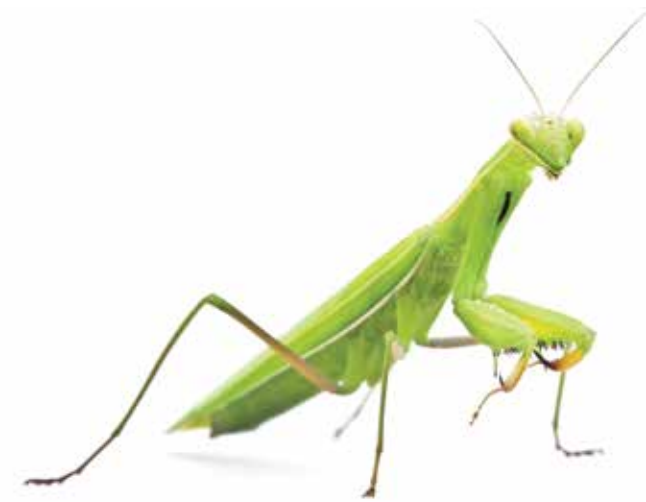


COMBATING GARDEN PESTS WITHOUT PESTICIDES, ATTRACTING GOOD BUGS



BENEFICIAL BUGS:

- * LADYBUGS
- * HONEY BEES
- * LACEWINGS
- * DAMSEL BUGS
- * SOLDIER BEETLES
- * DRAGONFLIES
- * GROUND BEETLES
- * PRAYING MANTIS
- * PARASITIC WASPS
- * HOVERFLIES
- * PIRATE BUGS
- * SPIDERS

INTEGRATED PEST MANAGEMENT (IPM)

Natural pest control that is healthier for people and the environment

IPM aims to remove unwanted insects from your garden while attracting helpful ones, using a mix of environmentally friendly methods:

1 NATURE • Garden-damaging bugs have natural enemies like ladybugs and wasps. Certain plants such as yarrow and marigolds attract these beneficial insects, reducing the need for pesticides.

2 DIY • Mulches keep invasive weeds at bay. Copper barriers on raised garden beds reduce damage by slugs and snails. Screens keep out birds and insects.

3 NONTOXIC • Pesticide-free gardening practices that help keep pests in check include correct irrigation, crop rotation and growing plants resistant to pests, disease and drought (typically native species).



GOOD BUGS

MANY TYPES OF WASPS INJECT THEIR EGGS INTO CATERpillARS AND THE HATCHING LARVAE EAT THE PLANT-DAMAGING PEST.



MONITORING

KEEP AN EYE ON THE BALANCE OF BUGS WITHIN YOUR YARD'S ECOSYSTEM; CATCHING A PROBLEM EARLIER MAKES IT EASIER TO CORRECT.

4

DAYS TO HATCH

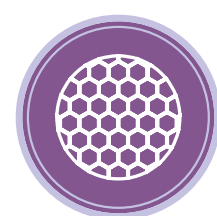
ONCE HATCHED, THE LARVAE OF GREEN LACEWINGS FEAST ON DESTRUCTIVE APHIDS.



5,000

APHIDS

A LADYBUG CAN EAT THIS MANY OF THEM IN ITS LIFETIME.



30,000
LENSES IN EACH EYE

THE BENEFICIAL DRAGONFLY HAS SUPERIOR VISION, GIVING IT AN INCREDIBLE HUNTING ADVANTAGE.



A GREEN ALTERNATIVE TO STORM DRAINS, WHICH FLUSH POLLUTED RUNOFF INTO STREAMS, LAKES AND OCEANS



BIOSWALES:

- * PROTECT WATER QUALITY
- * REDUCE SEWER OVERFLOWS
- * INCREASE WELL WATER SUPPLIES
- * ATTRACT BIRDS AND BUTTERFLIES
- * LOOK NICER THAN CONCRETE STORMWATER CHANNELS

BIOSWALES AND WATER QUALITY

Capture, absorb and filter polluted stormwater runoff on site

BIOSWALES These shallow, vegetated ditches let nature do the work of cleansing polluted rainwater and snowmelt that run off streets and parking lots. The methods are low-tech:

- 1 DETENTION** • Vegetation slows the runoff, allowing silt, toxic metals and other pollutants to settle out.
- 2 FILTRATION** • Grasses and shrubs filter runoff as it passes through them.
- 3 INFILTRATION** • Pollutants are captured in porous soils as the runoff seeps underground.

124

BODIES OF WATER

IN CALIFORNIA ARE TOO POLLUTED FOR SWIMMING AND FISHING. (2016)



CLEANSING RUNOFF AT HOME

HOMEOWNERS CAN BUILD A "RAIN GARDEN" — A SUNKEN VEGETATED AREA THAT CAPTURES RUNOFF FROM THE ROOF AND DRIVEWAY AND ALLOWS WATER TO SEEP UNDERGROUND.



RUNOFF POLLUTANTS

INCLUDE MOTOR OIL, GASOLINE, PESTICIDES, FERTILIZERS, PET WASTES, SEDIMENT AND TOXIC METALS LIKE MERCURY, COPPER, ZINC AND LEAD.

