EAST BAY MUNICIPAL UTILITY DISTRICT

Getting Started with Water-Wise Gardening

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Kristin Bowman
EBMUD Water Conservation Representatives

September 17, 2020

Upcoming Fall Webinars

Plant Selection for Beginners
Wednesday 9/23, 1pm - 2pm

No Frustration Irrigation
Tuesday 9/29, 1pm - 2pm

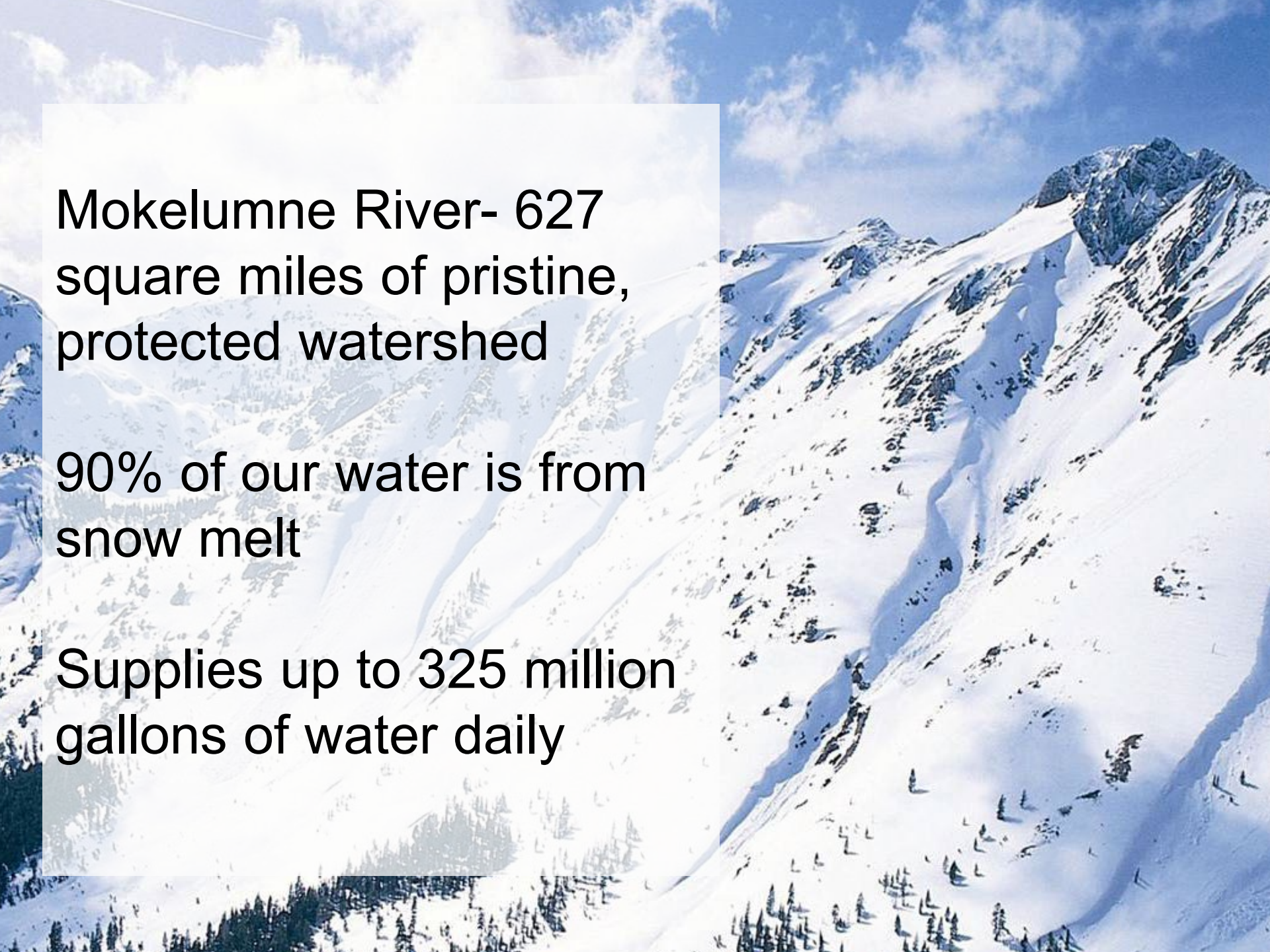
Graywater: Laundry-to-Landscape
Thursday 10/8, 1pm - 2pm

Big Gardens in Small Spaces
Thursday 10/15, 1pm - 2pm

Register at
www.ebmud.com/watersmart

Agenda

1. EBMUD water supply
2. Multi-benefits of water conservation
3. Sheet mulching
4. Lawn conversion and Irrigation equipment rebates
5. Planting resources
6. Hiring a landscape contractor
7. Tracking your water use
8. Q and A

