



Spring Garden Maintenance / Mantenimiento del jardín en la primavera

Geneva Gondak, EBMUD

Water Conservation Representative



Rolando Gonzalez, EBMUD

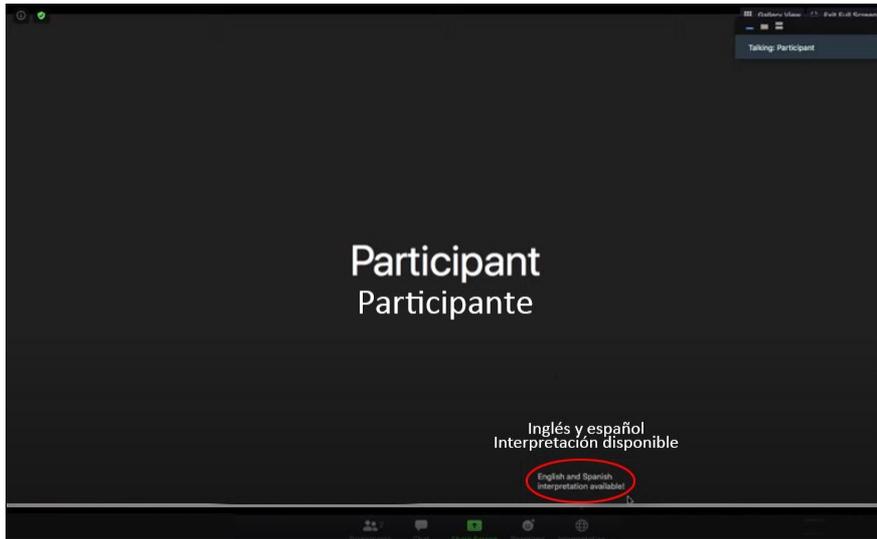
Water Conservation Representative



**Suzanne Bontempo,
Our Water Our World**

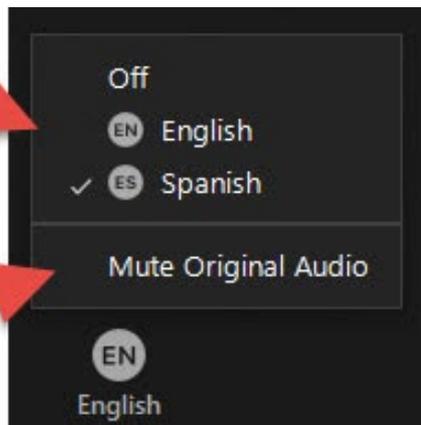
Program Manager

Español o Inglés



Si desea escuchar la presentación en español, seleccione y haga clic en el botón del lenguaje en la quiere oír la lección.

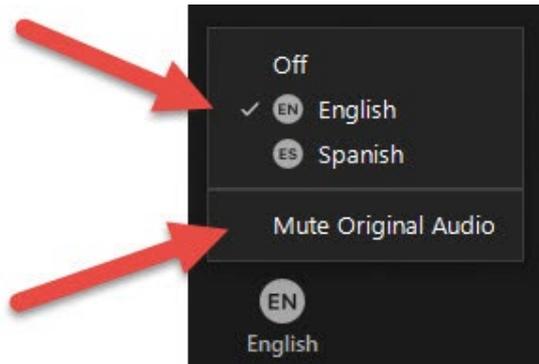
Luego seleccione “Spanish” (Español)



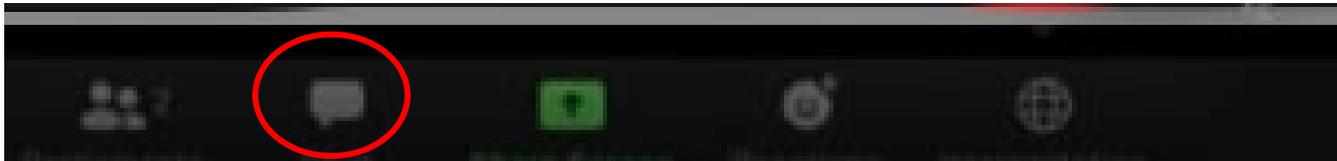
Si selecciona español, escuchará al intérprete como orador principal, pero escuchará al presentador en inglés en el fondo a un volumen más bajo.

Si solo desea escuchar en español, haga clic en el botón “Mute Original Audio” (Silenciar audio original) y solo escuchara en español.

Español o Inglés



Si no elige un idioma, automáticamente se escuchara la presentación en inglés.



Si desea hacer una pregunta, escríbala en el chat y el intérprete hará la pregunta.

