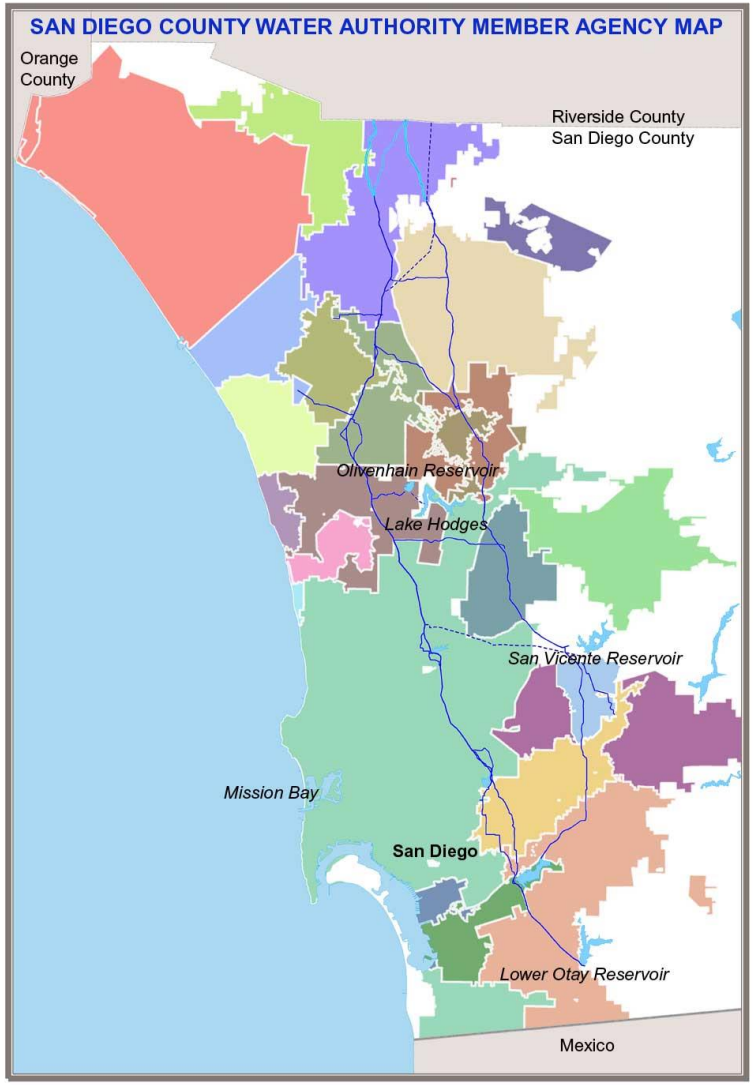
Water Supply Conditions and Regional Drought Response

City of Chula Vista
July 8, 2014

San Diego County Water Authority

- Wholesale water agency created by State Legislature in 1944
  - 24 member agencies
  - 35-member board of directors
  - Serves 3.1 million people and region's $191 billion economy
- Mission is to provide safe and reliable water supply to member agencies
- Service area
  - 950,000 acres
  - 97% of county's population



Governor Brown Executive Order Strengthens Drought Actions

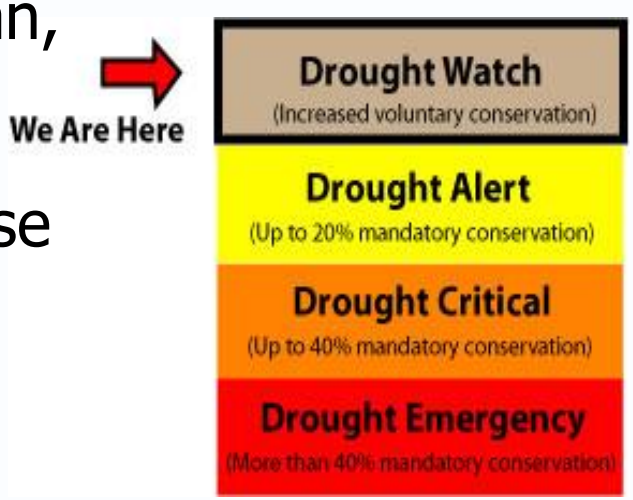
"The driest months are still to come in California and extreme drought conditions will get worse…I call on every city, every community, every Californian to conserve water in every way possible"