49%

OF POLLUTANTS IN RUNOFF

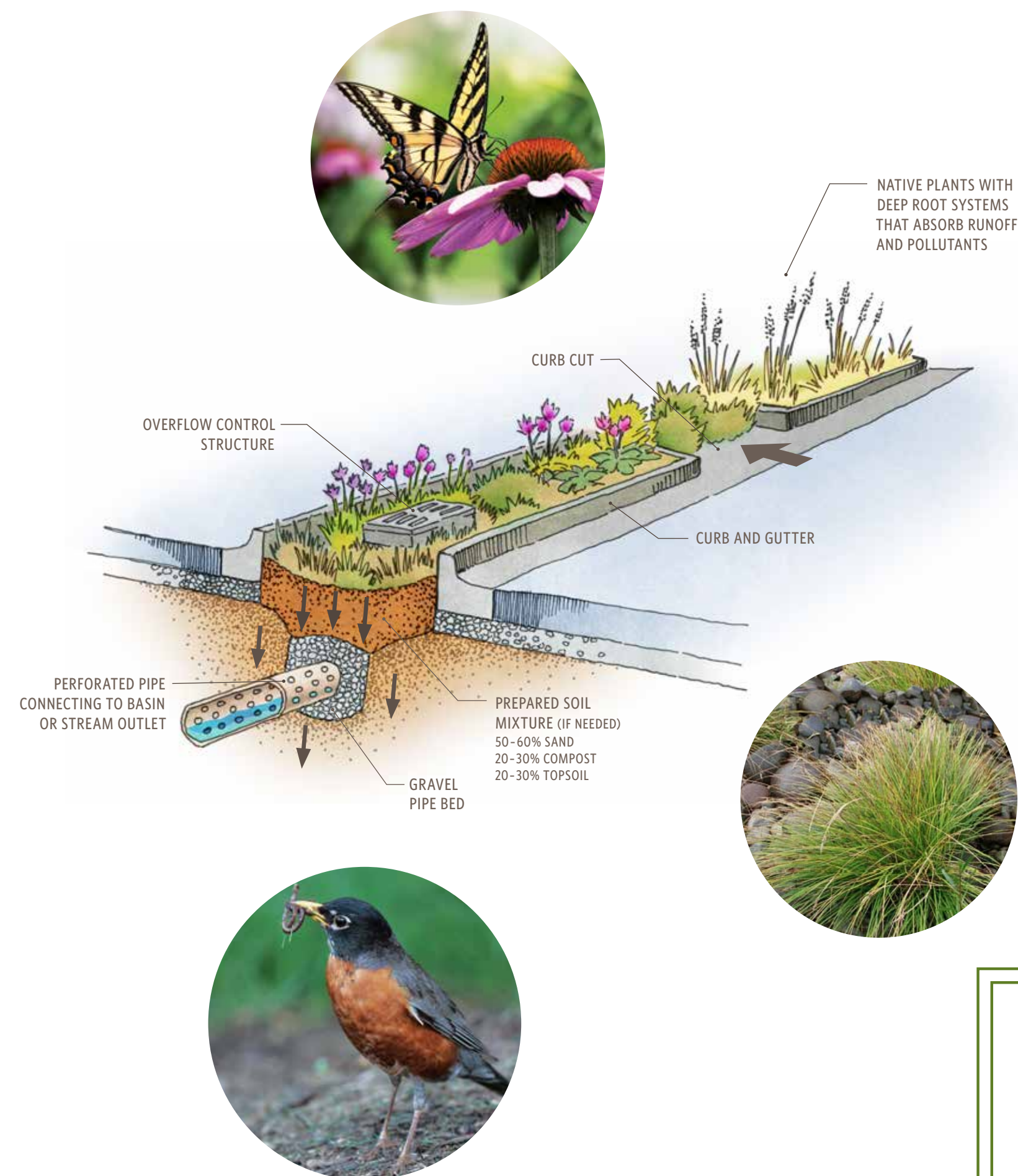
CAN BE REMOVED BY A WELL-DESIGNED BIOSWALE DURING A MODERATE STORM. (2016)



99%

OF STORM DRAIN SYSTEMS

IN CALIFORNIA EMPTY THE RUNOFF DIRECTLY INTO A WATER BODY WITHOUT BEING CLEANSED AT A WATER TREATMENT PLANT. (2016)



SOURCES: U.S. EPA; University of California Agriculture and Natural Resources; UC Davis; Soil Science Society of America; Sacramento Stormwater Quality Partnership

ABOUT A THIRD OF OUR DIET RELIES ON IMPORTED HONEY BEES, WHOSE POPULATION HAS BEEN IN RAPID DECLINE. ONE SOLUTION MIGHT BE TO ENCOURAGE NATIVE, WILD BEES TO POLLINATE OUR FARMS AND GARDENS.

CROPS POLLINATED BY WILD BEES:

- * APPLES
- * BLUEBERRIES
- * RASPBERRIES
- * CHERRIES
- * CRANBERRIES
- * SQUASH
- * WATERMELON
- * TOMATOES

NURTURING WILD BEES

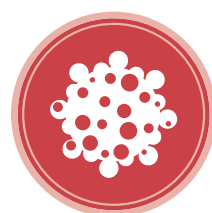
Native pollinators can help sustain our food supply

WILD With the right habitat, scientists say native bees in the wild can be just as effective in pollinating crops as European honey bees. Ways to nurture wild bees include:

1 PROVIDE FORAGE • Plant flowering cover crops in orchards. Grow hedgerows of native shrubs, grasses and wildflowers within and around crop fields and gardens. Include a range of plants blooming at different times to provide nectar and pollen year-round.

2 PROTECT FROM PESTICIDES • Most pesticides can kill bees. Do not apply them to plants in bloom. Maintain buffers between sprayed areas and bee foraging habitat.

3 CREATE NEST SITES • Leave bare a sunny, sheltered area where ground-nesting bees can tunnel. Keep rotting logs, stumps or branches for wood-boring species. Or build nests by drilling small holes into wood blocks.



POLLEN COLLECTORS

MOST WILD BEES ARE POLLINATORS. THEY TRANSFER POLLEN FROM ONE FLOWER TO THE NEXT, HELPING PLANTS SET THE FRUIT.



