



Rethinking Managed Landscapes

JODIE COOK, ASLA
WWLP, QWEL, SITES AP





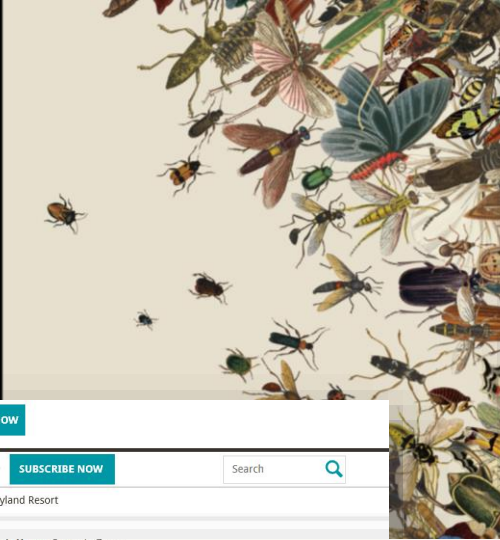
**82% OF ORANGE COUNTY RESIDENTS
LIVE IN AN HOA**

**HOA COMMUNITIES CAN BENEFIT IN
MANY WAYS FROM A SUSTAINABLE
APPROACH**

**...IN FACT THE BENEFITS EXTEND FAR
BEYOND YOUR COMMUNITY**

FEATURE The Insect Apocalypse Is Here

What does it mean for the rest of life on Earth?



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TRENDING: Best of OC Tyler Skaggs investigation Videos show cat's death Gropers at large Disneyland Resort

NEWS LOCAL NEWS

Dirty work: How to fix Aliso Creek



Today's Hours: 8 a.m. to 7 p.m.

SMITHSONIAN'S NATIONAL ZOO & CONSERVATION BIOLOGY INSTITUTE

VISIT ANIMALS SUPPORT MEMBERSHIP EDUCATION CONSERVATION

Newsroom / New Smithsonian Study Links Declines in Suburban Backyard Birds to Presence of Nonnative Plants

New Smithsonian Study Links Declines in Suburban Backyard Birds to Presence of Nonnative Plants

Findings Give Landowners a Simple Road Map to Provide Essential Habitat for Breeding Birds

Oct. 22, 2018



Home & Garden • Perspective

Whether or not Roundup is safe, the gardener has better options

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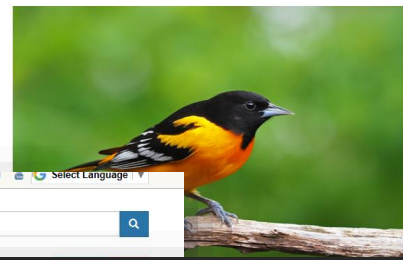
SCIENTIFIC AMERICAN

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Silent Skies: Billions of North American Birds Have Vanished

Though waterfowl and raptor populations have made recoveries, bird populations have declined since 1970 across nearly all habitats

By Jim Daley on September 19, 2019



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A neonicotinoid insecticide reduces fueling and delays migration in songbirds

Margaret L. Eng¹, Bridget J. M. Stutchbury², Christy A. Morrissey^{3,4,*}
+ See all authors and affiliations

Science 13 Sep 2019;
Vol. 365, Issue 6458, pp. 1177-1180
DOI: 10.1126/science.aaa9419

Article Figures & Data Info & Metrics eLetters PDF

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Hazardous delays

Neonicotinoids are a widely used group of pesticides that have been shown to have negative impacts on an increasing number of species, most notably pollinators. Eng *et al.* tested how exposure to these compounds influenced the behavior of a migrating songbird. Ingestion of field-realistic levels of neonicotinoids reduced the mass and fat stores, which in turn reduced migration survival potential to impose population-level effects.

Science, this issue p. 1177

Abstract

Neonicotinoids are neurotoxic and have been shown to affect the migratory movements of imidacloprid-exposed songbirds. We tested the effects of experimental dosing and a field-realistic level of imidacloprid (1.2 or 3.9 milligrams per liter of water) on the migratory movements of imidacloprid-exposed songbirds.



An aerial photograph of a densely populated, hilly residential area. The terrain is rugged and hilly, with numerous winding roads and clusters of houses. A semi-transparent blue box is overlaid on the center of the image, containing the title text in yellow. The overall scene depicts a complex relationship between urban development and natural topography.

ALTERED RELATIONSHIP BETWEEN SOIL AND WATER

DRAINED AWAY



H2O for HOAs - 2019

AND SPED UP





A MICRO WATERSHED...