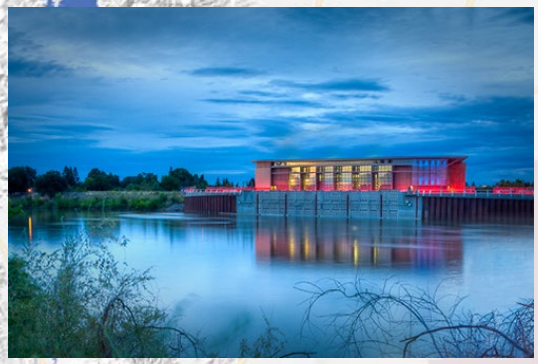


Mokelumne River- 627 square miles of pristine, protected watershed

90% of our water is from snow melt

Supplies up to 325 million gallons of water daily

EBMUD WATER SUPPLY



AUBURN

SACRAMENTO

FREEPORT REGIONAL WATER FACILITY
SUPPLEMENTAL WATER SUPPLY FOR DRY YEARS

MOKELUMNE RIVER WATERSHED

PARDEE RESERVOIR
MUNICIPAL WATER SUPPLY

CAMANCHE RESERVOIR
FLOOD CONTROL

MOKELUMNE RIVER FISH HATCHERY

Lower Mokelumne River

575 SQUARE MILES

FAIRFIELD

SACRAMENTO — SAN JOAQUIN DELTA

LODI

CONCORD

STOCKTON

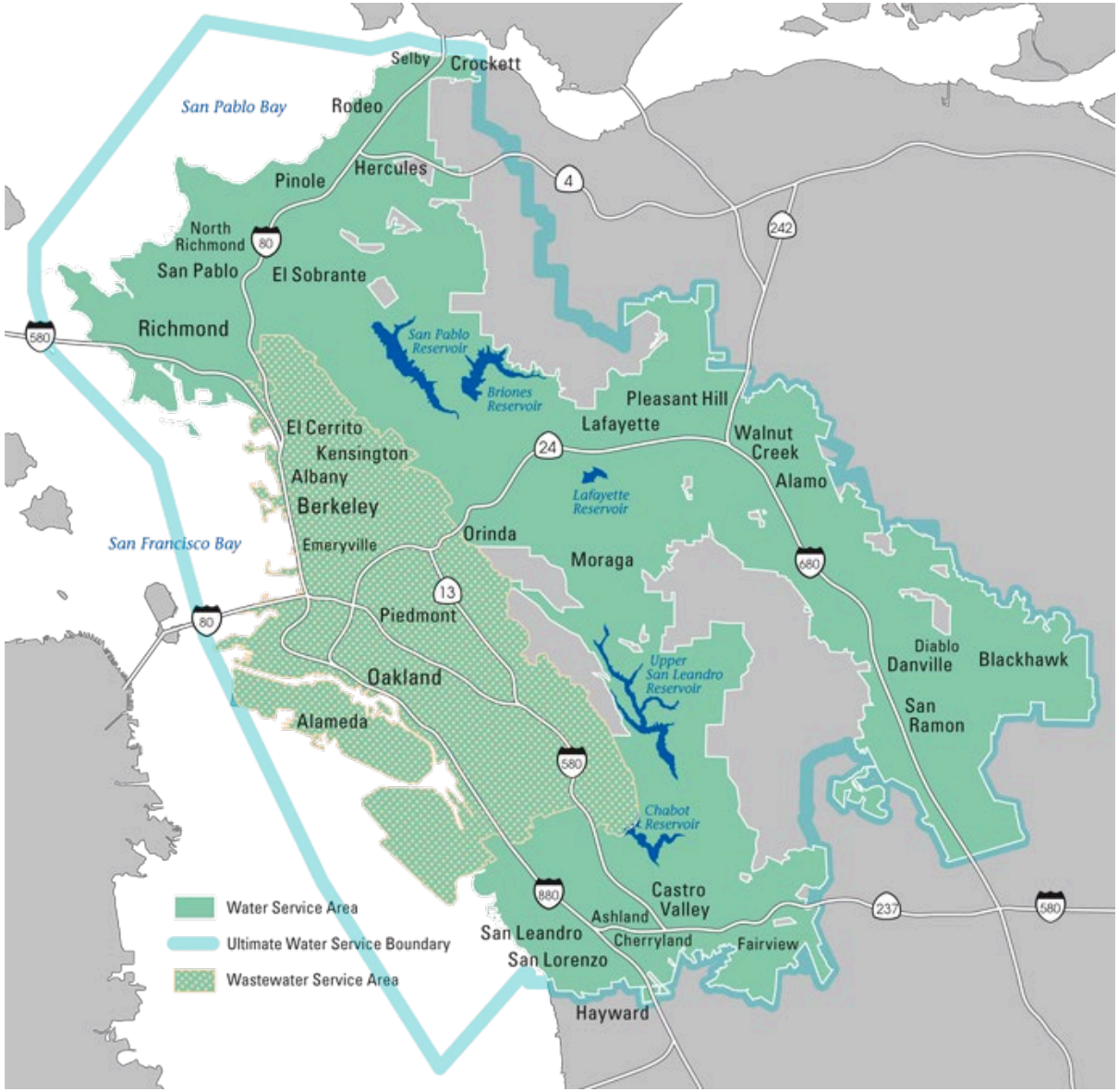
EBMUD MOKELUMNE AQUEDUCTS
3 - 85 MILE LONG WATER SUPPLY PIPELINES

EBMUD SERVICE AREA
332 SQUARE MILES

DUBLIN

TRACY

SFPUC Hetch He



Water and Wastewater Service Areas

1.4 million water customers