Governor Brown 4/25/14

California DROUGHT

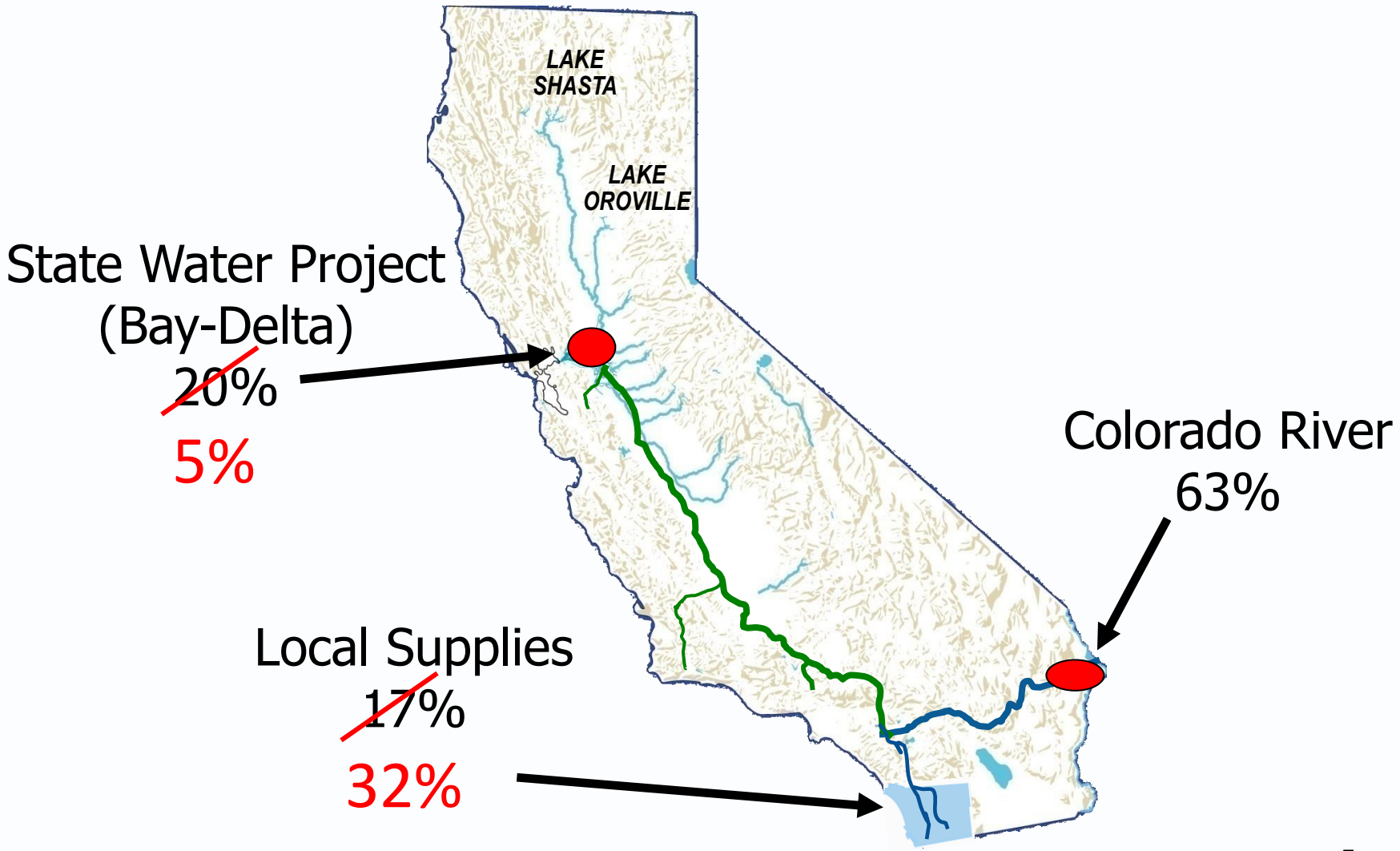
February 13, 2014 San Diego County Water Authority Board Actions on Drought Response

- Activate the Water Authority's Water Shortage and Drought Response Plan, Voluntary Stage