SOLITARY

UNLIKE HONEY BEES, WILD NATIVE BEES DO NOT LIVE IN HIVES OR MAKE HONEY. MOST ARE SOLITARY AND NEST UNDERGROUND OR IN WOOD.



1,600
WILD BEE SPECIES

FOUND IN CALIFORNIA. THE HONEY BEE IS ONE OF THE FEW NON-NATIVES.

35%

OF CALIFORNIA CROPS

POLLINATED BY WILD BEES.



\$900

MILLION

CALIFORNIA AGRICULTURE REAPS AT LEAST THIS MUCH VALUE YEARLY FROM POLLINATION BY WILD BEES.



**FEEDING WORMS YOUR FOOD WASTE
MAKES FOR GREAT GARDEN FERTILIZER**



WORM FOOD:

- * VEGETABLE SCRAPS
- * BREAD, GRAINS, PASTA
- * TEA BAGS
- * FRUIT RINDS, PEELS
- * COFFEE GROUNDS, FILTERS
- * EGG SHELLS

COMPOSTING WITH WORMS

Nature's recyclers turn garbage into super soil

SUPER POOP Worms like to eat slowly rotting organic material, such as vegetable and fruit scraps. The resulting worm manure, or compost, is often more beneficial to plants than traditional compost. Here's why:

- 1 MORE NUTRIENTS** • Worm manure contains more growth-boosting minerals and bacteria and makes those nutrients more available to plants.
- 2 BETTER SOIL** • Worm compost retains plant nutrients for a longer time and has greater moisture-holding capacity.
- 3 GREATER PROTECTION** • Worm compost provides much higher protection against plant-damaging microbes in surrounding soil.



IT TAKES GUTS

SECRETIONS IN WORM INTESTINES MAKE NUTRIENTS CONCENTRATED AND AVAILABLE FOR PLANT UPTAKE.

1:4

OPTIMAL RATIO

FOR HEALTHIER HOUSE PLANTS, MIX 1 PART WORM COMPOST INTO 4 PARTS POTTED SOIL.



NUTRIENTS

CHEMICALS IN WORM MANURE THAT PROMOTE PLANT GROWTH INCLUDE NITROGEN, PHOSPHOROUS, POTASSIUM, CALCIUM, MAGNESIUM, IRON AND ZINC.



1/2

THEIR BODY WEIGHT

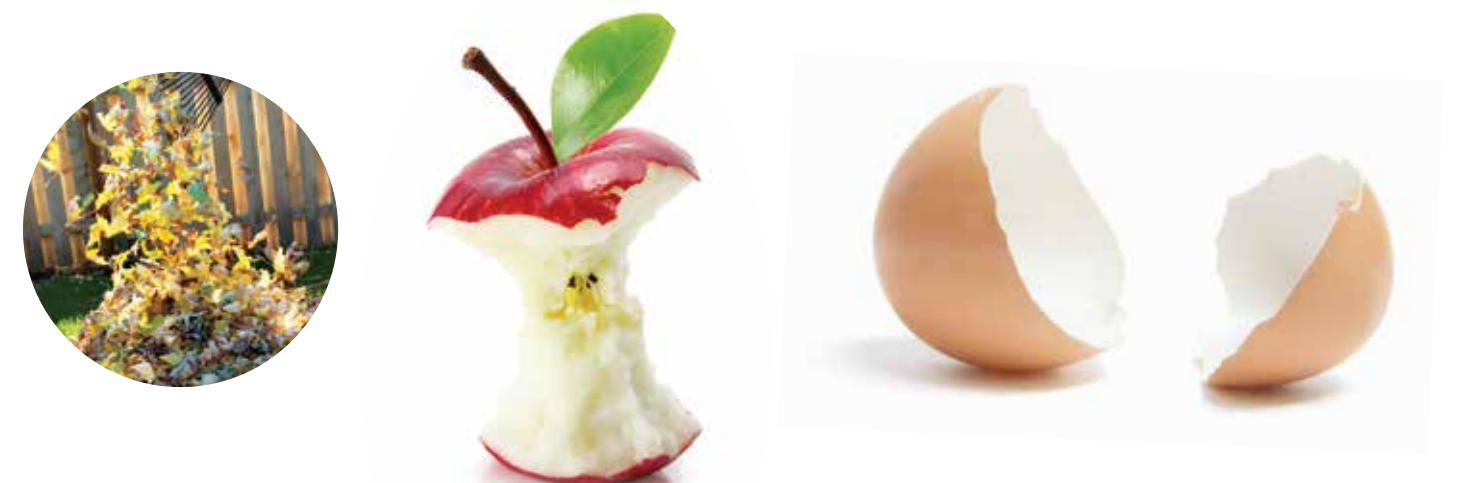
RED COMPOSTING WORMS CAN EAT HALF THEIR WEIGHT IN ONE DAY.



90%

OF WORM'S BODY

COMPRISED OF WATER.



SOURCES: University of California Agriculture and Natural Resources; CalRecycle; CompostGut.com; Mother Earth News; New Mexico State University

WHEN CALIFORNIANS OPEN A SPIGOT, THEY MAY BE TAPPING A SOURCE HUNDREDS OF MILES AWAY

MOST OF CALIFORNIA'S WATER SUPPLY COMES FROM THESE RIVERS:

- * AMERICAN
- * COLORADO
- * FEATHER
- * MOKELUMNE
- * SACRAMENTO
- * SAN JOAQUIN
- * STANISLAUS
- * TRINITY
- * TUOLUMNE

WHERE OUR WATER COMES FROM

Californians rely on a heavily engineered water supply system

ENGINEERED In California, most water availability is in the north during winter storms and spring snowmelt, but most water demand is in the south during the dry summer. Reservoirs and aqueducts help bridge these gaps in space and time.