685,000 wastewater customers

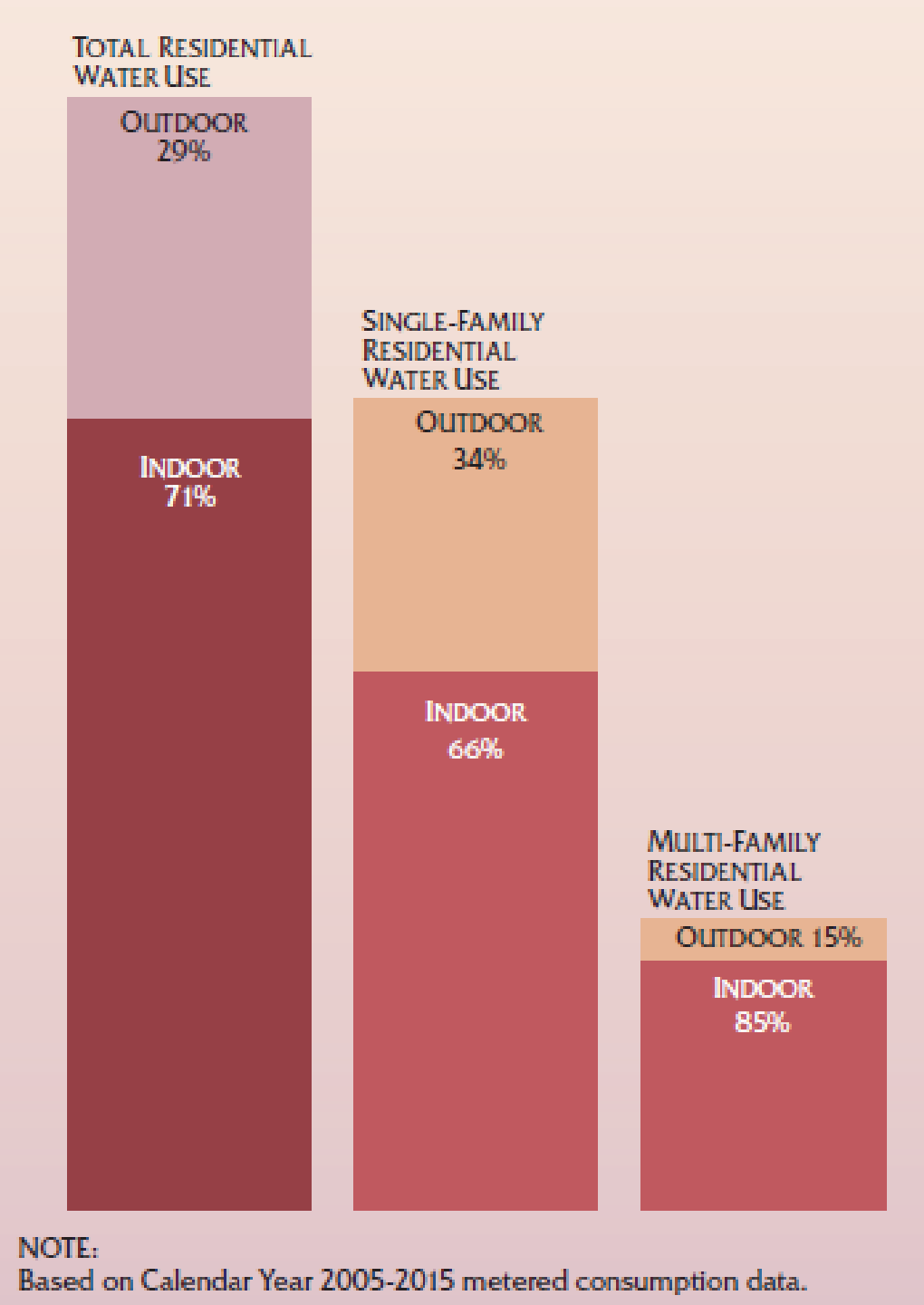
>4,200 miles of pipe

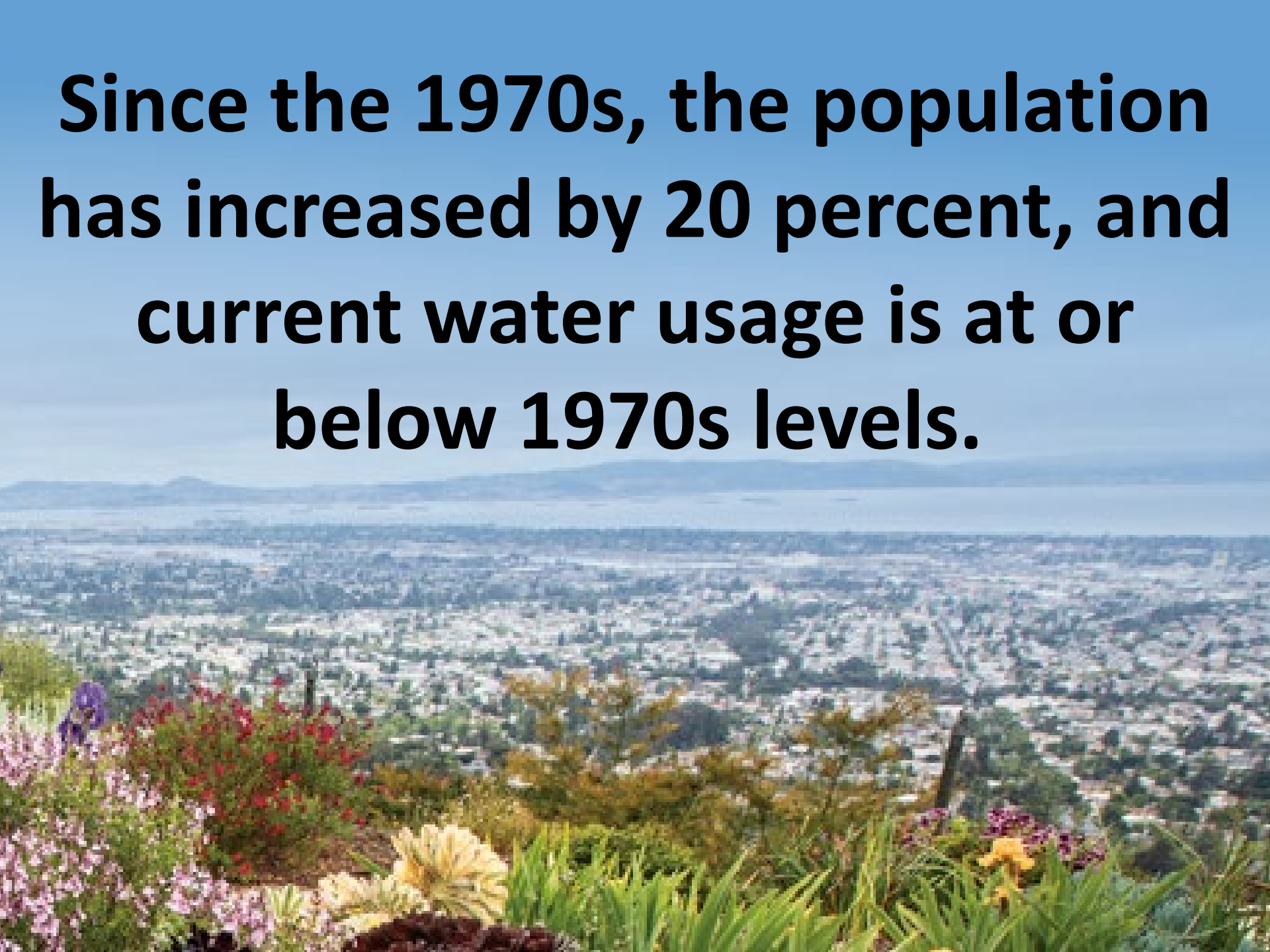
400,000 meters

Average EBMUD Household Water Use

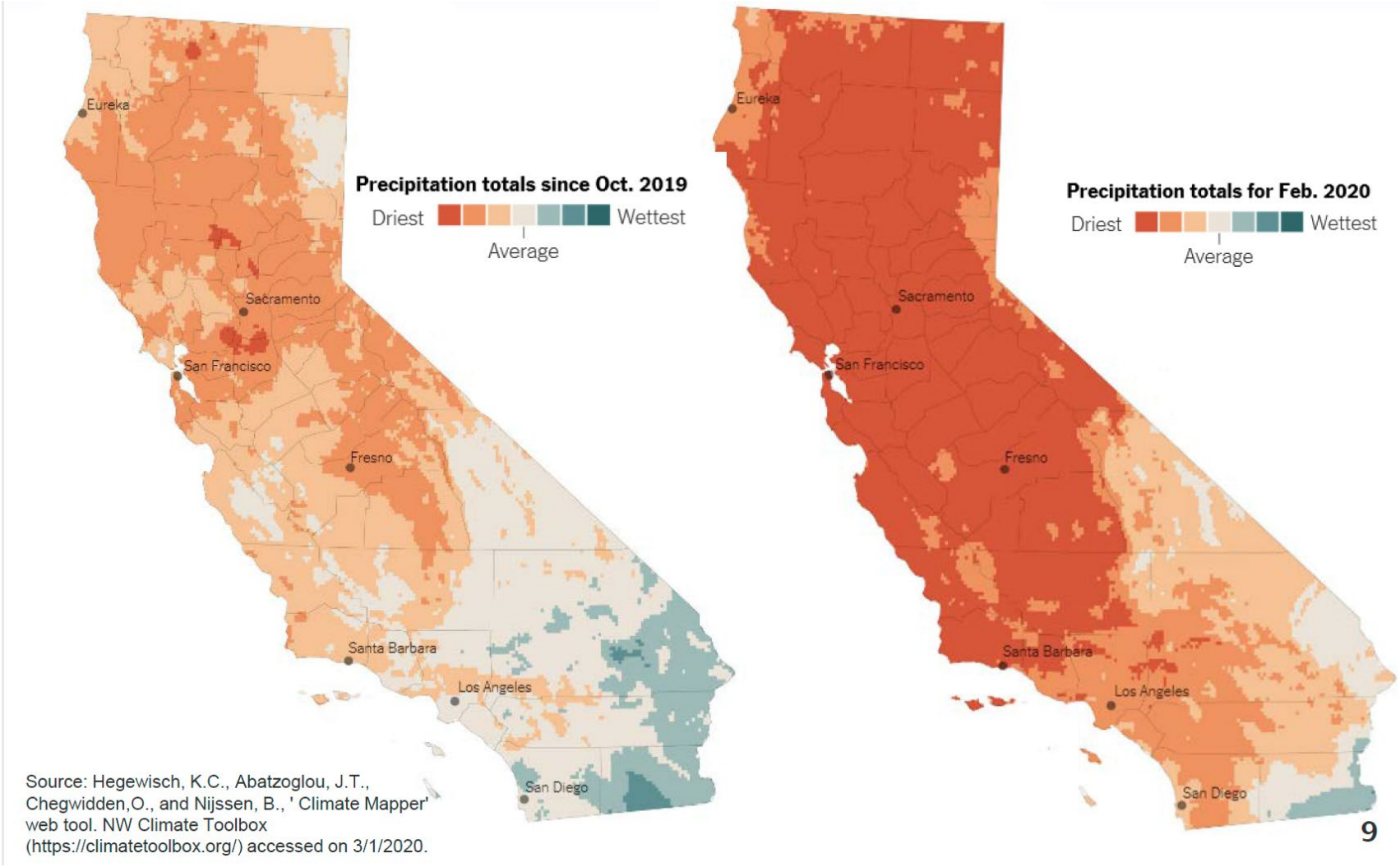
Outdoor water use: 34%

Indoor water use: 66%




Since the 1970s, the population has increased by 20 percent, and current water usage is at or below 1970s levels.