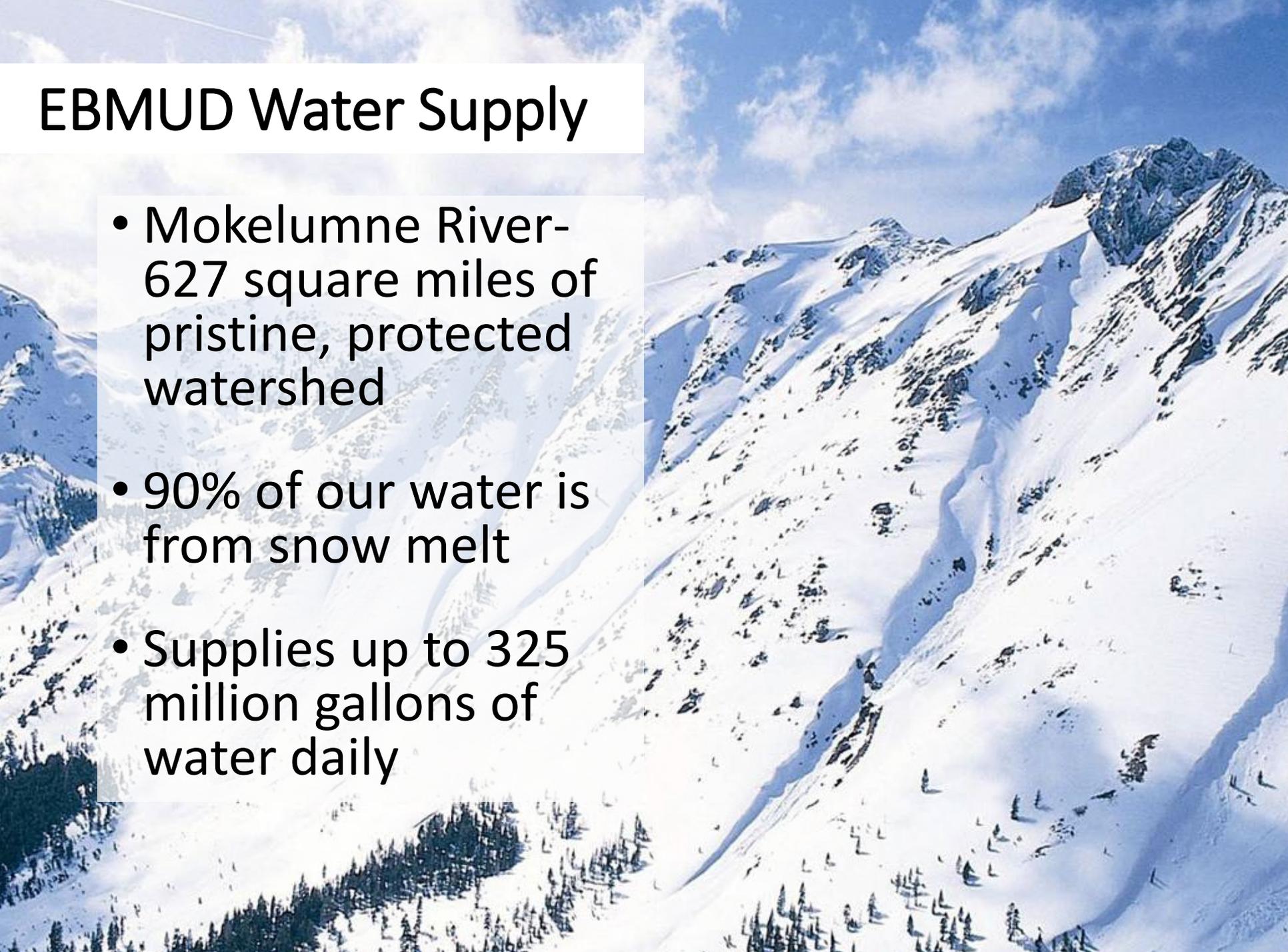


Overview

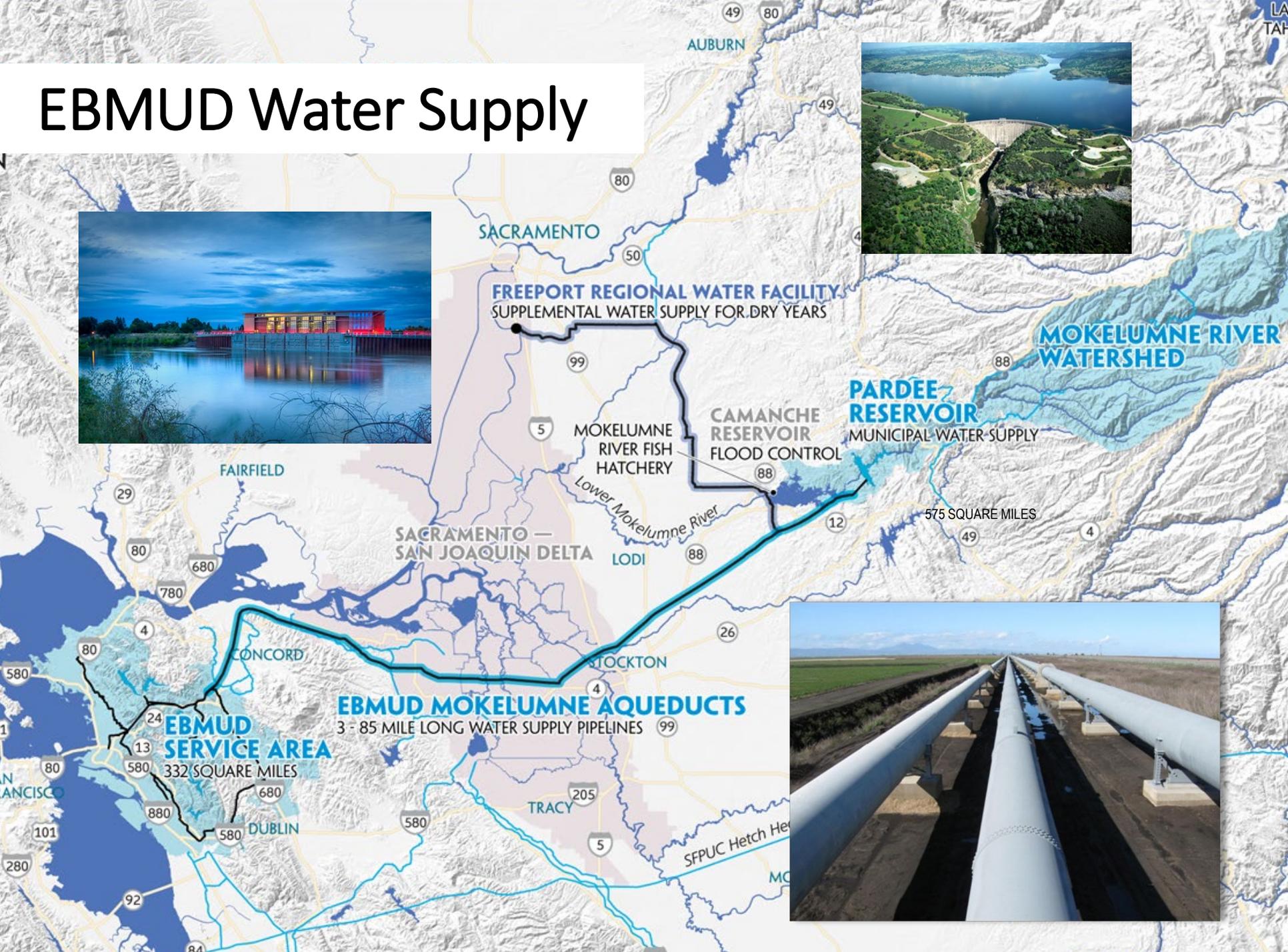
1. EBMUD water supply & drought update
2. Spring garden maintenance
3. EBMUD rebates and mulch coupons
4. Questions!
5. Upcoming events

