



## Impacts of the Pandemic

The coronavirus pandemic continues to have an impact on consumer behavior and the global economy. Industries across the country are experiencing challenges from limited workforces, shuttered factories, and supply-chain bottlenecks.

Manufacturing disruptions caused by workforce shortages, unreliable transportation, and the scarcity of raw materials have led to material and supply shortages. As a result, demands for products and services have outpaced supplies, leading to sharp increases in consumer prices.

According to the latest data from the US Bureau of Labor Statistics, the Consumer Price Index rose 7% for the calendar year 2021 – the largest 12-month increase since 1982. Leading the increase was energy – up 29.3% over last year, mostly driven by gasoline prices up 49.6%.

Price increases are being felt on many levels, including the landscaping industry. The demand for raw materials remains at record-high levels and a dramatic increase in global transportation costs have further driven up prices. For example, the cost of resin used for plastic irrigation products has gone up 210%.

Adding to the rising costs of commodities, fuel, and utilities, businesses are also seeing significant increases in their payrolls with the California minimum wage going up 7.14% on January 1st, as well as mounting insurance rates (health, liability, and workers compensation).

As a result, it has now become necessary to be proactive in managing budgets and material, supply, and product inventories. Environmental Concepts will remain vigilant in communicating with our product and equipment suppliers in order to minimize supply interruptions.

## DROUGHT WATCH - Spring 2022

In spite of a promising start to the winter 2021-22 wet season that brought record-level precipitation to the state in December, drought conditions continue to prevail and impact California's water resources. Although snowpack water equivalent (SWE) levels reached 157% of normal in December, the majority of the state's largest reservoirs remain below average.

January followed with what was a record-setting dry month across most of California, reducing statewide SWE levels to 98%. The month of February also started off unseasonable warm and dry with record-breaking temperatures recorded throughout the state, including Northern California. SWE levels have now drastically fallen to a mere 55% of normal.

A recent study authored by climate scientists found that the extreme dryness experienced in California and the West over the last two decades is now ranked as the driest 22-year period and the worst megadrought in the last 1,200 years. The team also concluded that dry conditions will likely prevail through 2022 and may even persist for several years.

In October 2021, Governor Newsom signed a proclamation extending the drought emergency executive orders to all 58 of the state's counties. Under the Executive Order, water supply agencies were directed to execute urban water shortage contingency plans. The State Water Resources Control Board was also authorized to adopt emergency regulations, as deemed necessary, to prohibit wasteful water practices.

Californians were urged to voluntarily reduce water use by 15%. Unfortunately, statewide water use totals under the voluntary water conservation directive fell far below targeted levels, especially in Southern California. The failure of the voluntary water conservation initiatives changed the course of action of regional and local water agencies.

The vast majority of regional and local water districts rely on 30% to 40% of imported water from the State Water Project and the Colorado River Basin Project, which are managed by the Municipal Water District of Southern California (MWD). The balance of water supplies comes from a variety of other sources, including groundwater aquifers and reclaimed water.

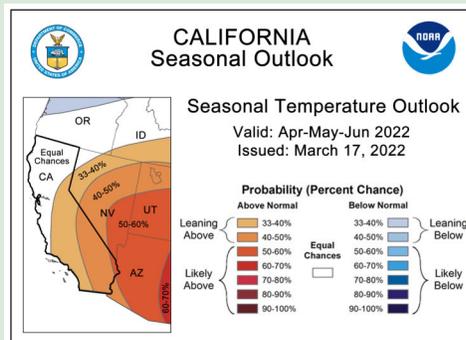
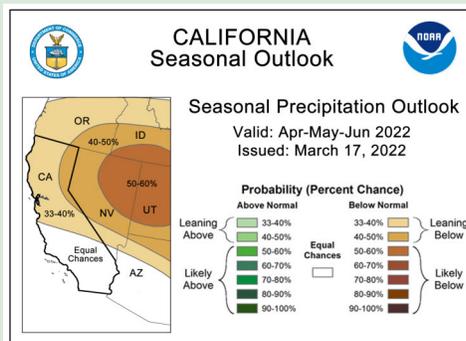
Given that climate outlook models predict a high probability that La Niña conditions will continue to dominate through spring, water officials were not confident that water-year 2022 precipitation would alleviate current drought conditions. Thus, emergency regulations promoting water conservation and prohibiting wasteful water uses were adopted by the State Water Board.

The watering restrictions are basic, minimum-level conservation measures that prohibit unreasonable outdoor water use, such as hosing down driveways and sidewalks, running sprinklers in a manner that causes more than incidental runoff, and the application of water in landscape areas within 48 hours after measurable rainfall of at least ¼" of rain.

As a method of compelling consumers to reduce water use, several water districts have decreased water allocations for budget-based tier structures. Exceeding the reduced allocation would lead to moving into a higher tier with significantly higher water rates. As a result, the same water used in prior years will cost more based on the lowered allotments.

When water allocations are reduced, the effects of the decreases will have a direct impact on irrigation water budgets for communities.