1 RUNOFF • About half the state's water supply comes from rain and snowmelt running off the 400-mile Sierra Nevada. Many Sierra rivers are dammed to store and release this runoff when needed.

2 IMPORTS • Most of Southern California's water supply originates hundreds of miles away in the Sierra and the Rocky Mountains, via the Colorado River.

3 GROUNDWATER • About 35% of California's water supply is pumped from aquifers – sponge-like underground reservoirs filled with gravel and sand. More is pumped in dry years to make up for the lack of rain.

75%
OF PRECIPITATION
FALLS NORTH OF SACRAMENTO.

66%
OF CALIFORNIANS
RECEIVE SOME PART
OF THEIR WATER FROM
THE SACRAMENTO-
SAN JOAQUIN DELTA.

85%
OF SACRAMENTO'S WATER
IS DRAWN FROM THE SACRAMENTO AND AMERICAN RIVERS.
THE REST COMES FROM GROUNDWATER.

DELTA EXPORTS

NORTHERN AND CENTRAL SIERRA RIVERS DRAIN TO THE SACRAMENTO-SAN JOAQUIN DELTA, WHERE GIANT PUMPS AND AQUEDUCTS DIVERT WATER TO CITIES AND FARMS ACROSS THE SOUTHERN TWO-THIRDS OF THE STATE.

RECYCLED
MANY CALIFORNIA COMMUNITIES REUSE TREATED WASTEWATER FOR LANDSCAPE IRRIGATION.



GARDENERS CAN PUT THE RIGHT AMOUNT OF WATER IN THE RIGHT PLACE AT THE RIGHT TIME, SAVING MUCH WATER

BENEFITS OF DRIP IRRIGATION:

- ✦ SAVES WATER AND FERTILIZER
- ✦ PREVENTS OVERWATERING
- ✦ MINIMIZES RUNOFF AND SOIL EROSION
- ✦ REDUCES RISK OF PLANT DISEASE
- ✦ WORKS WELL ON SLOPES
- ✦ EASY TO RECONFIGURE

DRIP IRRIGATION

The most efficient way to water most home gardens

EFFICIENT Drip irrigation is highly efficient because it delivers water slowly and directly to the base or root zones of plants.

1 DIRECT TO PLANT • Drip systems use considerably less water than pop-up sprinklers and hand-watering because they deliver water only to the desired plants.

2 DIRECT TO SOIL • Running a drip line directly to the plant's base or underground to its root zone minimizes water losses to overspray, wind and evaporation.

3 SLOWLY APPLIED • Water delivered at a trickle is more likely to soak in before it runs off. This makes drip irrigation ideal for watering sloped gardens.

53%

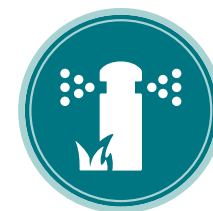
OF HOUSEHOLD WATER

GOES TO IRRIGATING YARDS IN CALIFORNIA.



HYDROZONING

GROUPING TOGETHER PLANTS WITH SIMILAR WATER NEEDS WILL FURTHER CONSERVE WATER.



MAINTENANCE

DRIP IRRIGATION SYSTEMS NEED TO BE REGULARLY CHECKED FOR LINE BREAKS AND PLUGGED EMITTERS.



90%

EFFICIENCY

USING DRIP IRRIGATION, COMPARED WITH 50% — 70% FOR SPRINKLER SYSTEMS AND HAND-WATERING.



152 GALLONS

USED DAILY BY THE AVERAGE SACRAMENTO COUNTY RESIDENT, COMPARED WITH STATEWIDE AVERAGE OF 111 GALLONS PER PERSON PER DAY. (SEPT 2016)



HERBS CAN HELP YOUR GARDEN GROW. FRAGRANCE REPELS PESTS, FLOWERS ATTRACT POLLINATORS.



CULINARY HERBS THAT WARD OFF GARDEN PESTS:

- * BORAGE
- * CHIVES
- * DILL
- * FENNEL
- * OREGANO
- * PARSLEY
- * SAGE
- * ROSEMARY
- * THYME

HERBS AS GARDEN GATEKEEPERS

Plants that enliven food also shoo pests, invite pollinators

GATEKEEPERS Many herbs serve as gatekeepers to your garden's health, both turning away destructive pests and attracting helpful insects.

- 1 DETERRENT** • Growing highly fragrant herbs can make your garden less appetizing to deer. Rosemary bushes can be used as a protective border. Its spiky leaves emit a strong perfume that deer dislike.
- 2 REPELLENT** • Aromas of thyme, sage and winter savory repel insects that damage kale and other cabbage crops. Parsley fends off destructive beetles and its seeds attract predatory wasps that kill the tomato hornworm.
- 3 ATTRACTANT** • Allowing herbs to flower will draw pollinators. Hummingbirds sip nectar from lavender and other tubular-flowered herbs. Bees prefer herbs with single-petaled flowers, such as basil. Some herbs such as fennel feed butterflies and their larvae.

NO. 1

CALIFORNIA LEADS THE NATION IN PRODUCTION OF HERBS, INCLUDING PARSLEY AND SAFFLOWER.



DROUGHT TOLERANT

HERBS NEED LITTLE WATER. MOST ARE NATIVE TO THE SEMI-ARID MEDITERRANEAN REGION.



HERBS VS. SPICES

PLANTS THAT HAVE LEAVES USED FOR FOOD SEASONING, MEDICINE OR PERFUME ARE HERBS. SPICES COME FROM ROOTS, BARK OR SEEDS.