‘Continuously reducing landscape water use beyond levels of efficiency can harm other landscape functions, like providing habitat, healthy soil, quality of life benefits, tree health, and storm water management.’

- Jay Lund, Center for Watershed Sciences
University of California, Davis



Plants Make Rain

Conventional v.s. Sustainable

NOT THAT!

DO THIS!

Conventional

v.s.

Sustainable



NOT THAT!



DO THIS!

Large and small
expanses of unused
lawn

Lawn is minimized to
useful areas and cared
for sustainably

Conventional

v.s. Sustainable



NOT THAT!

Plants are chosen for visual appeal, planted in masses of a single species



DO THIS!

Plants chosen for ecosystem services, diversity, and aesthetics
(no monocultures)

Sustainable

v.s.

Conventional

DO THIS!

Pests managed by IPM,
weeds controlled first by
cultural practices, living
soil supports plant
health

NOT THAT!

Regular pesticide,
fertilizer, herbicide,
fungicide use

Sustainable

v.s.

Conventional

DO THIS!

Uses native and site-adapted plants, reflecting place

NOT THAT!

Uses standard plant palette of non-natives typical for similar local or global regions

Conventional

v.s. Sustainable



NOT THAT!



DO THIS!

Quickly conveys
stormwater offsite

Relies on rainfall,
captures, infiltrates,
stores for re-use

Conventional

v.

Sustainable

Designed without regard for surrounding areas

Uses standard plant palette of non-natives typical for similar local or global regions

Plants are only chosen for aesthetics and planted in monocultures

Design is sensitive to surrounding **ecosystems**, quality of life for future generations

Uses **native and site-adapted plants** reflecting place

Plants chosen for ecosystem services, **diversity, and aesthetics**

Conventional

v.

Sustainable

Most or all shrubs pruned multiple times per year

Quickly conveys stormwater offsite

Maintenance varies by location, pruning uses a **variety of styles**

Relies on rainfall, captures, **infiltrates**, stores for re-use

Conventional v. Sustainable

On-site plant debris removed

Regular pesticide, fertilizer, herbicide use

Large and small expanses of unused lawn

On-site plant debris **composted** and reused

Pests managed by IPM, weeds controlled **first by cultural practices, living soil** supports plant health

Lawn is **minimized** to useful areas and cared for sustainably

WHAT IS CONTOURING FOR RAIN? WHAT IS A SWALE?

Your green space is a prescribed swale. This is an area that is slightly graded so that rain water can infiltrate the soil from the landscape surface at the source.

Don't think of contouring as just the sides of the swales, but it will still function.

The purpose of a swale is to allow so that storm water to pass through as you can see. Water allowed to run off our landscapes and down our streets to the ocean means you are not using the water. Most city governments are the only way to reduce our water pollution, so we have to be creative.

A: Rain Garden (planted)



B: Dry Creekbed (rocks and pebbles)



C: Rain Garden on Slope

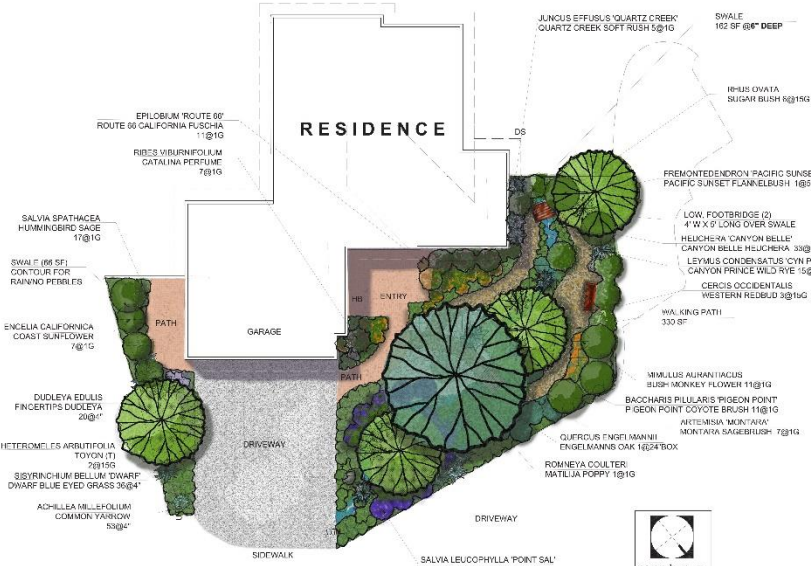


Swales and Rain Gardens are designed to infiltrate water within 48 hours or less. As these plants grow, their roots from the swale may not be as visible but will still function to infiltrate rain and eliminate runoff.

Swales are always designed to direct high stormwater flows toward existing drains.