Driest February on Record



Source: Hegewisch, K.C., Abatzoglou, J.T., Chegwidden,O., and Nijssen, B., ' Climate Mapper' web tool. NW Climate Toolbox (https://climatetoolbox.org/) accessed on 3/1/2020.

Multi-benefits of Water Conservation

Bay-Friendly Landscaping Principles

- Landscape Locally
- Reduce waste
- Nurture the Soil
- Conserve Water
- Conserve Energy
- Protect Water & Air Quality
- Create Wildlife Habitat

Check Out Water Savings

Water Efficient Landscape Design Calculator

Curious about how much water you can save by converting your lawn? Use this calculator to see potential water savings and benefits of sheet mulching!

Select your city: --- Select ---

Total lawn area to be converted: (square feet)

www.lawntogarden.org/water-savings-calculator

Select City and Square Foot

Water Efficient Landscape Design Calculator

Curious about how much water you can save by converting your lawn? Use this calculator to see potential water savings and benefits of sheet mulching!

Select your city: Oakland

Total lawn area to be converted: 1000 (square feet)

A **1,000** square foot lawn is estimated to use **32,736** gallons of water per year, based on your location.[1]

To Determine Water Savings

Landscape type and size
Plant water use (WUCOLS)
Irrigation type
Sheet mulching

Landscape Type	Planting Area (sq. ft)	Water Use	Irrigation Type	Annual Water Use (gal)
Groundcover	250	Low	Drip	2,273
Perennials	250	Low	Drip	2,273
Shrubs	250	Low	Drip	2,273
Trees	250	Moderate	Drip	4,547
Lawn		High	Spray	0
Annuals		High	Spray	0
Total Area	1000		**Total Water Use:**	**9,602**

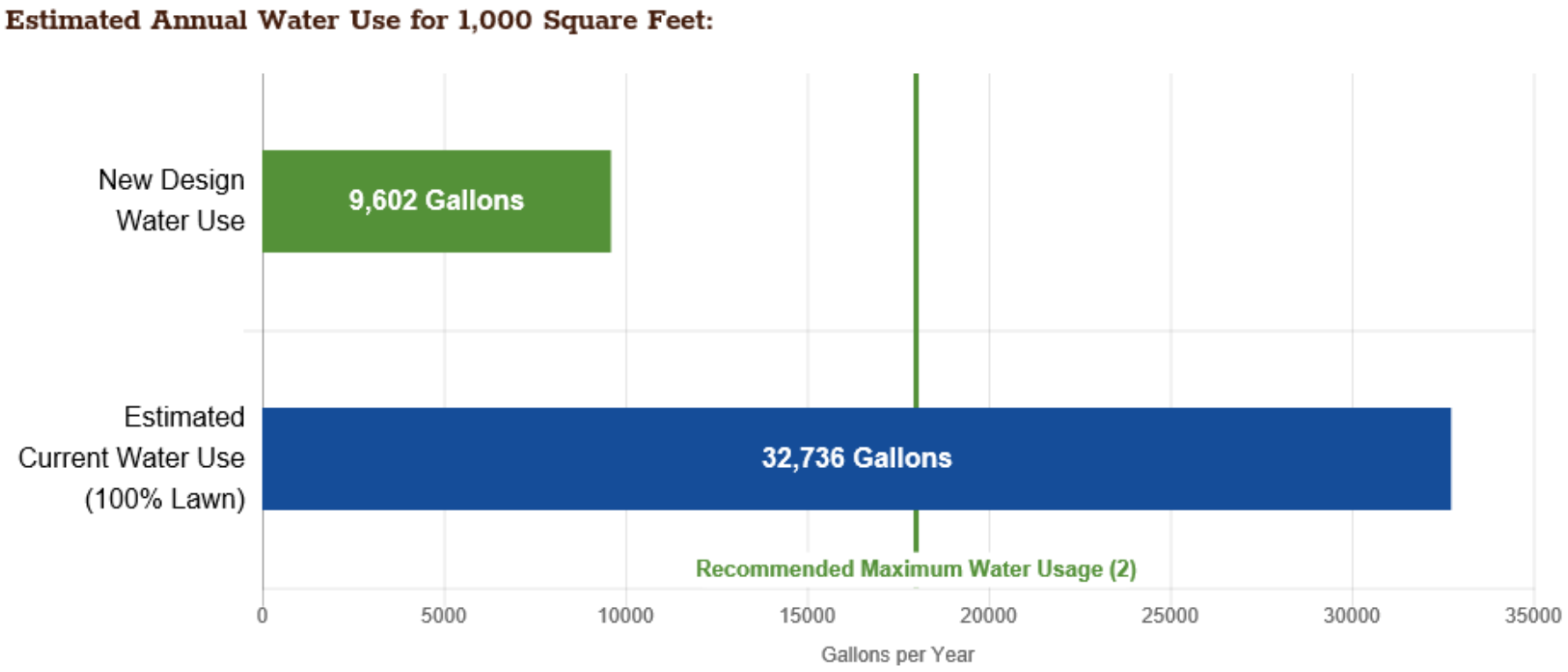
☑ **Sheet Mulching?** Check box to see how much more water you can save by sheet mulching with cardboard, compost and mulch.

