Let's Go
Native

...with our landscaping
The purpose of this guide is to encourage the use of native plants in our landscape planning. We've chosen plants that mirror the desert around us, yet this list is not exhaustive. With a little rain, the desert seems miraculously transformed. Changing colors, forms, and textures draw people from all over the world, eager to view the desert 'spring bloom'. Those of us lucky enough to live here can create our own little miracle with the tips this "Let's Go Native" guide provides.

**Why Native?**
Because native plants provide us with intensely colored flowers, unusual shapes and textures, and heady fragrances. Desert plants do this despite the great fluctuations in day-to-night temperatures, alkaline soils that lack organic material, minimal rainfall, summer floods, drying winds, and intense sunlight.

Because...planting natives saves us time and money. Desert plants require less water, less fertilizer and less maintenance than those grown in milder climates. Using the natural vegetation already in place and adding local drought tolerant plants requires less investment.

Because...ground water, our most precious resource, is limited. The community of Twentynine Palms relies entirely on ground water for all its water needs, a resource not replenished at the rate it is being used.

Because...our choices help protect the native vegetation in Joshua Tree National Park. Our community shares an extensive border with Joshua Tree National Park. As good neighbors, we should select non-invasive species with "stay-at-home" seeds. An invasion of foreign grasses has already altered the Park's fire ecology. In other California deserts weedy mustards have out-competed many colorful annual wild flowers.

Because...Going Native brings us into harmony with the natural beauty of the Mojave right in our own backyards! As a mobile society we tend to carry with us the gardens of our experience. But to attain success and lasting satisfaction as a desert dweller, it helps to remember "to garden where you live."

**Nature is our finest landscape architect**

**Planning Ahead**

Plan before you plant! Knowing what to plant and where to plant will save both time and money. Depending in which section of the Morongo Basin you live, you will need to consider your temperature extremes. Site elevation will preclude the use of some types of plants due to freezing (not good for succulents) or extreme summer heat (high elevation plants may not be adapted!). When planning your landscape, make sure each plant has enough space to grow and mature. Don't over-plant - you'll only end up having to severely prune or remove plants later on. Avoid the temptation to plant lawns - these areas will need to be watered twice a day during hot weather, both costly and wasteful. A good design should create a natural habitat with lots of room for future growth. Try sketching out a plan for your yard, measuring off areas on which you'd like to focus. Group plants according to their needs for sun, water, and maintenance.

**What should I plant?**
Refer to the Plant Selection Chart at the left and keep in mind the following:

**PLANTING THEMES** - Several themes can be shown off in your garden, such as color, size, or type. You might have a nice cluster of cacti in a rocky area, then a grouping of similar shrubs with grayish leaves, or incorporate a hummingbird garden. Group plants according to their water needs. That way you can keep your irrigation simple and appropriate for your yard. If you find that you cannot live without a small patch of "lush green," consider planting a shady spot with some water-needy species. You might install a small birdbath or fountain to attract a variety of birds.

**SIZE** - Make sure plants have room to develop both canopy and rooting structures. Remember, a plant's roots can grow to at least twice the width of the above ground foliage.

**WATER USE** - Again, group plants together that have similar water needs. Plants with low water requirements are normally native, drought tolerant plants. Moderate water use plants are those usually introduced into the area, and high water use plants include lawns, annuals, and some perennials.

**GROWTH RATE** - All plants grow at different rates. Over watering natives can result in rapid, spindly growth or root rot.

**PLANT SPACING** - Keep in mind the mature size of the plants and their use when deciding on spacing; allow them room to grow to their full size. Check the spacing of your plant in the natural landscape. To avoid future headaches and expense do not install plants too close to one another or to buildings, walkways, power lines, and other problem areas. If the plants will be used as a solid mass they should be spaced so that they will grow together in 3-4 years. If they will be used as a screen, a windbreak, or to create a hedge they may be planted closer together and pruned as a group rather than as individual plants.

**Natural Vegetation**
If you are building a home or other structure try to disturb as little of the natural vegetation as possible during construction. Natural vegetation stabilizes the soil, protects ground water, and provides habitat for native animals.

Initially it may be hard to find native plants in local nurseries, but always request them. Your interest in native plants will influence suppliers to carry them. Try to avoid cultivars that may cross-pollinate with our local species, and to germinate native plants from collected seed.

Avoid harvesting (or digging up) wild plants. The disturbance to the ecosystem is irreversible, and besides, most native plants don't transplant well.

**Basic Concepts of Xeriscaping**

**Quality landscaping that conserves water and protects the environment**

The **Mini-Oasis** - Plant thriftiest species closest to the buildings. Annuals, herbs, vegetables, exotics and non-native perennials will not thrive in nutrient-poor native soils and need to be planted in amended soil.

The **Transitional Zone** - These plantings require supplemental watering, but infrequent irrigation once established.

