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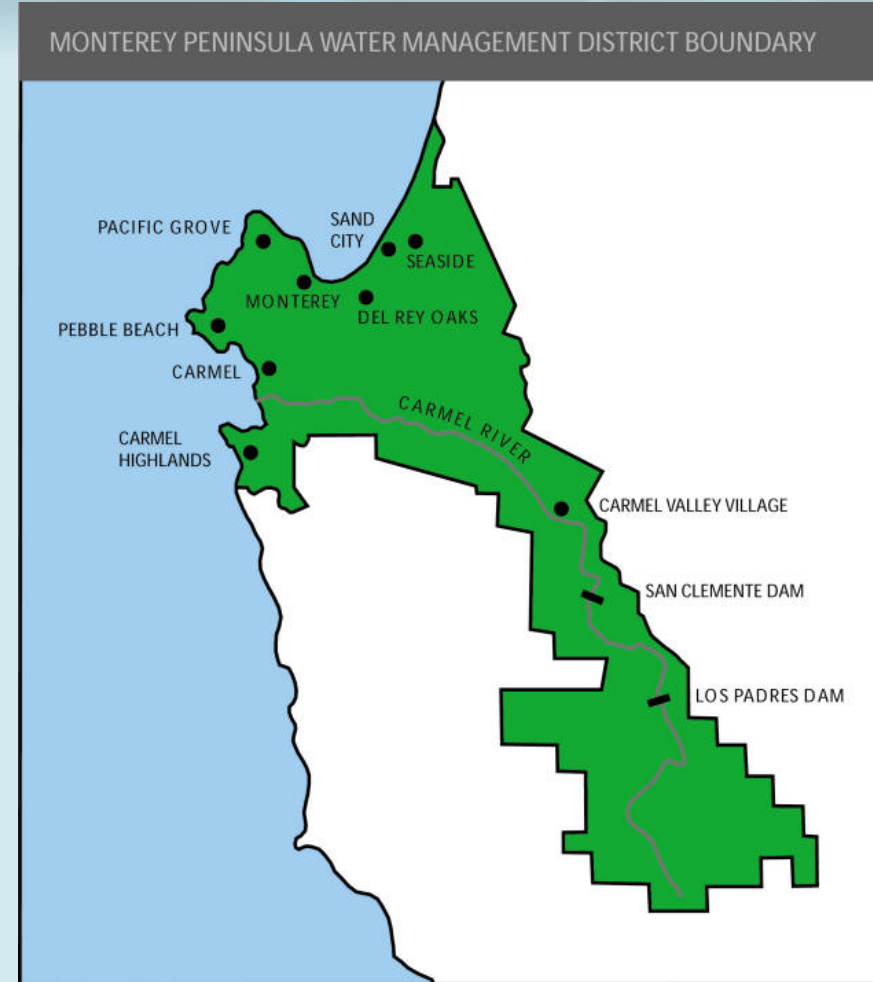
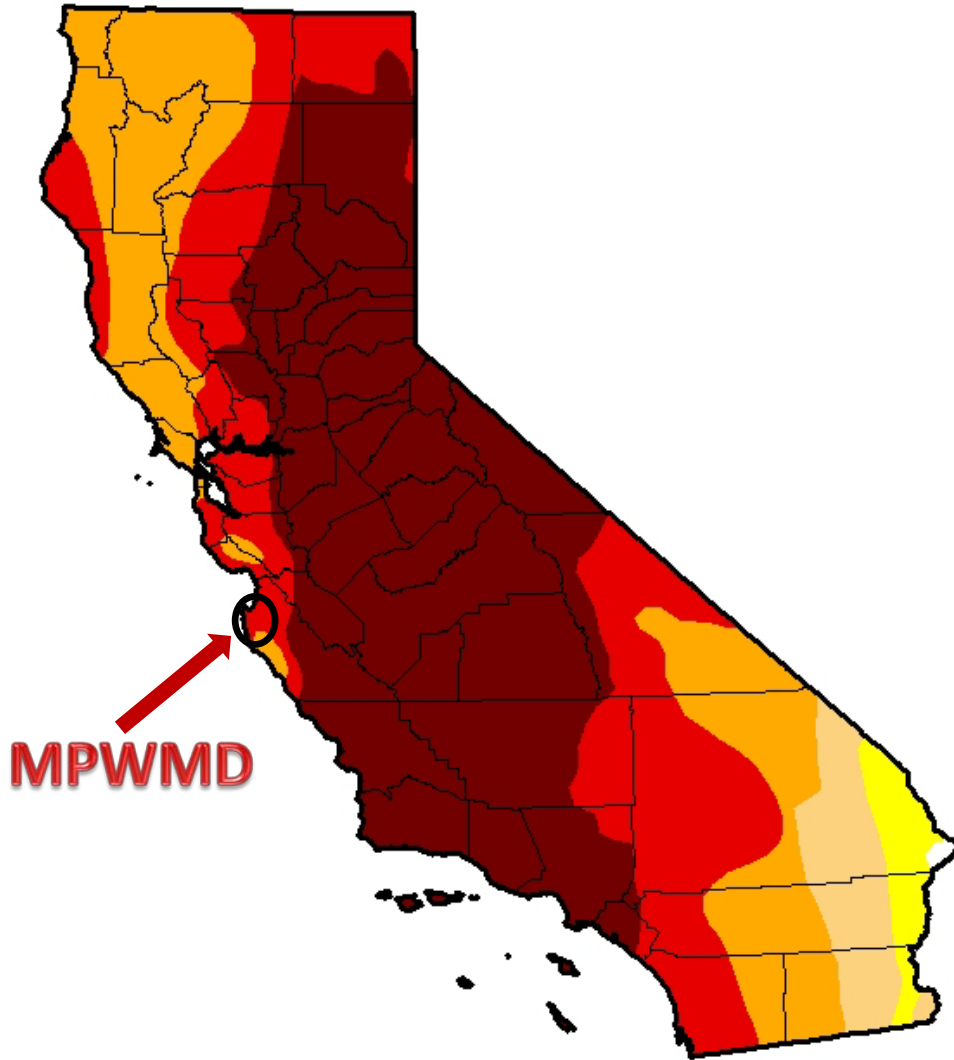
# Public Private Partnerships. How the Monterey Peninsula Saved (More Than) 35%