Water Savings from Sheet Mulch: 1,765

Before and After

Lawn: **32,736 gallons** annually

Water Efficient Design: **9602 gallons** annually



WUCOLS IV
Water Use Classification of Landscape Species

Plant Search Database

If you know exactly which plant you are interested in, you may search for it by name (partial names are OK, too). Otherwise, consider searching by plant type and/or water use.

See WUCOLS List for All Regions

City

Search for a city: Search for a city — or — Find a city on the map

Plant Name

Common Name or Botanical Name

Water Use

- [ ] Very Low
- [ ] Low
- [ ] Moderate / Medium
- [ ] High
- [ ] Unknown
- [ ] Not Appropriate for this Region

Plant Type

- [ ] **Gc** (Ground Cover)
- [ ] **P** (Perennial)
- [ ] **S** (Shrub)
- [ ] **T** (Tree)
- [ ] **V** (Vine)
- [ ] **Ba** (Bamboo)
- [ ] **Bu** (Bulb)
- [ ] **G** (Ornamental Grass)
- [ ] **Pm** (Palm and Cycad)
- [ ] **Su** (Succulent)
- [ ] **N** (California Native)
- [ ] **A** (Arboretum All-star)

Looking for Turf Grass?

Search Plants


Questions?

Sheet Mulching

Saves time, money and water

Builds healthy soil

Creates attractive climate appropriate gardens

Eliminates the need for grass and weed-killing herbicides.

Improve water retention in soil

Enhance soil structure

Step 1: Prepare the Site

- Knock down or mow existing vegetation so it lies flat.
- Flag sprinkler heads
- Edge lawn to avoid run off and keep mulch on-site
- Make mounds with sod and soil from edging

Step 2: Plant Larger Plants

- Plant 5 gallon or larger plants
- Dig a hole
- Rough up the root ball
- Partially backfill the hole with soil mixed with compost.

Image courtesy of StopWaste

Step 3: Weed Barrier

- 2 layers of cardboard
- Overlap piece by 6-8 inches
- Wet cardboard

Step 4: Compost and Mulch Layers

- 1-2 inches of compost
- 3 inches of mulch
- If main goal is weed suppression, than just add mulch

Step 5: Plant Small Plants

- Cut hole in the cardboard
- Dig hole as deep as root ball and three times as wide
- Keep mulch away from crown of plant