The **Arid Zone** - Once established, plants survive solely on annual rainfall. All plants selected for the arid zone should be natives or desert adapted species.

Together in 3-4 years. If they will be used as a screen, a windbreak, or to create a hedge they may be planted closer together and pruned as a group rather than as individual plants.

**How to buy plants**

So, you're ready to go shopping, or maybe even grow your own plants! Here's a handy list of things to keep in mind:

**Roots**: Make sure the plant has a well-developed root system that will hold together when removed from the container. If roots have pushed their way out from the bottom of the container, avoid it! Root bound plants have a tough time growing out.

**Health**: How does it look? Is it droopy, yellowish, not looking so hot? Don't buy it! Is it vigorous, the right color and healthy looking? Go for it!

**Shape**: Keep an eye out for well-developed, uniform shapes... but give our natives a break! They may look a little odd in the nursery, but remember that natives have their own unique characters and shapes. Just pick healthy ones.

**Bugs and Disease**: Examine your plant for warms and unwanted troublemakers. Avoid specimens with curled or chewed leaves or fungus.

**Please remember**! Do not remove unique cacti, smoke trees and ocotillo from native deserts! Before you buy these kinds of plants, make sure they have been grown from seed OR are properly tagged with Department of Agriculture tags, indicating they were obtained with legal permits.
Simple Steps to Planting

Make sure the planting hole is large enough for mature plant root development. It might look like a huge hole, but consider how far your roots will grow.

Pre-fill the hole with water. Make sure water drains from the hole. Use a good soil mixture when planting. Do not backfill using the caliche you just dug out!

Separating a Plant from its Container: To remove a plant from a container, lay the pot on its side and gently push on all sides of the pot to loosen up roots and soil. Next, carefully pull the pot away from the plant. Pulling the plant out by the stem may harm the plant. This can be tough, but always try to avoid damaging the roots. You can use a utility knife to cut the pot away.

Placing a Plant in a Hole: Carefully set the plant in the planting hole, checking to make sure the hole is the right size. Adjust as needed. Too deep will kill your plant; planting too high will expose the roots. After adjustments, roughen the edges of the root system by hand or gently with a trowel to separate roots that have become root bound or tightly wound. This will allow the root system to properly develop. Notes: If roots are circling around the root system, cut them off. This doesn't damage the plant and will prevent the stem from becoming "choke." When planting cactus and ocotillo, lightly dust the root system with sulfur to prevent root disease.

Back Filling and Watering: After setting the plant into the planting hole, back fill about half way, placing the displaced soil back into the planting hole. Gently compact the soil around the root structure using the handle of a spade or shovel. Next, completely fill the hole with water. Allow the water to soak into the root ball and surrounding soil. Complete filling the hole with back fill and gently compact again. Do not overcompact the soil! Add another dose of water to soak in and eliminate any large air pockets.

Water Basin: Build a mound with dirt around the outside edge of the planting hole. This mound is used to hold mulch (see Mulching) and water. The basin edge should be about 2-3 inches high and 3-4 inches wide. Finish planting by applying 2 inches of mulch within the basin.

Caring For Your Landscape

Native plants need very little maintenance, but all plants need some attention.

Mulching:
To keep the roots cooler and conserve water, place mulch around the base of your plants. The use of rocks or gravel as mulch is an attractive, natural idea since the high desert winds can blow organic mulch away from the plant. If using organic mulch, make sure mulch does not touch the stem or trunk of the plant, as many native plants may rot near the stem if exposed to too much moisture.

Fertilizing:
Native plants don't need any fertilizer! Isn't that handy? Non-natives may require some extra nutrients. Look for a well-balanced, slow-release fertilizer and apply a few months after planting. Check manufacturer's recommended application.

Watering:
The frequency and duration of irrigation depends on the plant type, soil type, age of the plant and environmental conditions such as sun and wind exposure. The goal is to establish a deep root system that is protected from the problems of heat and water evaporation that occur near the soil surface. All new plantings require regular watering until they become established, usually a period of one year. Once established, desert natives can survive without supplemental irrigation but look better with some additional watering. Other species may need a permanent schedule of irrigation.

Drip systems are the most efficient irrigation systems for desert climates and are quite easy to install prior to planting. Generally trees and large shrubs will need two to six 2-gallon/hour drip emitters. Smaller shrubs and native plants need only a single 1-gallon/hour emitter and the smallest plants need a ½-gallon/hour emitter. Check your soil to make sure the water is percolating into the root zone and adjust the system accordingly. Monitor the plantings for signs of stress, especially during the first year.

An irrigation system is optional if you choose native or very low water use plants. However, be prepared to water by hand for the first year. After establishment, water the plants during times of drought or as needed. Scheduling irrigation during the cool morning or evening hours rather than the hot midday hours will help reduce water loss due to evaporation.