Plant List:

*Please refer to plants to ensure you are using a plant with similar size, growth habit and water requirements.



California Native Garden Congratulations! You are about to embark upon a fun, rewarding and ultimately important journey. The conservation of your lawn to a sustainable native garden. You are now part of a growing community of homeowners and garden lovers embracing a sense of place to the front and backyards of urban and suburban southern California. Welcome home.

ADDING PERSONALITY TO YOUR GARDEN:

All Your Garden Dreams... you will want to add personality and your own creative touch to your garden. Use the tools to experiment with containers, textures, colors and other tools to add your own unique touch to your garden. While the elements are not included in the plan, they are all easily available throughout southern California nurseries.



Partner With Nature! Invest in rain barrels or a cistern to save in your garden also so we need to care native plants to use. Consider incorporating these elements of sustainability into your garden.



RAIN WATER CAPTURE, RAIN CHAINS and SWALES



THE PLANT NURSERY
CALIFORNIA NATIVE PLANTS

My Avant Garden
CALIFORNIA NATIVE PLANTS

moulton niguel water district

Coastal Zone Garden - Laguna Niguel, CA
Full Sun/Part Shade/Full Shade in Sunset Zones 22, 24

This garden is designed to thrive in Southern California communities where the typical coastal influence is not felt on a daily basis. This garden will feature great diversity in plant types and seasonal flowers, all of which will attract birds, butterflies, hummingbirds and beneficial pollinators. It will be completely drought tolerant and self-sustaining once established. This garden embraces the essence of our Southern California look with boulders, a pea gravel swale and contouring the land to allow rainwater to replenish the soil.

Your new garden will offer many possibilities for future fine tuning as you add more details and personality into the design. There are dozens of wonderful plants that can be used in containers and in the garden to complement in this basic intermediate design and we encourage you to include more variety as your garden matures.

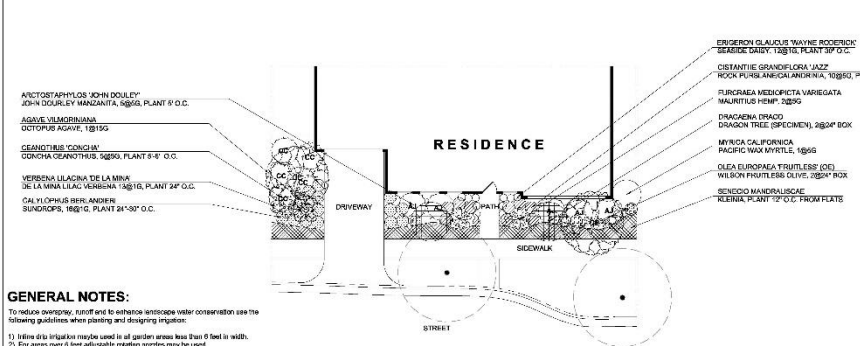
Josie Cook
LANDSCAPE DESIGN

YOUR HOMEOWNERS ARE MAKING SUSTAINABLE CHOICES

Type	Botanical Name	Common Name	Water Use
S	Agave attenuata	Century agave	Very Low
S	Agave ssp. (CA native and non-native)	agave	Low
N	Arctostaphylos 'Candy Heart'	John Dourley manzanita	Low
P	Callitriche ssp. and cvs. (some spp. changed to Callitriche)	rock juncos	Very Low
P	Callitriche lanceolata	rock juncos	Very Low
NA	Callitriche ssp. and cvs. (some spp. changed to Callitriche)	rock juncos	Very Low
NA	Callitriche ssp. and cvs. (some spp. changed to Callitriche)	rock juncos	Very Low
T	Conoclinium 'Coralia'	Concho ceanothus	Low
T	Conoclinium ssp.	Concho ceanothus	Low
NA	Erigeron 'Wayne Woodcock'	Wayne Woodcock daisy	Low
S	Furcraea ssp.	Wayne Woodcock daisy	Low
S	Montia californica (Ruyca californica)	Pacific wax myrtle	Low
T	Onoclasma	fern	Low
CP	Quercus macrocarpa (Q. macrocarpa)	oak	Low
P	Veronica filiformis (V. filiformis)	filiformis	Low

Categories of Water Needs

Category	Abbreviation	Percentage of FT.
High	H	73-99
Moderate/High	MH	43-69
Low	L	13-29
Very Low	VL	< 13



GENERAL NOTES:

- To reduce overwatering, runoff and to enhance landscape water conservation use the following guidelines when planting and designing irrigation:
 - 1) Irrigate in the morning.
 - 2) For areas over 1 foot adjustable rotating nozzles may be used.
 - 3) Mulch around and under plants (height the drip cover area to cover. Plant with covers 1" above grade to discourage water sitting at base of plants and to direct moisture toward root zone. Plant to discourage soil wetting of plants into a depression. Plant covers must remain slightly above ground surface.
 - 4) Mulch all garden beds with 2" small to medium bark mulch.
 - 5) Soil amendment (compost) is used to increase soil organic matter, use no more than 20 per cent compost to native soils.