10 YEARS

TYPICAL COMMERCIAL PRODUCTIVE LIFESPAN OF LAVENDER, WHICH IS USED FOR FRAGRANCE AND ALTERNATIVE MEDICINES.



95,000 STICKS OF GUM

CAN BE FLAVORED WITH JUST 1 GALLON OF MINT OIL.

SOURCES: University of California Agriculture and Natural Resources; Mint Industry Research Council; California Department of Food and Agriculture



GROWING MILKWEED AND OTHER FLOWERING PLANTS WILL ATTRACT THE SHOWY BUTTERFLY



MILKWEED SPECIES MOST FREQUENTED BY MONARCHS IN CALIFORNIA:

- ✦ CALIFORNIA [Asclepias (A.) californica]
- ✦ SHOWY (A. speciosa)
- ✦ HEARTLEAF (A. cordifolia)
- ✦ NARROWLEAF (A. fascicularis)
- ✦ WOOLLY (A. vestita)
- ✦ WOOLLYPOD (A. eriocarpa)

GARDENING FOR MONARCHS

Providing a stopover on butterfly's marathon migration

STOPOVER The monarch butterfly is unique among insects for its long-distance seasonal migration. Gardeners can help sustain their journey by providing three basic needs:

- 1 HOST PLANT** • The female lays her eggs only on milkweed, almost the only food its larvae and caterpillars will eat. California has several native milkweed species.
- 2 FOOD** • Monarchs feed on nectar, so plant plenty of native wildflowers and blooming shrubs. Add gravel to your birdbath or create a muddy patch in your yard to provide butterflies a shallow place to drink water.
- 3 SHELTER** • Monarchs need protection from harsh weather and predators. A dense patch of shrubs or cluster of tall grasses and wildflowers will do the trick.



DEFENSE

MILKWEED CONTAINS TOXINS THAT MAKE THE MONARCHS UNPALATABLE TO MOST PREDATORS.

\$1,000

FINE

FOR TOUCHING OR OTHERWISE DISTURBING MONARCHS IN PACIFIC GROVE, CALIF., WHICH HOSTS A WINTER SANCTUARY FOR THEM.



TWO

U.S. MONARCH POPULATIONS

ONE BREEDS EAST OF THE ROCKIES AND WINTERS IN MEXICO. THE OTHER BREEDS WEST OF THE ROCKIES AND WINTERS ON CALIFORNIA'S COAST.



CALIFORNIA OR BUST

CALIFORNIA'S COAST IS THE ONLY PLACE IN THE U.S. WHERE MONARCHS GATHER IN THE WINTER.

1,000 MILES

THE DISTANCE SOME WESTERN MONARCHS FLY TO REACH THEIR WINTERING GROUNDS. IT TAKES FIVE TO SIX GENERATIONS OF THE INSECT TO COMPLETE THE MIGRATION. SCIENTISTS HAVE NOT FIGURED OUT HOW THE INSECTS KNOW WHERE TO GO.



SOURCES: University of California Agriculture and Natural Resources; UC Davis; Xerces Society of Invertebrate Conservation; City of Pacific Grove

THE SACRAMENTO VALLEY AND LOWER SIERRA
FOOTHILLS ARE IDEAL FOR GROWING MANY
KINDS OF CITRUS TREES



POPULAR CITRUS TREES IN SACRAMENTO VALLEY:

- * WASHINGTON NAVEL ORANGE
- * VALENCIA ORANGE
- * LISBON LEMON
- * ROBERTSON NAVEL ORANGE
- * MORO BLOOD ORANGE
- * BEARSS LIME
- * OWARI SATSUMA MANDARIN
- * OROBLANCO GRAPEFRUIT
- * MEYER LEMON

CITRUS: THE GIVING TREES

Enjoy healthful fruit, glossy foliage and sweet fragrance year-round

GIVING TREES Citrus trees offer better returns on their maintenance than most anything in your garden. Here are three dividends:

- 1 HEALTHY FRUIT** • Citrus fruits are rich in vitamins, minerals, dietary fiber and plant chemicals that are linked to a lower risk of cancer and heart disease.
- 2 FRAGRANT EVERGREEN** • Citrus trees please the senses year-round with their shiny foliage, bright fruit and fragrant blossoms. The scents of kumquat and Meyer lemon blossoms are especially pleasing.
- 3 LOW MAINTENANCE** • Once established, a citrus tree can yield fruit for decades with little upkeep, compared with the planting, weeding, watering and pest control involved in growing annual vegetables.

DWARF TREES

ONCE MATURE, A HEALTHY DWARF CITRUS TREE CAN PRODUCE UP TO 20 FULL-SIZE FRUITS EACH YEAR.



FRESH OJ YEAR-ROUND

THERE ARE A VARIETY OF CITRUS TREES THAT RIPEN IN EVERY SEASON: WASHINGTON NAVEL ORANGE (WINTER), TROVITA SWEET ORANGE (SPRING), LANE LATE NAVEL ORANGE (SUMMER) AND OWARI SATSUMA MANDARIN (LATE FALL).

No.1
PRODUCTION

CALIFORNIA LEADS THE NATION IN PRODUCTION OF LEMONS, LIMES, MANDARINS AND KUMQUATS.

10
OUNCES

OF SATSUMA MANDARIN JUICE CONTAINS AS MUCH SYNEPHRINE AS AN OVER-THE-COUNTER NASAL DECONGESTANT PILL.



37%
MARKET SHARE

CALIFORNIA DOMINATES U.S. CITRUS PRODUCTION.