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WaterSmart Innovations 2015

# About MPWMD

- 120 miles south of San Francisco on the coast
- Regional population of approximately 105,000
- Special district created by the California Legislature in 1978
- Authority for management of ground and surface water
- Regulatory authority over all water suppliers within its boundaries
- All local water sources (100% local groundwater)
- \$2.3 billion hospitality industry (9 million visitors annually)
- Vacation destination (many 2<sup>nd</sup> homes)

# Monterey Peninsula Water Management District



# Historic Context – 1987

- 1987-88: Demand was 17,219 AF
  - 2020 demand projection was 22,000 AF
- First major conservation programs
  - Retrofit upon resale/change of use requirement
  - Water Permit requirement
    - New construction/remodel efficiency requirements
    - Permit required before building permit
- Hired 2 people to enforce requirements
- Data collection
  - 2015 database has over 30,000 unique property records
  - Numbers and types of fixtures, types of uses, more

# Change of Ownership Retrofit Requirements

- Engaged local Realtors/title companies
  - Rely on Realtors to inform seller/buyers
    - Retrofits completed before sale
    - Inspection to verify compliance (compliance = compensation)
    - 2015: Less inspections due to previous retrofits, new documentation
  - Certification form required before transfer
    - Escrow officer at Title Company
  - Non-compliance recorded on title
    - Corrected upon future sale, refinance, remodel, etc.

# Water Efficiency Requirements

Water Permit requirement involves every building/planning department before Building Permit is issued

- Water efficient toilets/urinals, showerheads, faucets
- Instant-access hot water & insulated hot water pipes
- High efficiency clothes washers & dishwashers
- Water efficient landscapes/irrigation
  - Rainwater/graywater irrigation encouraged/incentivized
  - Smart controller (new construction)
  - No overhead spray on non-turf
  - Rain sensor required on all automatic systems upon change of ownership or remodel



# CII Efficiency Requirements – New Construction

CII has additional requirements:

- No single-pass water use systems
- Water cooled refrigeration equipment prohibited when there is alternative cooling technology available
- Cooling towers must be equipped with conductivity controllers
- Boilerless steamers or connectionless steamers required in food service
- Alternative water sources for indoor toilet flushing and other uses are encouraged
- Business-specific BMPs must be implemented to extent possible



# Conservation in the 1990's

- Water Rationing (1989-1991) reduced 30%
  - By 1997, long-term savings were only 10%
- Rationing partnership with MPWMD (enforcement) and Cal-Am Water
- Permanent water waste regulations/enforcement
  - Leaks, breaks, run-off, etc. (hotline/web reporting)
  - Drinking water at restaurants only on request
  - Conservation signage in public restrooms
- Toilet rebate program in partnership with Cal-Am