Pruning:
Native plants that are properly chosen for the location and are not over watered will need little, if any pruning. Only prune when necessary to remove dead, broken or damaged branches. As a tree grows, the lower branches may be removed and the canopy thinned to allow more airflow and light penetration. Mature trees only require pruning every 3-5 years. Shrubs may need pruning every year to control growth or remove unwanted flower pods. Avoid shearing and sculpting plants - let them do their own natural thing!

The community of Twentynine Palms promotes the development of efficient, well-planned, attractive landscaping and encourages the use of native plants that conserve water and promote energy savings. Help us conserve, to provide a healthy environment for ourselves and for future residents. Limit lawn size, irrigate efficiently, mulch around trees, adjust watering schedules seasonally, and use water-efficient plants. The water table and your pocket book will thank you.

Thanks for "Going Native"
<table>
<thead>
<tr>
<th>Plant Selection Chart</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Perennials &amp; Vines</strong></td>
</tr>
<tr>
<td><strong>Botanical Name</strong></td>
</tr>
<tr>
<td><em>Argemone munita</em></td>
</tr>
<tr>
<td><em>Baileya multiradiata</em></td>
</tr>
<tr>
<td><em>Cucurbita pepo</em></td>
</tr>
<tr>
<td><em>Datilus giganteus</em></td>
</tr>
<tr>
<td><em>Echium wildpretii</em></td>
</tr>
<tr>
<td><em>Euphorbia antisyphonia</em></td>
</tr>
<tr>
<td><em>Echinocereus engelmannii</em></td>
</tr>
<tr>
<td><em>Ferocactus</em></td>
</tr>
<tr>
<td><em>Oxalis stricta</em></td>
</tr>
<tr>
<td><em>Achimenes schreberi</em></td>
</tr>
<tr>
<td><em>Achimenes schreberi</em></td>
</tr>
<tr>
<td><em>Achimenes schreberi</em></td>
</tr>
<tr>
<td><em>Achimenes schreberi</em></td>
</tr>
<tr>
<td><em>Achimenes schreberi</em></td>
</tr>
<tr>
<td><em>Achimenes schreberi</em></td>
</tr>
<tr>
<td><em>Achimenes schreberi</em></td>
</tr>
<tr>
<td><em>Achimenes schreberi</em></td>
</tr>
<tr>
<td><em>Achimenes schreberi</em></td>
</tr>
<tr>
<td><em>Achimenes schreberi</em></td>
</tr>
<tr>
<td><em>Achimenes schreberi</em></td>
</tr>
<tr>
<td><em>Achimenes schreberi</em></td>
</tr>
<tr>
<td><em>Achimenes schreberi</em></td>
</tr>
<tr>
<td><em>Achimenes schreberi</em></td>
</tr>
</tbody>
</table>

**Key Code**

- **Water Use**
  - None: Does not need supplemental water once established.
  - Low: Requires some supplemental water, or place near grated plant.
  - Moderate: Requires water as the soil begins to dry.

- **Soil**
  - L: Light, predominantly sandy soil with rapid drainage.
  - H: Heavy, predominantly clay soil with slow drainage.
  - Alb: Alkaline soils above pH 6.5.
  - Cal: Caliche or hardpan soils.
  - Sal: Saline soils.
References

Composting
When going native with your landscaping, you will actually have little green waste for composting. To learn more about composting and your local Master Composters group, call 1-800-U-RECYCL

Free Plants
The town of Yucca Valley has an "Adopt-A-Joshua Tree" program to save plants that may otherwise be destroyed due to construction. Email Carol Miller at cmiller@yucca-valley.org or write to her at 57090 Twenty nine Palms Hwy, Yucca Valley, CA 92284 to be placed on a list for free Joshua trees or Mojave yuccas.

Books
You may find the following additional information helpful as you begin to garden with natives, to discover new plants to try, and to stimulate your landscaping imagination:

Native Plants for Southwestern Landscapes - Judy Mielke. University of Texas Press. 1993

Websites
California Native Plant Society
www.cnps.org
High Desert Landscaping
www.vvwater.org/guide
Restoration Techniques
www.serg.sdsu.edu/SERG/techniques.html
Coachella Planting Guide
www.cvwd.org/lush&eff.htm
Drip Irrigation
www.digicorp.com
Groundwater Guardians
www.groundwater.org

~ Good Ideas ~

- Keep the native vegetation on site
- Cage and nurture volunteers
- Can't find what you want in the nursery?
  Grow your own from local seed!!
- Rescue plants from development projects
- Avoid cultivars of natives

This publication was created by the Twenty nine Palms Groundwater Guardian Team, and made possible through the generous support and assistance from:

- Twenty nine Palms Water District
- City of Twenty nine Palms
- Joshua Tree National Park
- Morongo Basin Conservation Association
- Private citizens and local businesses

If you have any questions, please contact us at (760)367-7546.