REPOPULATING POLLINATORS BY MIMICKING NATURE IN YOUR GARDEN



POLLINATORS:

- * BATS
- * BEES
- * BEETLES
- * BUTTERFLIES
- * FLIES
- * HUMMINGBIRDS
- * MOTHS
- * WASPS

HABITAT FOR POLLINATORS

Gardeners can help repopulate bees and butterflies

REPOPULATE Pollinating insects and birds need to feed and breed. Here are three ways you can attract and nurture them:

- 1 FLOWERING PLANTS** • Grow a wide variety of nectar-rich native species with a staggered bloom sequence to ensure food for each pollinator's unique season.
- 2 NEST SITES** • Leave dead trees for wood-nesting bees and bare, untilled sunny spots for those that nest underground.
- 3 AVOID PESTICIDES** • Most pesticides can kill beneficial insects. Do not apply them to plants in bloom. Maintain buffers between sprayed areas and flowering plants.



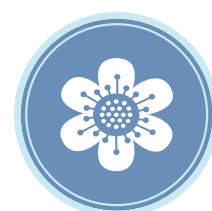
VANISHING BEES

RECENT POPULATION DECLINES IN BEES HAVE BEEN ATTRIBUTED TO MANY FACTORS, INCLUDING INCREASED PESTICIDE USE, HABITAT LOSS AND CLIMATE CHANGE.

35%

OF HUMAN FOOD

RELIES ON ONE TYPE OF POLLINATOR: BEES.



75%

OF FLOWERING PLANTS

RELY ON INSECTS AND BIRDS FOR POLLINATION.



POLLINATION

AS INSECTS AND BIRDS SIP NECTAR OR GATHER POLLEN FOR THEIR BROOD, THEY TRANSFER POLLEN FROM ONE FLOWER TO THE NEXT, ALLOWING PLANTS TO REPRODUCE AND MAKE SEEDS AND FRUITS.



28,000

SPECIES OF BEETLES IN U.S.

THOUGH NOT EFFICIENT POLLINATORS, BEETLES VISIT MANY FLOWERS TO SIP NECTAR OR EAT FLOWER PARTS.



**GARDENING WITH NATIVE PLANTS SAVES
WATER AND WILDLIFE — AND LABOR ON UPKEEP**



NATIVE SHRUBS RECOMMENDED FOR SACRAMENTO AREA GARDENS:

- * CALIFORNIA WILD ROSE
- * COYOTE BUSH
- * FUCHSIA-FLOWERED GOOSEBERRY
- * MANZANITAS
- * OREGON GRAPE
- * RED-TWIG DOGWOOD
- * WILD LILAC
- * WESTERN REDBUD
- * WESTERN SPICE BUSH

GOING NATIVE

Plants made to live here have natural advantages

ADVANTAGES Trees, shrubs and other plants native to the Sacramento Valley evolved to thrive with dry, hot summers and less than ideal soil. Growing natives is beneficial in at least three ways:

- 1 LESS WATER** • Once established, many California native plants need little irrigation. Many non-native plants require an average of seven times more water than native species.
- 2 ENVIRONMENTALLY FRIENDLY** • Native plants adapted to your area will need little if any fertilizers, soil amendment or pesticides.
- 3 MORE WILDLIFE** • Native wildlife prefer native plants. A variety of native insects and birds will help pollinate your fruit trees and help free your yard of plant-eating bugs. A native oak feeds up to 5,000 species of insects.



CALIFORNIA POPPIES

"IF PURE GOLD WERE LIQUID AND COULD RAISE A CREAM, THAT GOLDEN CREAM MIGHT BE LIKE THE COLOR OF THE POPPIES."

— JOHN STEINBECK, *EAST OF EDEN*

66

FEET TALL

TWO CALIFORNIA FAN PALMS AT THE SOUTHWEST CORNER OF SACRAMENTO'S CAPITOL PARK HOLD THE NATIONAL TITLE FOR LARGEST TREES OF THEIR SPECIES. (2016)



GO LOCAL

LOCALLY NATIVE PLANTS ARE ADAPTED TO THE SOIL AND MICROCLIMATE CONDITIONS SPECIFIC TO YOUR REGION.

65%

OF WATER USE

AMONG SACRAMENTO AREA RESIDENTS GOES TO IRRIGATE YARDS. (2015)



6,000 PLANTS

THAT ARE SPECIES, SUBSPECIES AND VARIETIES NATIVE TO CALIFORNIA.



SOURCES: California Native Plant Society; University of California Agriculture and Natural Resources

WHAT YOU TOSS AS GARBAGE CAN SAVE YOU MONEY AND MAKE YOUR GARDEN HEALTHIER

GOOD COMPOSTING MATERIALS:

- * VEGETABLE AND FRUIT WASTES, EGGSHELLS
- * COFFEE GROUNDS, TEA BAGS
- * SHREDDED PAPER, CARDBOARD
- * YARD CLIPPINGS, FLOWERS
- * CHOPPED WOODY PRUNINGS
- * DRY LEAVES, PINE NEEDLES

BACKYARD COMPOSTING

Converting green wastes to garden soil helps plants and the environment

WHY COMPOST?

Composting saves resources and produces healthy soil for plants.

1 CONSERVATION • Turning green wastes into a gardening product conserves landfill space and reduces the need for commercial soil conditioners and fertilizers.

2 RETENTION • Compost improves the structure and texture of the soil so it can better retain nutrients, moisture and air for the betterment of plants.

3 ADDITION • Compost adds growth-promoting bugs and nutrients, including secondary and trace elements essential for plant health.



MULTIUSE

COMPOST CAN BE USED AS MULCH, TOP DRESSING, SOIL AMENDMENT OR AS AN ORGANIC FERTILIZER.