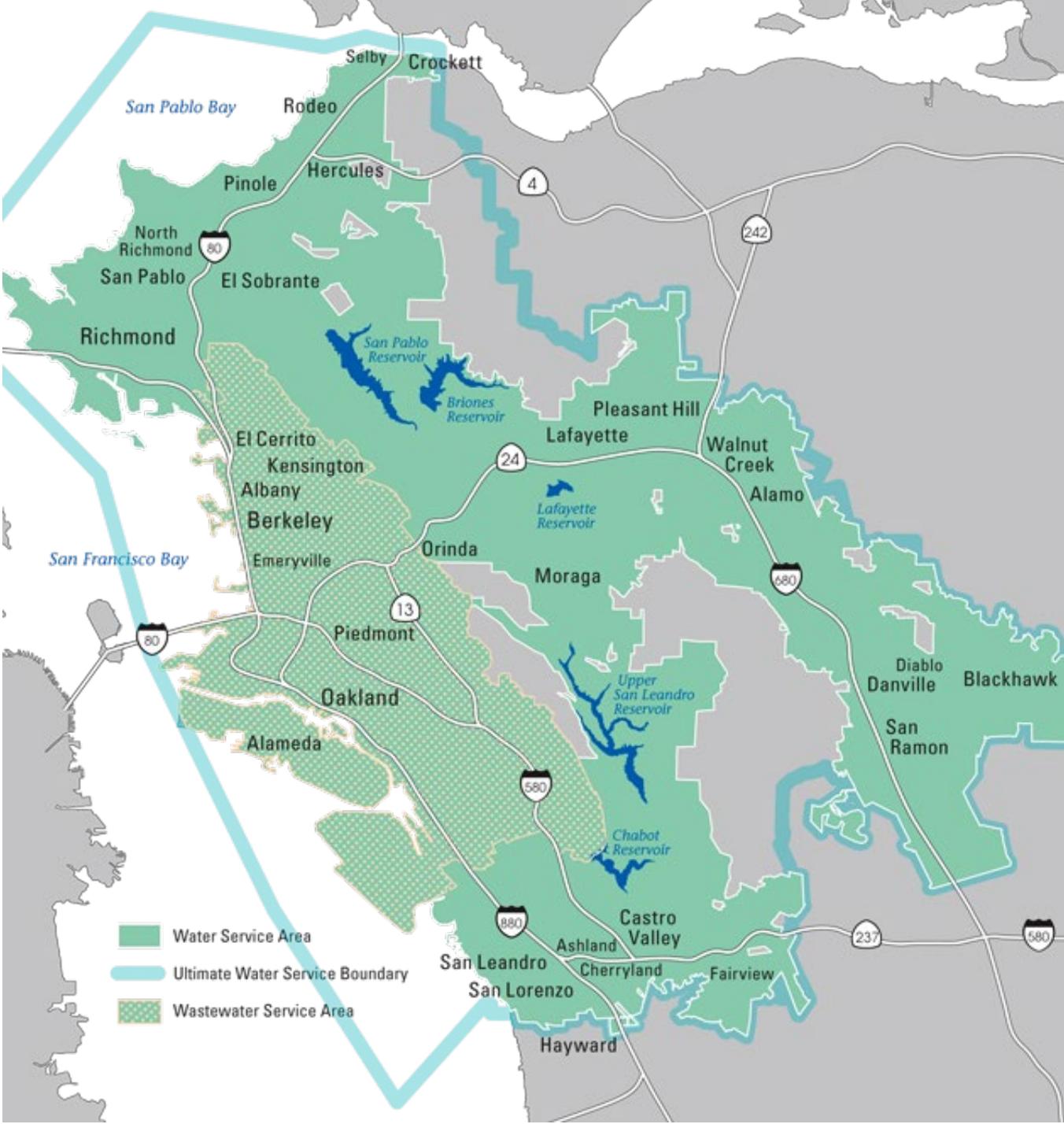
EBMUD Water Supply

- Mokelumne River-
627 square miles of
pristine, protected
watershed
- 90% of our water is
from snow melt
- Supplies up to 325
million gallons of
water daily



EBMUD Water Supply



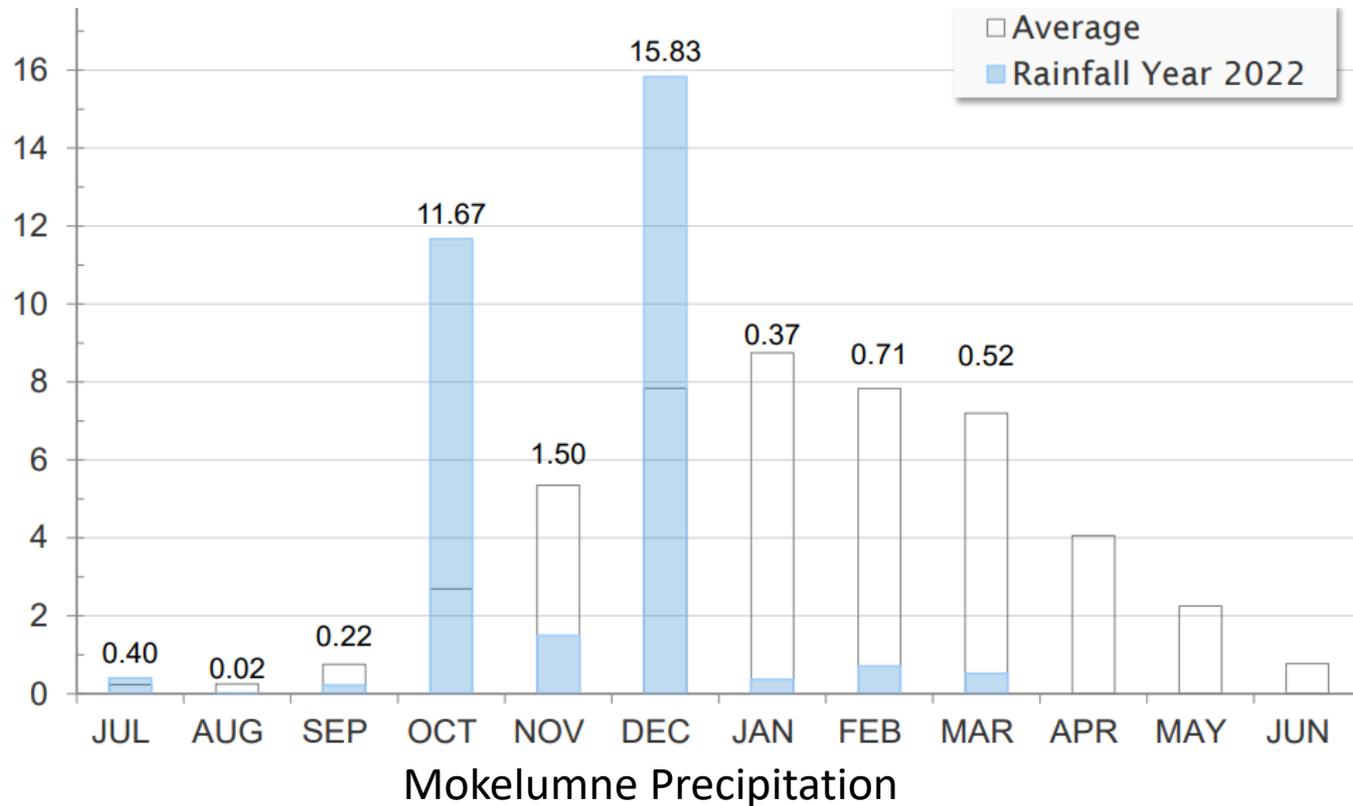


EBMUD Water and Wastewater Service Areas

- 1.4 million water customers
- 740,000 wastewater customers
- > 4,200 miles of pipe
- 400,000+ active water meters

Drought

- EBMUD is currently in a Stage 1 Drought- calling for voluntary 10% reduction.
- Record low precipitation in January & February.



What Can You Do?

- Find and fix leaks
- Install efficient fixtures like showerheads and aerators
- 5-minute showers
- Focus on the landscape!



Our community
is in a drought.

**Thank you for not
wasting water.**





Spring Garden Maintenance / Mantenimiento del jardín en la primavera



Suzanne Bontempo,
Program Manager

Our Water Our World
ourwaterourworld.org

Photo credit: S. Bontempo

Agenda

What we are going to learn...

- Spring gardening tasks
- Adjusting the irrigation for the season
- Compost, mulch & fertilizer
- Keeping weeds in check
- Growing food
- Plants for beneficial insects & pollinators
- EBMUD resources & rebates

We will open for questions at the end.



What is Our Water Our World (OWOW)?