PLANTING TECHNIQUE FOR NATIVE AND MEDITERRANEAN PLANTS (USED WITH PERMISSION: Tree of Life Nursery)

Mediterranean Planting Concept 2 California-Friendly/Native

TREES



SHRUBS

FLOWERING

TREES



SHRUBS



FLOWERING



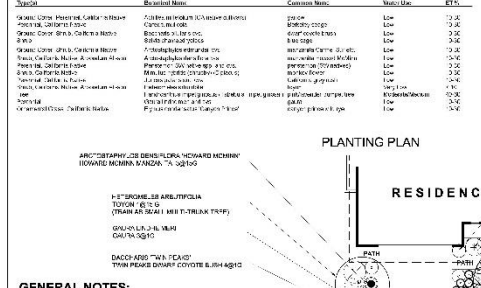
ACCENTS



GROUNDCOVER



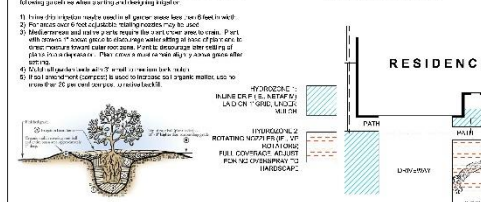
PLANTING PLAN



GENERAL NOTES:

- The plan is intended to provide a general concept of a water saving landscape. Landscape water use varies by site conditions. Site conditions may vary from those shown and the plan is not intended to be a final design. The plan is intended to be a general concept of a water saving landscape. Landscape water use varies by site conditions. Site conditions may vary from those shown and the plan is not intended to be a final design. The plan is intended to be a general concept of a water saving landscape. Landscape water use varies by site conditions. Site conditions may vary from those shown and the plan is not intended to be a final design.

HYDROZONE PLAN



PLANTING CONCEPT FOR NATIVE AND MEDITERRANEAN PLANTS (USED WITH PERMISSION: Tree of Life Nursery)

NOTE: THIS IS A CONCEPT PLAN. Many factors will affect the final design. The plan is intended to be a general concept of a water saving landscape. Landscape water use varies by site conditions. Site conditions may vary from those shown and the plan is not intended to be a final design.

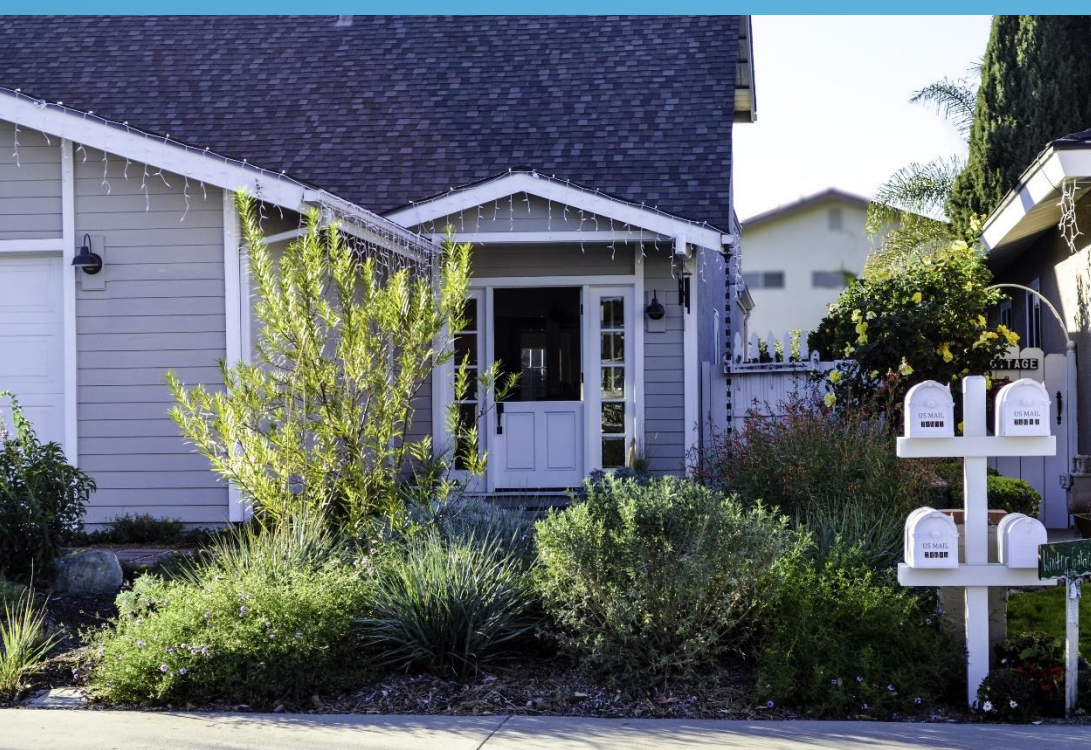
DATE: August 2019
 DRAWN BY: J. COOK
 SCALE: 1/8" = 1'-0"