Reductions in water allocations could also impact the health and vitality of landscape turf, trees, and planting areas, prompting the need to monitor the conditions of the landscaping. Factors such as low humidity, lack of precipitation, warm temperatures, and wind can also contribute to increases in water use.



# PLANT VARIETY - Making the Right Choice

Plants like all living organisms reproduce to pass along their genes to future generations. They either create offspring naturally by seed, through pollination and fertilization, or vegetatively by botanical propagation. Knowing the differences between the attributes and variations of the plant's offspring is vital when selecting the right plant for its intended purpose and location.

Reproduction by seed gives each plant genetic material from both parents, producing a unique and highly variable offspring. This can help for survival by allowing the species to adapt to changing environmental conditions. Evidence of natural seed selection for food crops, also known as plant domestication, dates back more than 10,000 years ago.

Reproduction through propagation, the purposeful act of reproducing plants, aka cloning, is highly predictable and produces new growth that has the same characteristics as the parent plant. However, the process can make it more difficult for the plant to adapt to changes in the environment. The first evidence of systemic plant breeding dates back to 2,000 BCE.

In 1735, a Swedish botanist pioneered a system for naming plants based on similarity in form and sharing of a common ancestry. Each plant is given a binomial botanical name identifying its genus (group) and specific epithet (attribute). When combined together, they define the plant species.

As the popularity of natural food-based plant selection and the crossbreeding of woody plants (trees and shrubs) became increasingly popular, it became necessary to distinguish between wild plants and those with variations that had been cultivated. This resulted in the creation of third-name species' subdivision categories of variety and cultivar.

The term plant "variety" refers to variations within a plant species that developed

naturally in the environment through fertilization. Seeds from a specific variety will often grow true-to-type, meaning that their offspring will retain the parent plant's unique and desirable characteristics.

A plant "cultivar" is a combination of the terms cultivated and variety, referring to variations within a plant species that have been developed through controlled plant breeding and grafting. Growers crossbreed parent plants that each have desirable characteristics, passing along those traits to their offspring.

Producing specific plant varieties and cultivars has been practiced for many years, originating with food crops as stated earlier. These practices eventually evolved into ornamental horticulture, which encompasses floriculture (flowers) and landscape horticulture (plants, and trees).

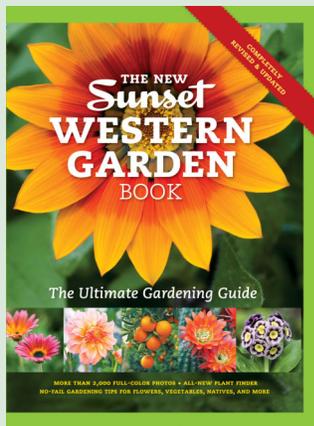
Plant breeding applies the principles of horticultural science to modify and create plant species variations that have specific desirable characteristics. These characteristics may include physical features, such as aesthetics and size, as well as benefits such as tolerance to heat and cold, resistance to insects and diseases, and most recently, drought tolerance.

Climate change and prolonged drought conditions have altered our vision of landscape design and irrigation methods, and also varied the approach to plant selection. We are now experiencing extremes in temperatures, precipitation, and insect and disease infestation. As a result, a minor difference in species variety may determine a plant's survival.

When making plant selections, it is also important to be aware of the site conditions such as sun exposure, shade, exposure to

frost, and other factors that may limit the size of the plant at maturity. The *Sunset Western Garden Book* is highly recommended as a resource for plant variety information.

Botanical Nomenclature			
Sample one: Variety (natural)			
Genus	Species	Variety	Common Name
<i>Cotyledon</i>	<i>orbiculata</i>	var. <i>oblonga</i>	Flavida
Sample two: Cultivar (cultivated variety)			
Genus	Species	Cultivar	Common Name
<i>Raphiolepis</i>	<i>indica</i>	'Ballerina'	Indian Hawthorn



## Reading Nursery Plant Labels

Nursery tags can take the mystery out of your garden center shopping experience. Knowing how to read plant labels is helpful in making the right choices for your garden or landscape.

Plant labels have changed over the past decades from being a simple form of product identification to eventually becoming a marketing tool. They provide more information about the product, thus helping consumers to feel more comfortable about their plant selections product.

Retail garden centers often carry similar products from different suppliers. Innovative growers have created detailed tags to differentiate their products from other sources.

Information on the tags typically includes:

- **Plant Name:** botanical name (genus and species in Latin), common name, and variety.
- **Climate Zone:** USDA Hardiness Zones, which describes the minimum tolerable winter temperature.
- **Exposure:** Full sun, partial sun, or full shade. Sometimes shown graphically by an icon.
- **Watering:** Often stated as drought-tolerant, dry, normal, or moist. Can also be shown by graphic icon.
- **Size and Shape:** Describes plant height and breadth. Important for proper spacing.
- **Special Features:** Varies by seller, but may include helpful information, such as deer-resistant, attracts pollinators, toxicity, etc.

It is important to do your homework before making your plant list and heading to the local nursery or garden center.