National Award-Winning Program

Partnership with water pollution prevention agencies & retail stores

IPM Educational Program for the public



OurWaterOurWorld.org

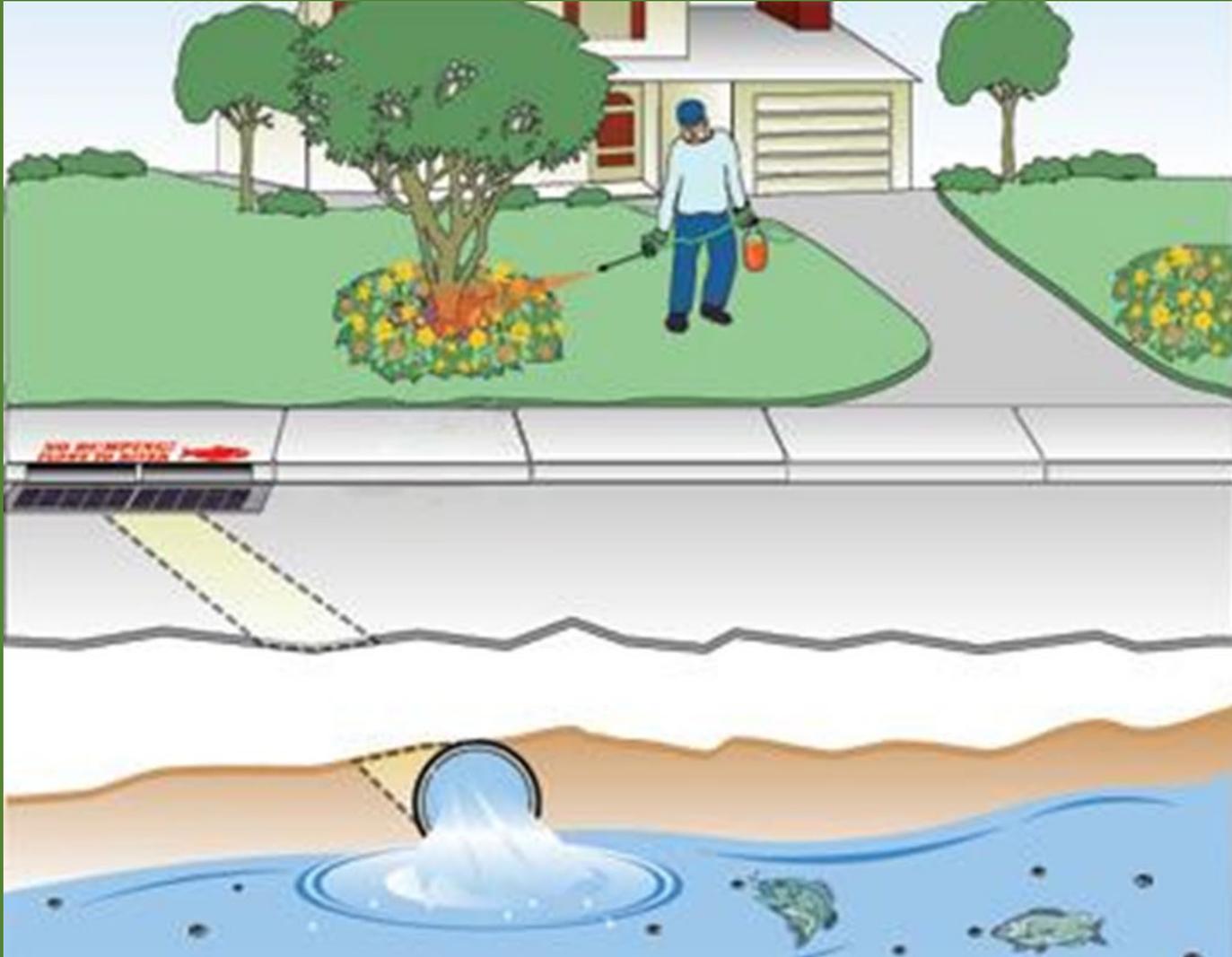


Informacion en Español

ourwaterourworld.org



Runoff from landscapes enters the storm drains, then flows to our local waterways



Integrated Pest Management

- A decision-making process
 - Science-based strategies
 - Looks at the garden as a whole
 - Ask questions:
 - What is the problem?
 - Can we live with it?
- Prevention
 - Identification
 - Action Steps:
 - **Cultural Controls:** bolstering the health of the garden
 - **Mechanical Controls:** traps, barriers, tools
 - **Biological Controls:** beneficial insects & supporting the ecosystem
 - **Chemical Controls:** pesticides, always a last resort



Spring Garden Maintenance

Build healthy soil

Protect root zones with mulch

Feeding with organic fertilizers

Water root zone deeply

Plant climate appropriate plants

Provide healthy garden practices

Invite beneficial insects



Irrigation Systems

- Adjust controllers for the new season
- Switch to drip
- Best time is 4am-6am
- Avoid evening watering



**Adjust run times according to the season
- Not Set It & Forget It -**



Inspect the irrigation system



- Check for leaks or malfunctions
- Adjust emitter placement as plants grow
- Add or remove emitters as needed



Photo credit: S. Bontempo

How often do I need to water?

LAWN & LANDSCAPE WATERING SCHEDULE

SPRINKLER / DRIP TYPE	LAWN			LANDSCAPE								
	Pop-Up/ Fixed-Spray Sprinkler	Impact/ Rotor Sprinkler	Multi- stream/ MP Rotor Sprinkler	Pop-Up/ Fixed-Spray Sprinkler	Impact/ Rotor Sprinkler	Multi- stream/ MP Rotor Sprinkler	Drip Emitters 1 gph 2 per plant 0.3" per hour	Inline Drip 0.6 gph 18" spacing 0.43" per hour	Inline Drip 0.6 gph 12" spacing 0.96" per hour	Inline Drip 0.9 gph 12" spacing 1.42" per hour	High Volume Drip 10 gph 1 per plant 1.5" per hour	Micro-Sprays 20 gph 1 per plant 1.6" per hour
CYCLES	3 cycles	3 cycles	3 cycles	3 cycles	3 cycles	3 cycles	3 cycles	3 cycles	3 cycles	3 cycles	3 cycles	3 cycles
TIMING	3-6 minutes	7-10 minutes	15-20 minutes	3-6 minutes	9-12 minutes	20-24 minutes	30 minutes	20 minutes	10 minutes	6 minutes	6 minutes	5 minutes
JANUARY	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
FEBRUARY	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MARCH	1 day per week	1 day per week	1 day per week	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
APRIL	1-2 days per week	1-2 days per week	1-2 days per week	1 day per week	1 day per week	1 day per week	1 day per week	1 day per week	1 day per week	1 day per week	1 day per week	1 day per week
MAY	2-3 days per week	2-3 days per week	2-3 days per week	1-2 days per week	1-2 days per week	1-2 days per week	1-2 days per week	1-2 days per week	1-2 days per week	1-2 days per week	1-2 days per week	1-2 days per week
JUNE	3-4 days per week	3-4 days per week	3-4 days per week	2 days per week	2 days per week	2 days per week	2 days per week	2 days per week	2 days per week	2 days per week	2 days per week	2 days per week
JULY	3-4 days per week	3-4 days per week	3-4 days per week	2 days per week	2 days per week	2 days per week	2 days per week	2 days per week	2 days per week	2 days per week	2 days per week	2 days per week
AUGUST	3-4 days per week	3-4 days per week	3-4 days per week	2 days per week	2 days per week	2 days per week	2 days per week	2 days per week	2 days per week	2 days per week	2 days per week	2 days per week
SEPTEMBER	3 days per week	3 days per week	3 days per week	1 day per week	1 day per week	1 day per week	1 day per week	1 day per week	1 day per week	1 day per week	1 day per week	1 day per week
OCTOBER	2 days per week	2 days per week	2 days per week	1 day per week	1 day per week	1 day per week	1 day per week	1 day per week	1 day per week	1 day per week	1 day per week	1 day per week
NOVEMBER	1 day per week	1 day per week	1 day per week	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
DECEMBER	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF



¿Con qué frecuencia debo regar?