# Recycled Water for Pebble Beach

- Partnership with MPWMD, Carmel Area Wastewater District (CAWD), Pebble Beach Community Services District (PBCSD), Pebble Beach Company, J. Lohr Properties, Griffin Trust
- Wastewater reclamation project for Pebble Beach golf courses/open space (1995)
  - Replaced 800 AF potable demand
- MPWMD issued bonds, sells water
- Pebble Beach Co. & Partners guaranteed loans
- CAWD added tertiary/RO treatment
- PBCSD owns the pipes
- Irrigates all golf courses and open space in Pebble Beach

# Conservation Programs – The New Millennium

- Expanded Conservation & Standby Rationing Plan (1998)
  - 7 stage plan – Always in Stage 1
  - Tiered rates based on number of residents (residential)
    - \$0.6054/100 gallons (lowest tier)
    - \$6.0543/100 gallons (5<sup>th</sup> tier)
    - Between 2010-2015, approximately 40 reduction in number of Tier 5 users
  - Mandatory landscape audits/budgets for large users, irrigation meters, open space
- Required all visitor serving commercial, public and quasi-public facilities to retrofit toilets, faucets, showerheads (2001)
  - Coordination with hospitality industry to develop & implement
- Rebate program expanded to other devices over the years

# Rebate Program Today

Ultra high efficiency toilet

Instant-access hot water

High efficiency toilet

High efficiency dishwasher

High efficiency clothes washer

Graywater irrigation systems

Efficient sprinkler nozzles

Soil moisture sensor

Lawn removal

Cooling tower conductivity controller

Cooling tower pH controller

High efficiency commercial dishwasher

Ozone laundry system

Water efficient steam/combo oven

Connectionless food steamer

Medical steam sterilizer water tempering device

Water broom

X-ray film processor recirculation system

Waterless wok stove

Pint or zero water urinal

Dry vacuum pump

# Commercial BMP Rates (Est. 2013)

California American Water's BMP rates were developed in partnership with MPWMD, local business coalitions/interests, chambers of commerce

- Rate BMP (Best Management Practices)
  - Water efficient plumbing fixtures (indoors)
  - Automatic irrigation controller
    - Water budget feature required
    - Rain sensor required
  - Turf irrigation
    - Gear rotor drive sprinklers
    - Multi-stream/multi-trajectory rotating sprinklers
    - High efficiency fixed spray nozzles
    - Subsurface low volume emitters

# BMP Rate Structure (Non-Residential)

## Four “Divisions”

- Division 1: Rate BMP compliant/minimal landscaping
    - \$0.90/100 gallons (CGL)
  - Division 2: Rate BMP compliant/water is essential to product of business
    - \$1.0222/100 gallons
  - Division 3: Rate BMP compliant w/landscaping
    - \$1.1357/100 gallons
  - Division 4: Not Rate BMP compliant
    - \$2.2715/100 gallons
- 
- *No user should be in Division 4*

# Recent Conservation Programs

- In cooperation with local business organizations, in 2014 **ALL** non-residential was required to install
  - HET if not ULF
  - Water efficient showerheads and faucets
  - High efficiency clothes washers
  - Efficient ice machines
  - Water efficient pre-rinse spray valves
  - Towel/linen reuse program
- Increased outreach programs and public workshops
- Collaborated with Cal-Am and highest CII users
- School landscape retrofits