California Friendly Planting - Pt. Sun



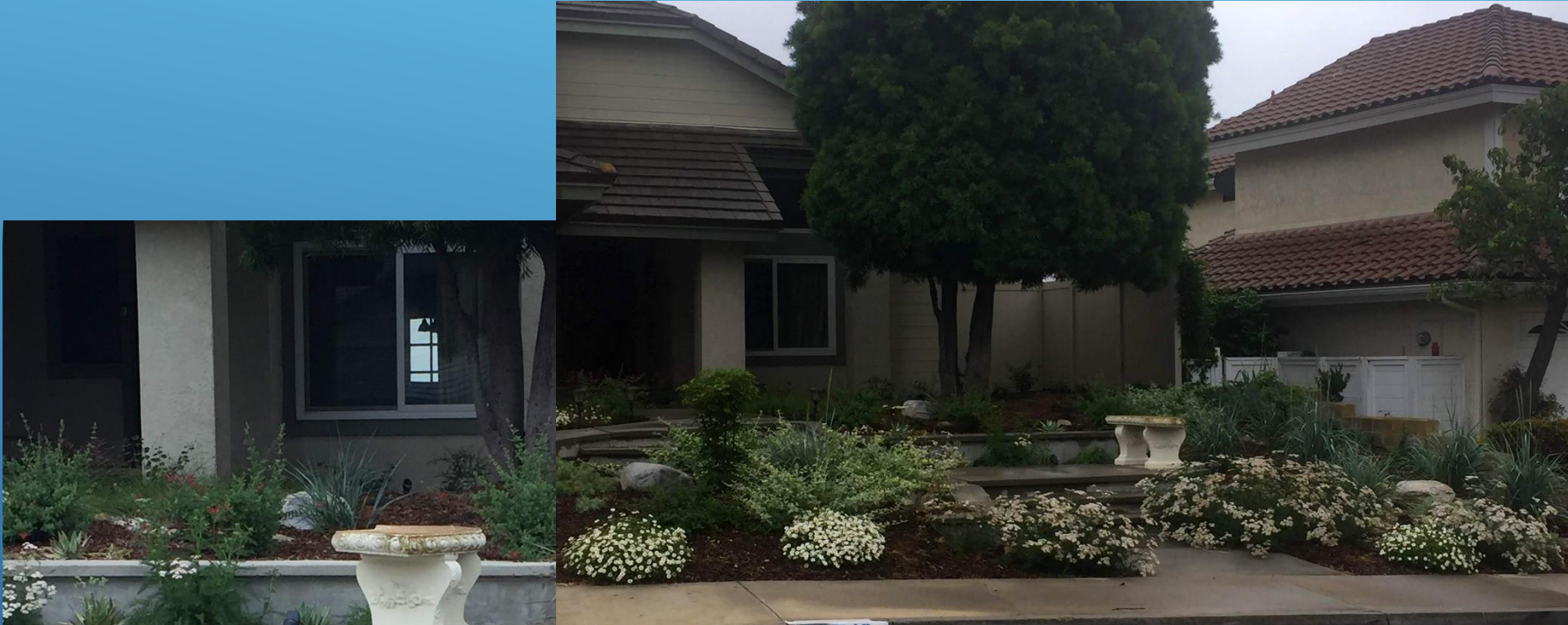
'CONVENTIONAL' YARDS OF ORANGE COUNTY



THE NEW FRONT YARD!

BEFORE





AFTER
90 DAYS







BEFORE



Quick Tips for HOAs



✓ Renovate plantings in a local context



✓ Hydrozone effectively

✓ Replace unused lawn areas with plants with strong aesthetic performance AND ecosystem services

Practical Tips for HOAs



✓ Make a monthly irrigation audit of all zones part of maintenance

✓ Map all new plants to soil, climate and hydrozone conditions for success

✓ Use ecological design principles

Thank you!