HORARIO DE RIEGO DE CÉSPED Y JARDINES

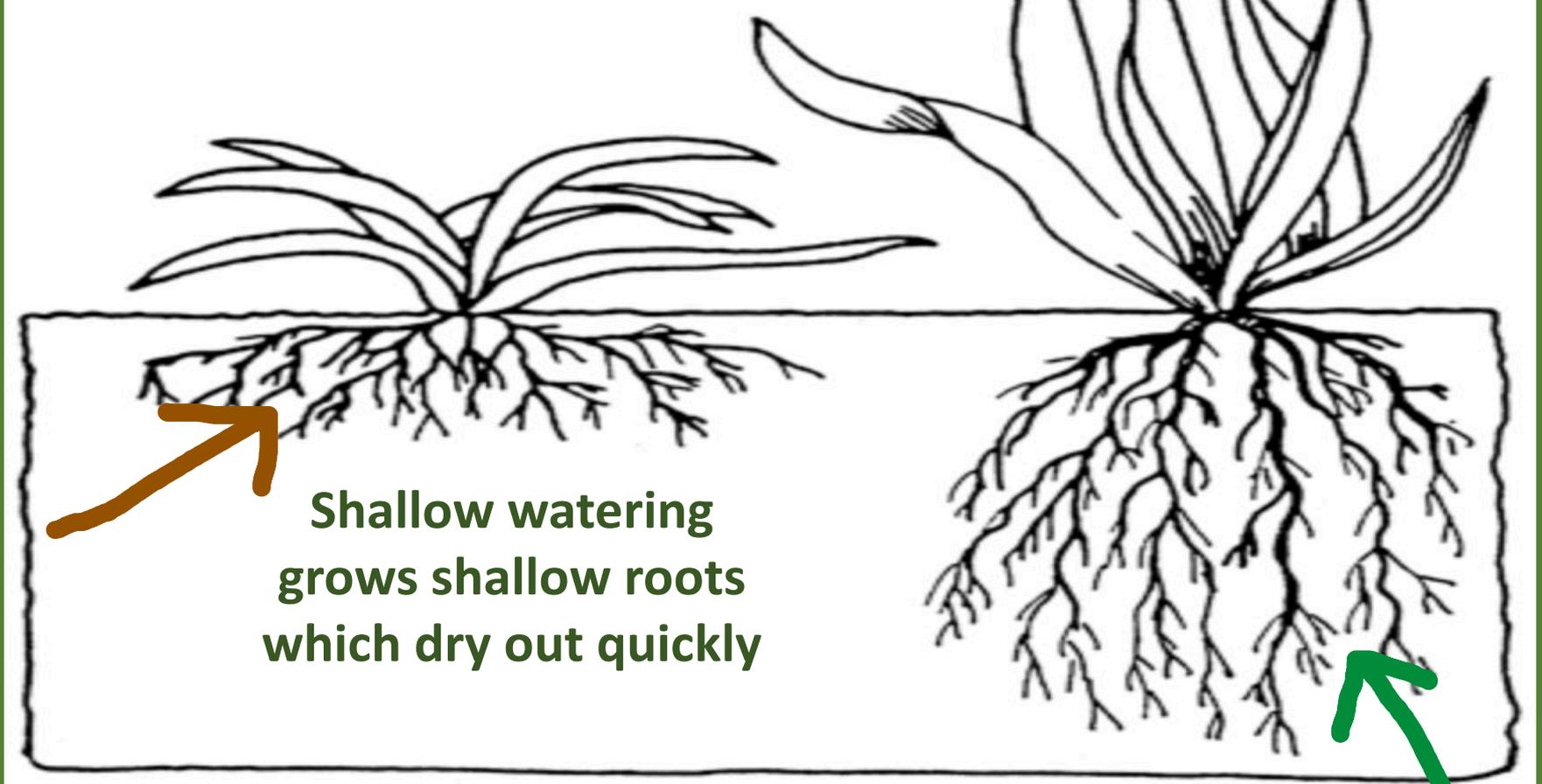
Tipo de Aspersor / Goteo	CESPED			JARDINES								
	Aspersor emergente / Aspersor Fijo	Aspersor de Impacto / de Rotor	Aspersor Multiple de Chorros / Aspersor Rotador MP	Aspersor emergente / Aspersor Fijo	Aspersor de Impacto / de Rotor	Aspersor Multiple de Chorros / Aspersor Rotador MP	Emisores de Goteo 1 gph 2 por planta 0.3" por hora	Goteo en Línea 0.6 gph 18" de espacio 0.43" por hora	Goteo en Línea 0.6 gph 12" de espacio 0.96" por hora	Goteo en Línea 0.9 gph 18" de espacio 1.42" por hora	Goteo de Alto Volumen 10 gph 1 por planta 1.5" por hora	Mini Aspersores 20 gph 1 por planta 1.6" por hora
Ciclos	3 Ciclos	3 Ciclos	3 Ciclos	3 Ciclos	3 Ciclos	3 Ciclos	3 Ciclos	3 Ciclos	3 Ciclos	3 Ciclos	3 Ciclos	3 Ciclos
Tiempo	3 - 6 Minutos	7 - 10 Minutos	15 - 20 Minutos	3 - 6 Minutos	9 - 12 Minutos	20 - 24 Minutos	30 Minutos	20 Minutos	10 Minutos	6 Minutos	6 Minutos	5 Minutos
Enero	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado
Febrero	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado
Marzo	1 día por semana	1 día por semana	1 día por semana	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado
Abril	1 a 2 días por semana	1 a 2 días por semana	1 a 2 días por semana	1 día por semana	1 día por semana	1 día por semana	1 día por semana	1 día por semana	1 día por semana	1 día por semana	1 día por semana	1 día por semana
Mayo	2 a 3 días por semana	2 a 3 días por semana	2 a 3 días por semana	1 a 2 días por semana	1 a 2 días por semana	1 a 2 días por semana	1 a 2 días por semana	1 a 2 días por semana	1 a 2 días por semana	1 a 2 días por semana	1 a 2 días por semana	1 a 2 días por semana
Junio	3 a 4 días por semana	3 a 4 días por semana	3 a 4 días por semana	2 días por semana	2 días por semana	2 días por semana	2 días por semana	2 días por semana	2 días por semana	2 días por semana	2 días por semana	2 días por semana
Julio	3 a 4 días por semana	3 a 4 días por semana	3 a 4 días por semana	2 días por semana	2 días por semana	2 días por semana	2 días por semana	2 días por semana	2 días por semana	2 días por semana	2 días por semana	2 días por semana
Agosto	3 a 4 días por semana	3 a 4 días por semana	3 a 4 días por semana	2 días por semana	2 días por semana	2 días por semana	2 días por semana	2 días por semana	2 días por semana	2 días por semana	2 días por semana	2 días por semana
Septiembre	3 días por semana	3 días por semana	3 días por semana	1 día por semana	1 día por semana	1 día por semana	1 día por semana	1 día por semana	1 día por semana	1 día por semana	1 día por semana	1 día por semana
Octubre	2 días por semana	2 días por semana	2 días por semana	1 día por semana	1 día por semana	1 día por semana	1 día por semana	1 día por semana	1 día por semana	1 día por semana	1 día por semana	1 día por semana
Noviembre	1 día por semana	1 día por semana	1 día por semana	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado
Diciembre	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado	Apagado



Your watering needs depend on:

- The plant type & watering needs once established
- How established the plant is (young plants need water more frequently)
- The texture of your soil: Clay vs. Sandy-Loam
- If there is a layer of mulch covering your soil
- The microclimates of your garden: Sun, shade, wind, heat, and the grade





Shallow watering
grows shallow roots
which dry out quickly

Water to encourage deep roots

Remember to water deeply and infrequently,

NOT shallow and often.