Image courtesy of StopWaste

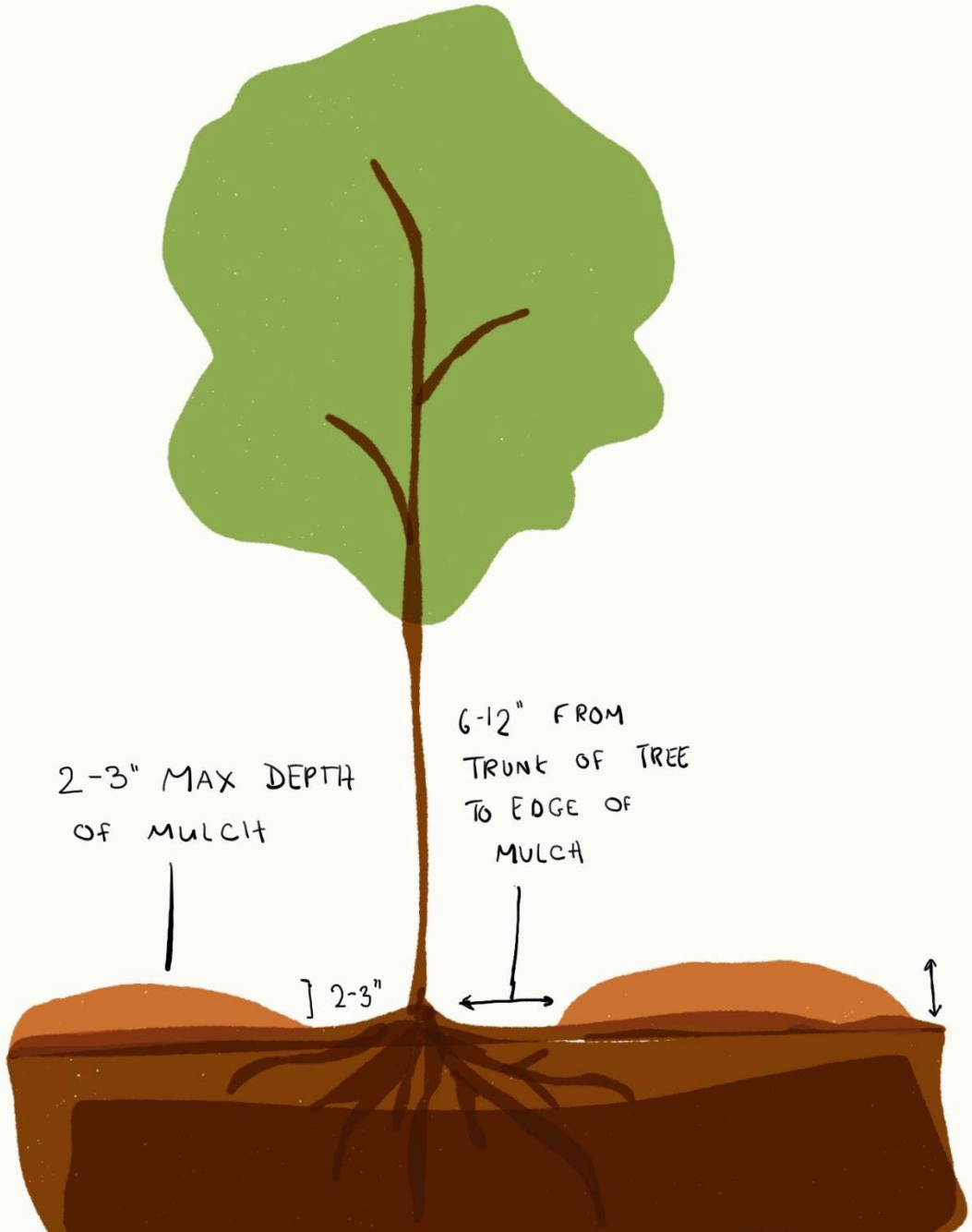
Hydrozoning

Group plants with similar water needs per zone (or valve).

Irrigation Checklist

- ✓ Convert overhead spray to drip
- ✓ Drip conversion kits available
- ✓ Cap off spray heads
- ✓ Drip goes under mulch layer to protect tubing from the sun and reduce water loss

When mulching around trees, don’t do this...


2-3" MAX DEPTH
OF MULCH
6-12" FROM
TRUNK OF TREE
TO EDGE OF
MULCH
] 2-3"

… do this

Mulch and Compost Coupons

- Provided by local nurseries
- Coupons for bulk or bags


Questions?

Landscape Rebates

Lawn Conversion
(.75/sq. ft.)

Drip Conversion
(.25/sq. ft.)

High-Efficiency Nozzles
($2-$5 each)

Self-Adjusting Controllers
($75-$125)

Pressure Regulators
($75-$125)

Irrigation Submeter
(50% of cost, up to $200)

Flow Meter Pilot
(up to $200)

Rebate Total

Residential
Up to $2,000

Commercial &
Multi-family
(5 or more units)
Up to $15,000

over a two year period

Lawn Conversion Checklist

- ✓No synthetic weed cloth
- ✓Plant 50% of area
- ✓Low to very low water use plants
- ✓ Lawn previously irrigated
- ✓No invasive plant species
- ✓3” of mulch




Rebate Process

Submit application before starting:

- pictures of existing landscape and irrigation on
- list of low-water use plants
- sq. ft. and/or number of devices

