Light: full-part sun
- Dimensions: 20-35' X 20-35'
- Attracts: birds
- Bloom Season: fall or winter
- Plant Type: evergreen low-canopy tree
- Comments: California native. Fruit drop can be messy.



[Plants in the LFLG Low-water garden](#)

Summer	Fall	Winter	Spring
Crepe Myrtle			
Rose			Rose
Glossy Abelia			
		Little Sur Manzanita	
		Pink Muhly Grass	
		Red Lorapetalum	
Star Jasmine			Star Jasmine
	Strawberry Madrone (Arbutus)		
Yellow Twig Dogwood			



(Little Ollie & Rayburn Ash don't flower)

One of the many interesting facets of the LFLG Low-water garden is that there is color in some form all year round. Thus supporting our original statement that *'Low water garden don't need to be sparse and unattractive'*.

In the **Spring**: Roses bloom with flowers that are red fading to apricot as they mature, the Red Loropetalum with its variegated pink and red foliage sports fushia pink trumpet shaped blossoms and the Star Jasmine explode in white flute shaped sweet smelling blossoms.

In the **Summer** months, as the roses start to wane others take up the color display: the Crepe Myrtle blooms (we have four colors in the garden at LFLG: white, light pink, magenta and purple), the Yellow twig dogwood shows white clustered flowers and the Glossy Abelia sports small white blossoms around its multicolored leaves. All the while the Jasmine keeps on flowering.

Fall starts the slowing down of the garden but the Glossy Abelia and the Red Loropetalum will still provide color interest with their multi colored foliage and the Arbutus trees will sport long grape-like clusters of lantern shaped white flowers with deep pink centers. Meanwhile the Pink Muhly Grass has sent up long spears with buds ready to burst.

When most other gardens are tucking in for the **winter** the LFLG Low-water Garden still has lots going on: the Yellow Twig Dogwood has dropped its leaves and displays the 'yellow twigs' that it is named for; The Arbutus tree has brightly colored red and yellow ping pong ball sized fruit that look like they've been rolled in sparkles dotting its canopy; the red loropetalum and glossy abelia both still have brightly colored foliage; the Little Sur Manzanita gets in the game with red berries; the Pink Muhly Grass now has 3 ft long spears topped with pink cotton candy colored fluffs that will last through the winter months.

The quiet and steady Little Ollie Olive is the one constant in the garden with its round shape and grey green foliage that looks like it shivers as the wind blowing causes the foliage to change from dark green to grey.

The addition of the new Little John Bottlebrush plants will carry on this kaleidoscope of continuous color with their robust red 'bottle brush' shaped flowers.

Plant	Possible Pathologies		
Crepe Myrtle	powdery mildew, leaf spot	water mismanagement	aphids, Japanese beetles
Yellow Leaf Dogwood		too wet or dry	
Flower Carpet Rose	typical rose issues		typical rose issues
Glossy Abelia	mineral or nutrient excess	water management	root knot nematodes
Little Ollie Olive			Olive fruit fly
Little Sur Manzanita	leaf spot, gall, rust		Whitefly, aphids, mealybugs
Meyeri Fern			Thrips
Little John Bottlebrush	Verticillium wilt	too wet soil, not enough sun	
Pink Muhly Grass	Powdery mildew	too wet soil	mealybugs
Raywood Ash	Canker, verticillium wilt		Ash borers
Red Loropetalum	Anthraco, Powdery mildew, leaf spot		
Star Jasmine	Blight, rust, Fusarium wilt	sunburn	Whiteflies, scale, mites
Strawberry Madrone	Leaf spot, SOD, root dx		



The LFLG low-water garden is very easy to maintain as well. Though there are always pathogens, insects and water considerations that will cause problems from time to time these plants were chosen for their hardiness and pest resistant qualities and seem to be problem free to date.

Maintenance requirements in the LFLG low water/maintenance garden are small and restricted, for the most part, to fall and late winter-spring.

Fall [Easy Fall Cleanup at LFLG](#)

Late winter-spring: [Late-winter/spring pruning at LFLG](#)

It is always a good gardening practice to walk through your garden on a regular basis to catch and deal with any problems before they get out of hand.

Recent research has shown that leaving the leaves will help to nurture the soil and provide shelter for the beneficial insects. If you don't like the 'messiness' of leaving all the leaves, split the difference. Take some and leave some.

[Leave the leaves:Xerces.org](#)

[Climate change/soil health info](#)



We started in 2020 with a overgrown and neglected landscape.



Here is the same landscape in June 2023.
Quite an improvement!
AND we're growing (no pun intended) all the time!

VISIT OUR GARDEN



4300 Linda Vista Ave. Napa, Ca.



UNIVERSITY OF CALIFORNIA
Agriculture and Natural Resources

■ UC Master Gardener Program

It is the policy of the University of California (UC) and the UC Division of Agriculture & Natural Resources not to engage in discrimination against or harassment of any person in any of its programs or activities (Complete nondiscrimination policy statement can be found at <http://ucanr.edu/sites/anrstaff/files/215244.pdf>.) Inquiries regarding ANR's nondiscrimination policies may be directed to John I. Sims, Affirmative Action Compliance Officer/Title IX Officer, University of California, Agriculture and Natural Resources, 2801 Second Street, Davis, CA 95618, (530) 750-1397.

So, make sure to stop by our garden often to observe, learn and enjoy all aspects of gardening.

AND to watch us grow!

[Las Flores Learning Garden](#)