Build Healthy Soil With Compost

Soil shouldn't be an afterthought

- Goal is ~5% organic matter in soil
- Increases water infiltration in soil
- Increases the amount of water that can be stored in the soil
- Increases the plant root's ability to get water & nutrients



Protect Soil With Mulch

(A protective layer of organic material laid on surface of soil beyond zone 1, in accordance with the Cal Fire recommendations)

- Dry soil is hydrophobic, if you add water too quickly it can run off; water slowly and over a longer time
- A layer of mulch will also protect the soil, aid with water infiltration
- Mulch reduces water evaporation significantly
- Mulch keeps to regulate the soil temperatures

(Keep away from plant stems)



Photo credit: S. Bontempo

Organic Rose Fertilizers

- Feeds soil microbes & increases soil health
- Prevents growth spurts that can attract pests
- Slowly releases nutrients in a more natural way
- Won't run-off into local waterways

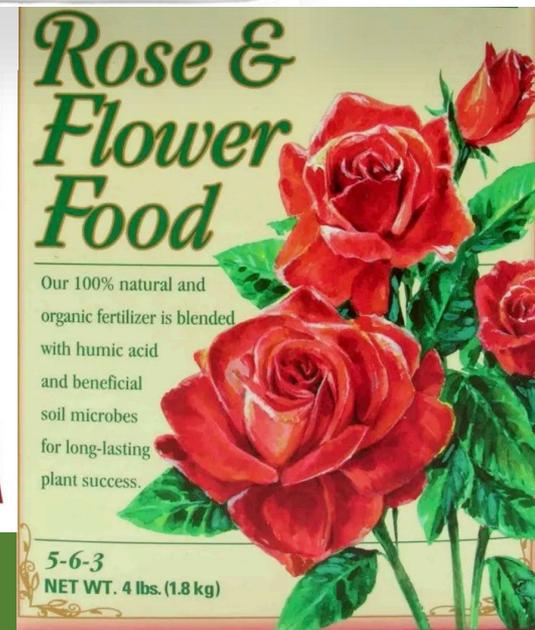
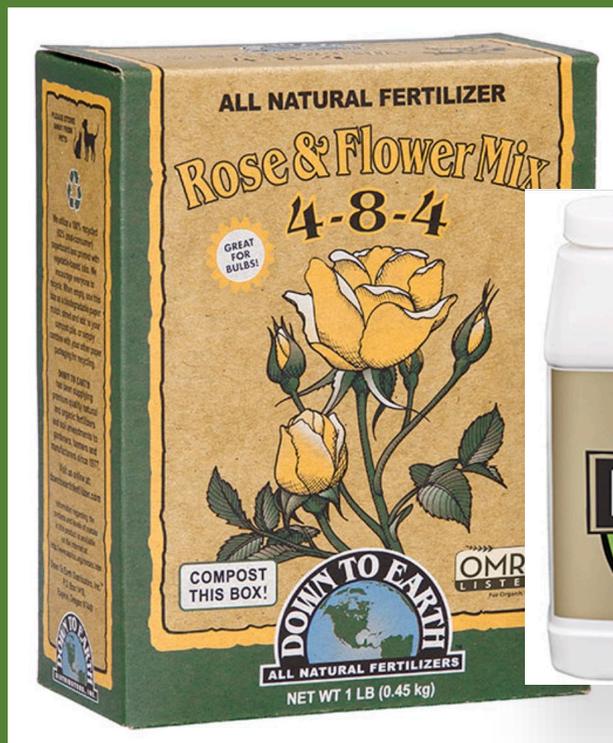




Photo credit: S. Bontempo

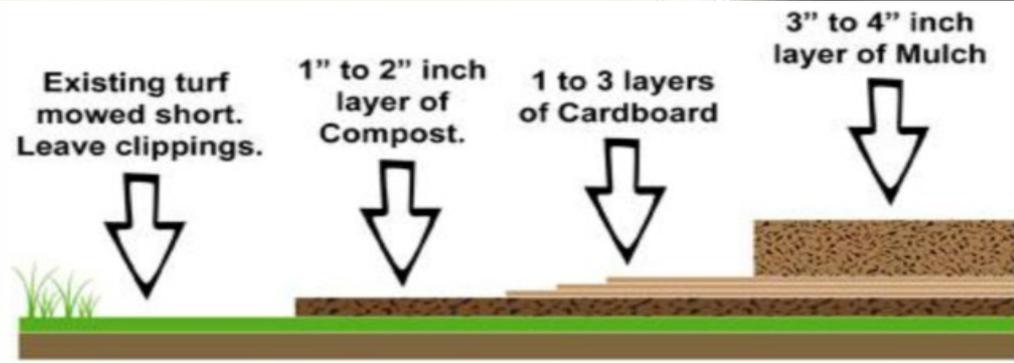
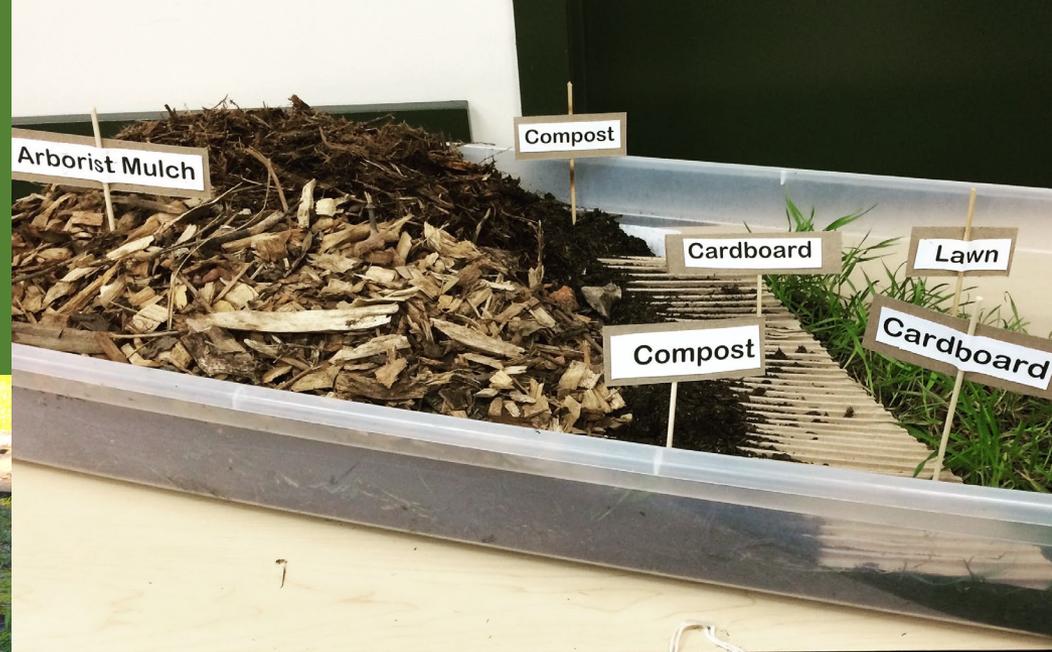


Keep Weeds In Check

- Hand pull weed that have just emerged
- Hoe at the first sight of weeds, when soil is dry
- Mow or trim
- Avoid letting them go to seed



Suppress Weeds With Sheet Mulching



- Leave weeds in place
- Layer cardboard or builder's paper (available at landscape supply stores)
- Top with no less than 3 of mulch, or a combo of compost then mulch





Looking To Grow More Food?