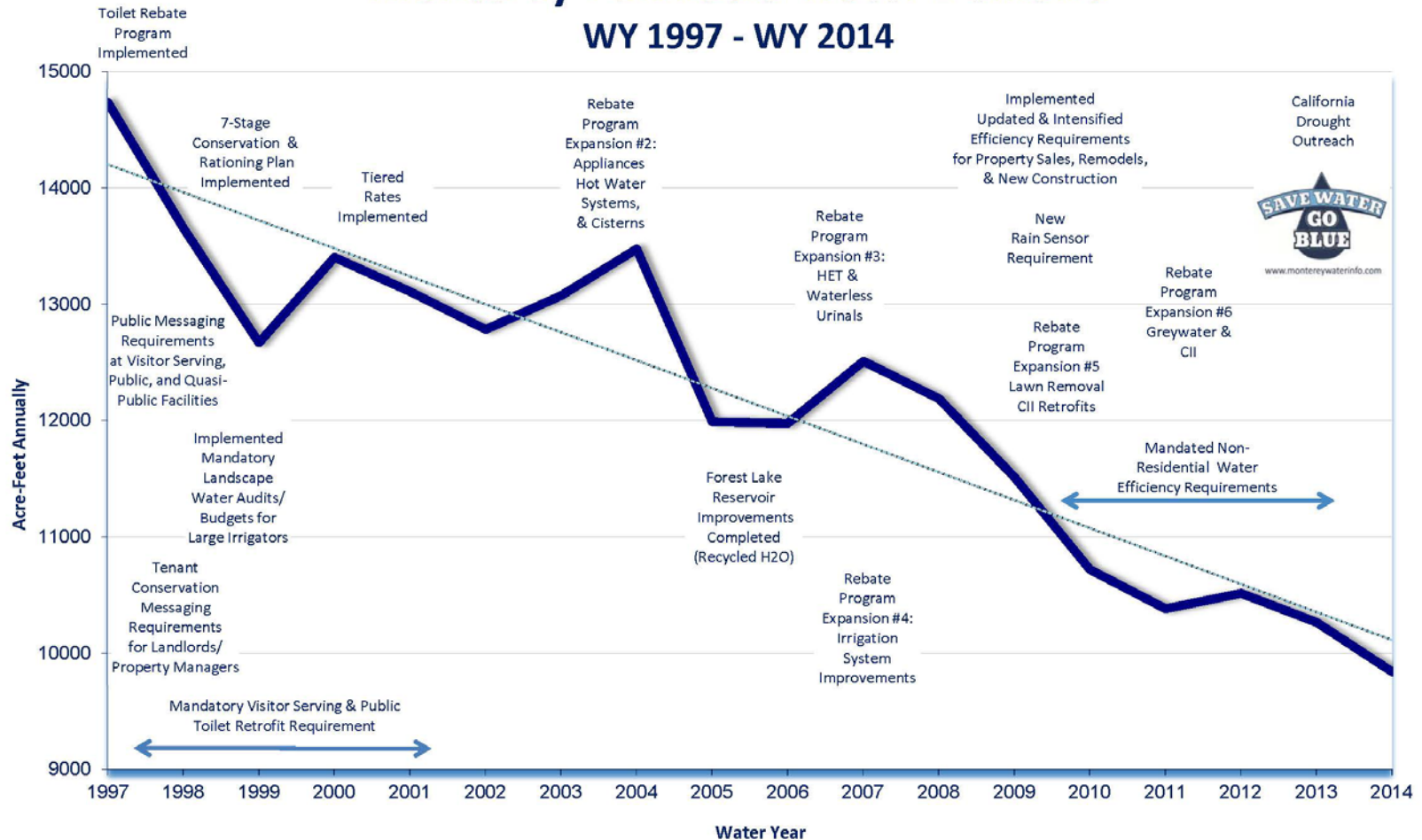


# School Landscape Retrofits

- Schools were required to meet CII requirements in 2014
- MPWMD/Cal-Am audited indoor & out at all schools
  - Provided equipment and funding
- MPWMD granted \$161,000 for Smart controllers
- Cal-Am granted \$55,000 for irrigation improvements
- MPWMD granted additional \$ for development of demonstration/learning site in MPUSD
- MPWMD granted \$100,000 for CUSD to replace football field with synthetic turf
- Significant savings achieved (WaterSmart 2016)

# 1997-2014

## Monterey Peninsula Water Demand WY 1997 - WY 2014



Data Source: CAW Customers and Consumption by Political Jurisdiction

# Monterey Peninsula's Success

- 1987-88: Demand was 17,219 AF
  - Demand was expected to be 22,000 AF by 2020
- WY 2014 demand (Oct. 2013-Sept. 2014) was **9,841 AF**
- California mandatory reduction target of 8%
  - Currently 17% below 2013 (June-August)

**Demand has been reduced by 43% from 1988**

# Public/Private Partners

- California American Water
- Seaside Municipal Water Company
- Cities/County
- US Government
- Local School Districts
- Monterey Peninsula College
- Monterey County Business Council
- Monterey County Association of Realtors
- Monterey County Hospitality Association
- Coalition of Monterey Peninsula Businesses
- Monterey Commercial Property Owners Association
- Sustainable Carmel, Seaside, Pacific Grove
- Residents Associations
- Homeowner's Associations

Questions?

Thank you!

Please visit our website at [www.montereywaterinfo.org](http://www.montereywaterinfo.org)