ZERO

WASTE

SAN FRANCISCO AIMS TO SEND ZERO WASTE TO DUMPS BY 2020, DIVERTING DISCARDS THROUGH COMPOSTING, RECYCLING AND OTHER MEANS.

25%

OF U.S. THROWAWAYS

ARE FOOD AND YARD WASTE.



FREE LABOR

BACTERIA, FUNGI, ANTS AND OTHER BUGS BREAK DOWN THE COMPOST MATERIAL.



25,000

BUGS

AEROBIC BACTERIA, THE BIGGEST PLAYERS IN COMPOSTING, ARE ALSO THE TINIEST — TAKING THIS MANY OF THEM LAID END TO END TO MAKE AN INCH.



VALLEY FARMERS AND WILDLIFE STEWARDS MANAGE
FIELDS TO FEED WINTERING WATERBIRDS



BIRDS ON THE PACIFIC FLYWAY:

- * DUCKS
- * SHOREBIRDS
- * SEABIRDS
- * GEESE
- * WADING BIRDS
- * SWANS
- * SONGBIRDS

PACIFIC FLYWAY

Millions of migratory birds rely on Central Valley stopovers

STOPOVERS Migratory waterbirds that winter in the Valley rely mostly on three types of managed habitat to rest and eat:

- 1 FIELDS** • Rice farmers flood up to 350,000 acres after harvest each winter to decompose the remaining rice straw. This provides a buffet of aquatic bugs and leftover grain for waterbirds.
- 2 CORN FIELDS** • Corn growers in the Sacramento-San Joaquin Delta similarly flood their harvested fields in the winter, providing about 40,000 acres of important habitat for wintering waterbirds, particularly sandhill cranes.
- 3 WETLANDS** • Managers of state and federal wildlife refuges provide nearly 27,000 acres of seasonal wetlands that are flooded in the fall, while privately managed wetlands such as duck clubs provide another 43,000 acres.



AMERICAN PACIFIC FLYWAY

SPANS 4,000 MILES FROM THE ARCTIC TO MEXICO AND 1,000 MILES EAST TO THE ROCKY MOUNTAINS.

95%

WETLANDS LOST

YET THE CENTRAL VALLEY STILL HOSTS SOME OF THE WORLD'S LARGEST POPULATIONS OF WINTERING BIRDS.



SEE THE LONGNECKS

THE COSUMNES RIVER PRESERVE NEAR SACRAMENTO HOSTS CRANES AND TUNDRA SWANS.

60%

OF FOOD SOURCE

SACRAMENTO VALLEY WATERBIRDS FEAST MOSTLY ON FLOODED RICE FIELDS.



230 SPECIES

DEPEND ON SACRAMENTO VALLEY'S MANAGED WETLANDS. SEVERAL ARE ON THE EDGE OF EXTINCTION.



AS SOLAR USE INCREASES, THE ECONOMIC AND ENVIRONMENTAL GAINS BECOME SIGNIFICANT

USES OF SOLAR ENERGY:

- * DRYING CLOTHES
- * COOKING
- * DEHYDRATING FRUIT
- * HARVESTING SALT
- * HARVESTING WATER FROM PLANTS
- * CONVERSION INTO ELECTRICITY

GOING SOLAR AT HOME

Rooftop systems provide multiple benefits over long term

BENEFITS In sunny California, rooftop solar panels can be a good investment, offering substantial long-term benefits in at least three ways:

1 ECONOMIC • Using your solar power, rather than the utility's, greatly lowers your electric bills and acts as a hedge against rate hikes. Buyers of solar systems enjoy a 30% federal income tax credit plus incentives offered at the utility, local and state levels. (2016)

2 PERSONAL • Homeowners enjoy the satisfaction of producing their own power, lowering their carbon footprint and seeing negative balances on their electric bills.

3 ENVIRONMENTAL • Solar energy is a renewable alternative to fossil-fuel power plants that emit air pollutants, including global warming gases.



PAYBACK

HOUSEHOLDS WITH CURRENTLY HIGH ELECTRIC BILLS SEE A RETURN ON THEIR SOLAR INVESTMENT IN 7-10 YEARS, WHILE THOSE WITH LOW BILLS TYPICALLY HAVE A 20-PLUS YEAR PAYBACK. (2016)

\$3.06

PER WATT

AVERAGE PRICE OF AN INSTALLED ROOFTOP SOLAR ENERGY SYSTEM IN 2015, COMPARED WITH \$5.46/WATT IN 2009.



NET METERING

CALIFORNIA REQUIRES MANY UTILITIES TO OFFER "NET METERING," CREDITING CUSTOMERS FOR ELECTRICITY THEY PRODUCE BUT DO NOT USE.

188

SUNNY DAYS/YR

SACRAMENTO IS AMONG THE 10 SUNNIEST URBAN AREAS IN THE U.S.



502,000

SOLAR ROOFS

INSTALLED ON CALIFORNIA HOMES AND BUSINESSES FROM 2008 THROUGH 2015.



SOURCES: California Energy Commission; U.S. Department of Energy; California Public Utilities Commission; Sacramento Municipal Utility District

LIVING AND EATING THE HEALTHFUL MEDITERRANEAN WAY IN CALIFORNIA



CALIFORNIA SPECIALIZES IN GROWING MEDITERRANEAN FRUITS AND NUTS:

- * ALMONDS
- * GRAPES
- * PISTACHIOS
- * APRICOTS
- * MANDARINS
- * POMEGRANATES
- * FIGS
- * OLIVES
- * WALNUTS

CALIFORNIA MEDITERRANEAN DIET

Eating plan promotes good health with locally grown foods

MEDITERRANEAN DIET

Eating the traditional Mediterranean meals reduces the risk of heart disease. The diet stresses frequent physical and social activity and consists of these types of foods in these amounts:

- 1 HIGH** • Fruits, nuts, vegetables and whole grains – daily. Replace butter with monounsaturated fats, ideally extra virgin olive oil.
- 2 MODERATE** • Seafood at least twice weekly. Yogurt and small amounts of traditional cheeses. Eggs and poultry occasionally. For those who drink, wine in moderation.
- 3 LOW** • Red meat, processed meats and sweets. For dessert, eat fresh fruit.