Photo credit: S. Bontempo



Choose Heirloom Varieties

- Ideal for our climate
- Are typically more drought tolerant, water savers

**Heirloom refers to a plant that is open-pollinated, non-GMO, and not hybridized.*

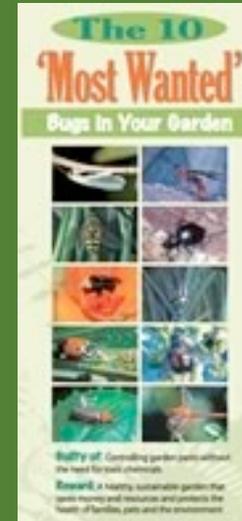
The National Heirloom Expo, Santa Rosa CA

Photo credit: S. Bontempo

Invite Beneficial Insects, Pollinators, Birds, & Garden Allies



Green Lacewing



Beneficial bugs will eat or parasitize pests and pollinate flowers.



Lady Beetle



Soldier Beetle





Photo credit: S. Bontempo

- Flowers that look like a daisy or a sunflower:

- Erigeron
- Gaillardia
- Echinacea
- Cosmos
- Coreopsis
- Calendula
- Aster

- Flowers that grow in clusters of tiny flowers:

- Yarrow
- Sweet Alyssum
- Eriogonum
- Ceanothus
- Lavender
- Oregano
- Agastache
- Mint
- Parsley

- Small & Large tubular flowers:

- Salvias
- Agastache
- Nepeta
- Lupine
- Zinnias
- Dwarf Buddleia
- Grevillea
- Bachelor Buttons
- Bleeding Hearts
- Columbine
- CA Fuchsia
- Lantana
- Bee Balm
- Verbena





Kniphofia



Agastache



Cestrum



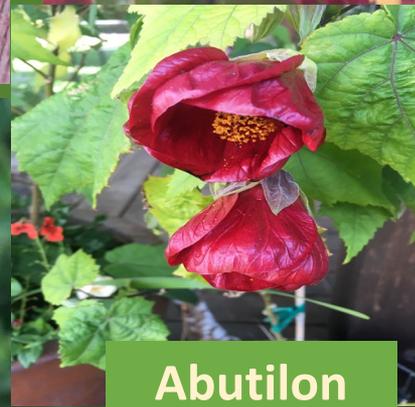
Snapdragon



Coreopsis



Verbena



Abutilon



Scabiosa



Verbena



Tithonia



Habitat Heroes

- Buckwheat (*Eriogonum*)
- Manzanita (*Arctostaphylos*)
- CA native oaks (*Quercus*)
- CA lilac (*Ceanothus*)
- Sages (*Salvia*)
- Culinary herbs

Proper Pest Identification Is Essential

- Identify the pest
 - Over 90% of the bugs we see are beneficial
- Understand the lifecycle
- Learn pest habitat and timing
- Know natural enemies
 - Are they present?



Online IPM Resources

Our Water Our World Website
www.ourwaterourworld.org



EFFECTIVE ECO-FRIENDLY PEST CONTROL • LESS-TOXIC PRODUCTS

SOLVE PEST PROBLEMS WITH LESS-TOXIC PRODUCTS

Keep your children, pets, and garden healthy

PESTS AND SOLUTIONS ▾ HEALTHY YARD AND GARDEN ▾ ALL ABOUT PRODUCTS ▾ STORE FINDER ABOUT ▾



OurWaterOurWorld.org Información en Español

Bug Guide
bugguide.net

UC Statewide IPM Program
www.ipm.ucanr.edu



UNIVERSITY OF CALIFORNIA AGRICULTURE & NATURAL RESOURCES

UC IPM Online

Statewide Integrated Pest Management Program

What is IPM? Identify & Manage Pests Research Publications Training & Events Links About Us Contact Us Subscribe

HOME

ON THIS SITE

- What is IPM?
- Home & landscape pests
 - Agricultural pests
 - Natural environment pests
 - Exotic & invasive pests
 - Weed gallery
 - Natural enemies gallery
 - Weather, models & degree-days
- Pesticide information
- Research
- Publications
- Events & workshops
- Online training
- Links
- About us
- Contact us

For Retail Nurseries & Garden Centers

What can you do to protect water quality?
Don't let fertilizer or pesticides get onto hard surfaces such as sidewalks or driveways. Sweep any material that accidentally lands on hard surfaces back onto lawn.

Search home & landscape pages:

Choose a plant and find its pests

- Flowers
- Vegetables & Melons
- Trees & Shrubs (includes roses)
- Lawns & Turf
- Fruit, Nuts, & Berries

Choose a pest by category

- Birds, Mammals & Reptiles
- Insects, Mites & Mollusks
- Plant diseases
- Weeds
- Household

More resources

- Current highlights**
 - Newsletter, March 2014 issue (NEW)
 - Asian citrus psyllid information for garden centers (NEW)
 - Invasives—find out more about invasive and exotic
- Common questions**
 - Aphids
 - Damping-off
 - Earwigs
 - Gophers
 - Lawn Watering
 - Mosquitoes
 - Powdery Mildew
 - Scapes
 - Snails & Slugs
 - Weeds In Landscapes
- Training & publications**
 - Online training & workshops
 - Publications
- Pesticides & alternatives**
 - Using pesticides

npic NATIONAL PESTICIDE INFORMATION CENTER
npic.orst.edu



EBMUD Rebates & Resources

- Lawn Conversion Rebates
- Irrigation Rebates
- Mulch & Compost Coupons
- Online Resources:
ebmud.com/watersmart-gardener



EBMUD Landscape Rebates
up to \$2,000 for residential properties
(up to \$15,000 for commercial properties)



Irrigation Rebates

Spray to Drip Conversion (\$0.25/sq. ft.)

High-Efficiency Sprinkler Nozzles (\$3 each)

Self-adjusting “Smart” Irrigation Controllers (\$75-\$125)

Pressure Regulators (50% cost up to \$125)

Irrigation Submeter (50% cost up to \$200)



Standard Lawn Conversion Rebate

\$0.75/sq. ft.

Low-water use plants

50% plant coverage

Drip irrigation or hand-watering

Mulch



****New Pilot** - Super Lawn
Conversion Rebate**

\$1.50/sq. ft.