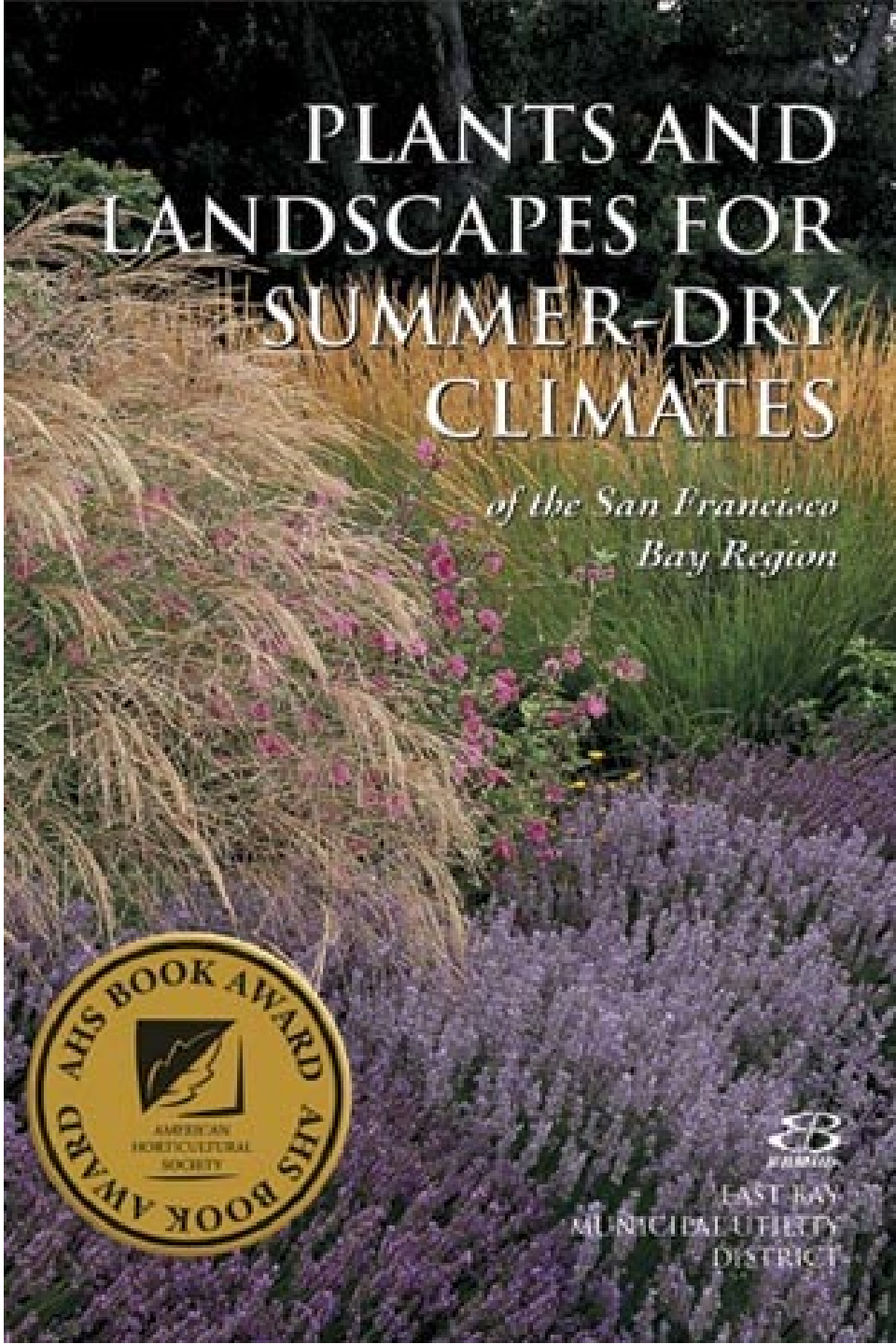
Six month deadline to complete project

Post inspection required (possibly virtual)

Low Water Use Plants

Plant Resources

- EBMUD Plant Book
- EBMUD low water use plant list
- UC Davis All Star Plant List
- WUCOLS Database
- CalScape
- CNPS Design Templates
- Firescape Booklet



Sample Summer Watering Schedule

- Don’t water on consecutive days
- No more than three times a week
- TEST your zones at least annually

Plant type	Water needs	Mon.	Tues.	Wed.	Thur.	Fri.	Sat.	Sun
Lawn *East of Hills*	High	💧	✗	💧	✗	💧	✗	✗
Lawn *West of Hills*	High	💧	✗	✗	✗	💧	✗	✗
Shrubs	Medium	✗	💧	✗	✗	✗	💧	✗
Shrubs	Low	✗	✗	✗	💧	✗	✗	✗
Natives	Low	*Water established natives (3 years and older) once per month. They adapt well to wet winters and dry summers. Water new natives (less than 3 years old) once per week.*						
Trees	Usually Low	*Water established trees (3 years and older) one deep irrigation per month. Water new trees when showing signs of stress.*						


Questions?

Hiring a Landscape Contractor

Education and Experience to look for:

- License and Bonds
- Length of time in Industry
- Describe formal and ongoing education
- Membership in professional organizations

✓**References**

Contractor Best Practices

Q: What practices do you use to encourage healthy, low-water use gardens?

A:

- Use of compost, mulch, sheet mulching
- Low-water use plants, California native plants Mediterranean plants
- Organic fertilizers and recycled materials

Contractor Best Practices

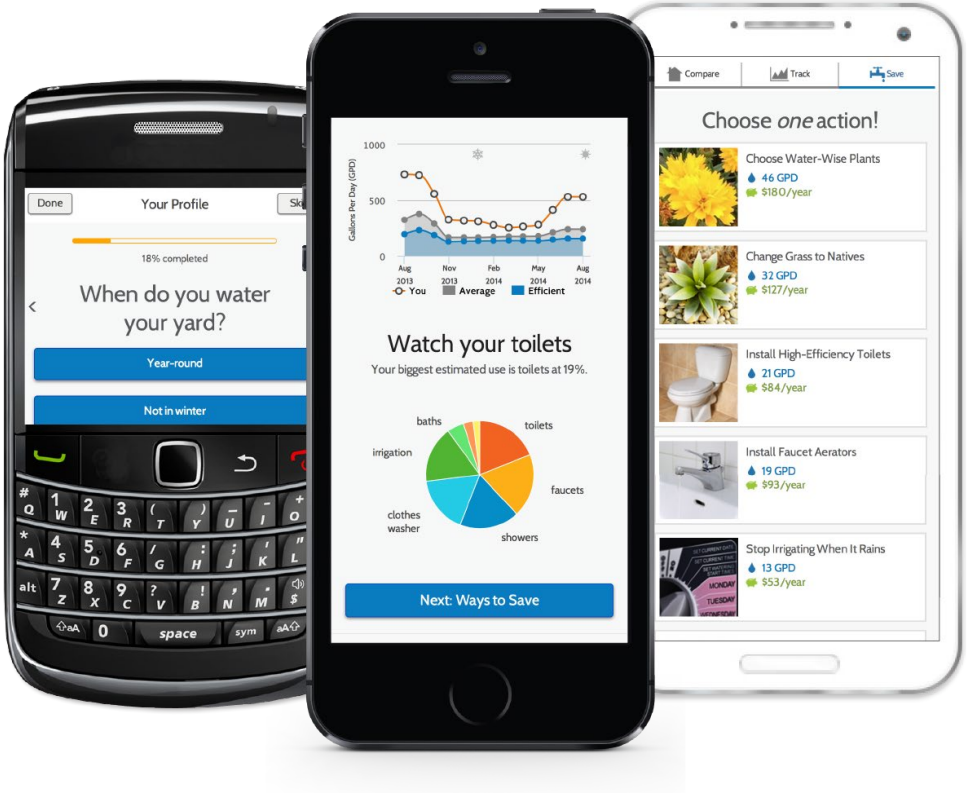
Q: What water-saving irrigation methods do you use?

A:

- Hydrozoning
- Drip in conjunction with flush and pressure release valve
- High efficiency rotating nozzles
- Weather-based irrigation controllers

Water Report Portal

- View water use, pay your bill, find recommendations all in one place
- Set leak alerts
- Track water use on your phone or tablet



Visit
www.ebmud.com/watersmart

Thank you!

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