MEDITERRANEAN CLIMATE

MUCH OF CALIFORNIA HAS A MEDITERRANEAN CLIMATE, WITH WARM TO HOT, DRY SUMMERS AND MILD, MODERATELY WET WINTERS.

166
POUNDS

WEIGHT OF AVERAGE U.S. MALE IN 1960; TODAY IT'S 195 LBS. WOMEN HAVE GONE FROM 140 TO 166 LBS.

FIVE

MEDITERRANEAN REGIONS IN WORLD

PARTS OF CALIFORNIA, AUSTRALIA, CHILE, SOUTH AFRICA AND COUNTRIES IN THE MEDITERRANEAN.



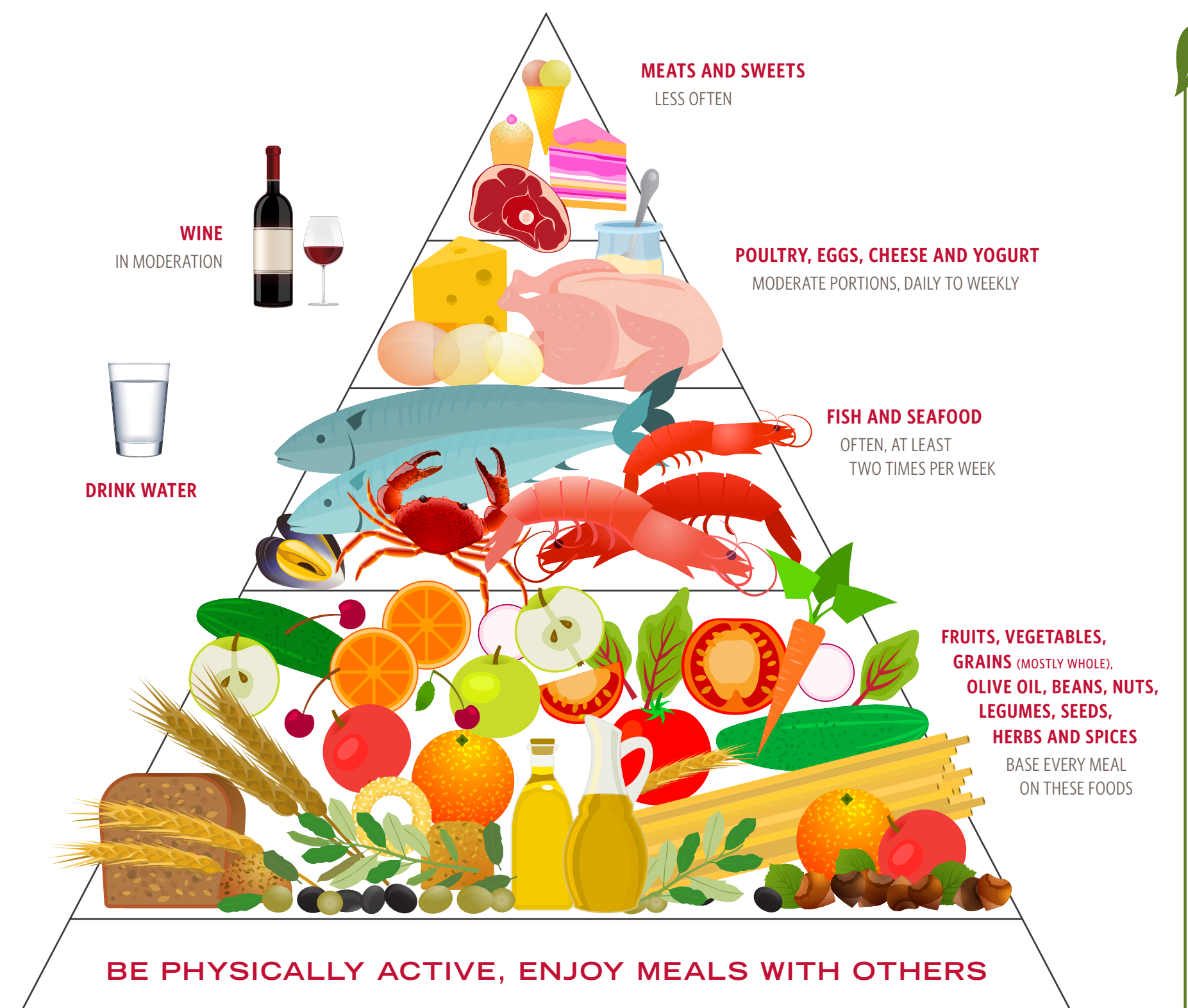
LOCALLY GROWN

EATING FRESH VEGETABLES AND FRUITS GROWN CLOSE TO HOME MAXIMIZES THE NUTRITION YOU GET OUT OF THEM.



8,476
FARMERS MARKETS IN U.S.

THIS 2015 FIGURE REPRESENTS A NEARLY FOURFOLD INCREASE OVER 20 YEARS.



SOURCES: California Department of Food and Agriculture; Harvard School of Public Health; Mayo Clinic; Oldways Preservation and Exchange Trust; National Center for Health Statistics; U.S. Department of Agriculture