All standard rebate requirements in addition to:

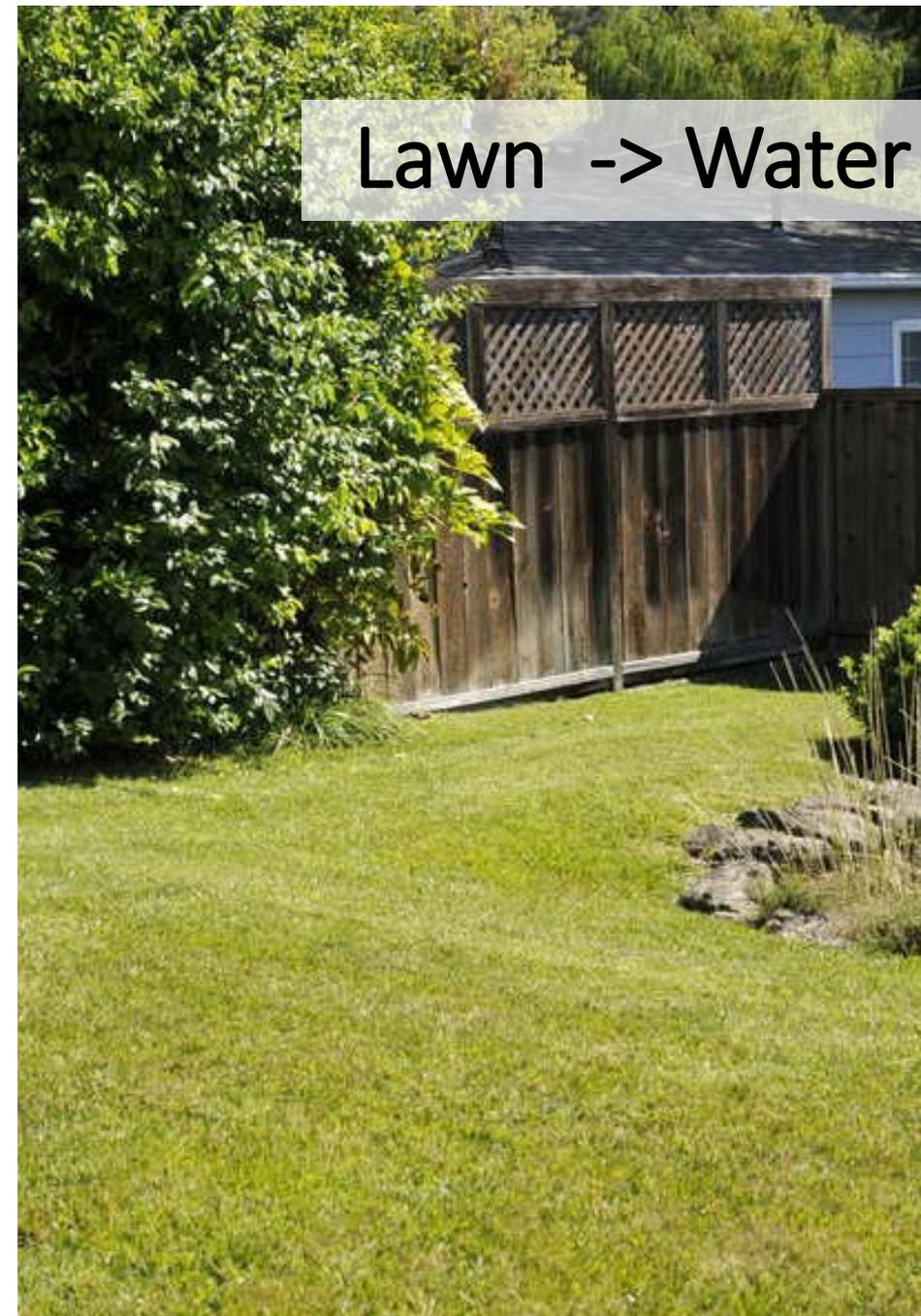
Majority CA native plants

Plant in cool season (Sept – Feb)

Apply compost

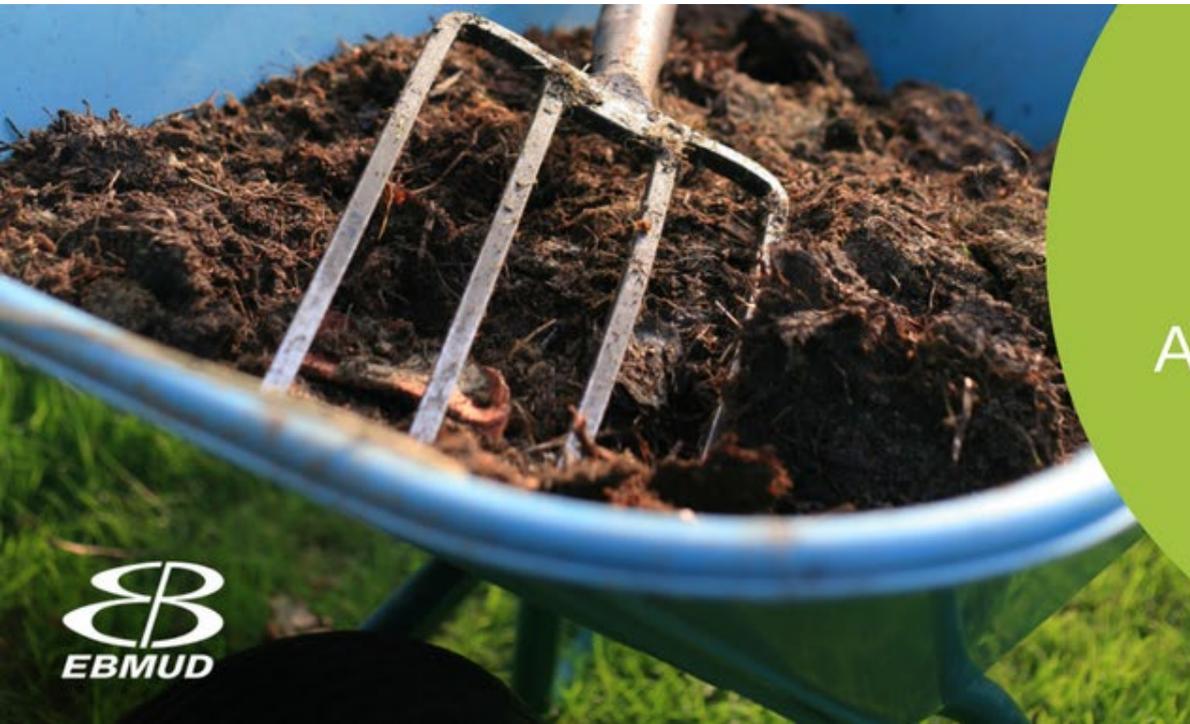
Sheet-mulch

Lawn -> Water Wise Landscape



Mulch and Compost Coupons

- Provided by local nurseries
- Coupons for bulk or bags
- Learn more: ebmud.com/mulch



Mulch

A gardener's best friend

Summary

- EBMUD water supply relies on snow melt
- We are in a drought- do what you can to conserve
- Water-wise garden maintenance helps to save water
- Spring is the time to:
 - Adjust and check irrigation
 - Water to encourage deep roots
 - Build healthy soil with compost
 - Protect root zones with mulch
 - Keep weeds in check
 - Invite beneficial insects
- EBMUD offers landscape rebates and mulch coupons





Photo credit: S. Bontempo

Questions?



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Upcoming Events

More info at ebmud.com/watersmart

- **Landscape Rebate Virtual Office Hours**
 - Every 2nd Tuesday, 12-1pm
 - Every 4th Tuesday, 5-6pm
- **Sheet Mulching Tips & Tricks Webinar**
 - April 14, 1-2pm
- **HOA Landscape Rebate Virtual Office Hour**
 - May 19, 12-1pm
- **Ruth Bancroft WaterWise Garden Tour**
 - In-person: April 23
- **Bringing Back the Natives Garden Tour**
 - Virtual: April 16, 17
 - In-person: April 30, May 1





Thank you for joining us!



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