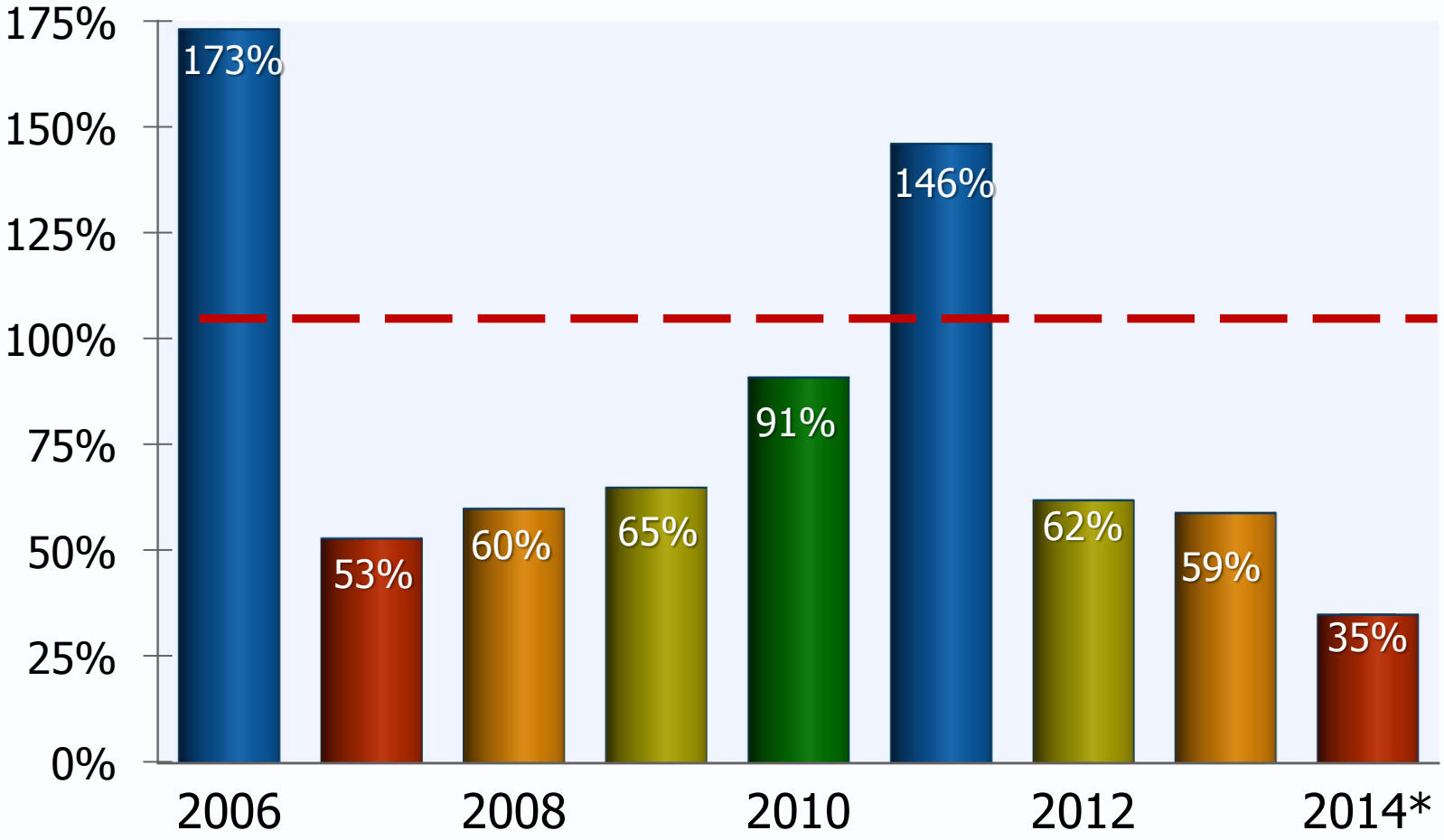


- Declare a Regional Drought Response Level 1, Drought Watch condition
  - Eliminate wasteful water practices
  - Check with local water agency for specific measures
- Actions taken to reduce usage will help manage storage reserves and respond to Governor's drought declaration calling for conservation statewide

Sources of San Diego County's Water Supply (2009-2013, 5-year average)



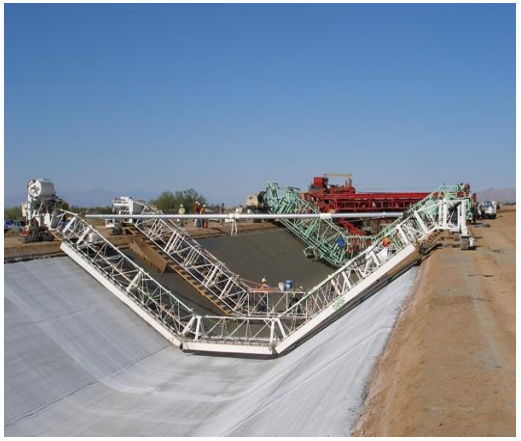
Average Water Year Statewide Runoff Percent of Average (Water Year: Oct 1 – Sept 30)



*April 1, 2014 forecasted water year runoff

San Diego Region Better Able to Manage Shortages due to Drought

- Ratepayers investments and water conservation efforts have reduced the region's vulnerability to drought
  - Diversification
    - Colorado River Transfers: 180,000 AF in 2013
  - Water Conservation
    - Water use down 24% since 2007
  - Regional Storage
    - Adequate storage reserves in So. Cal. to help manage conditions
- No cutbacks expected for San Diego region in 2014

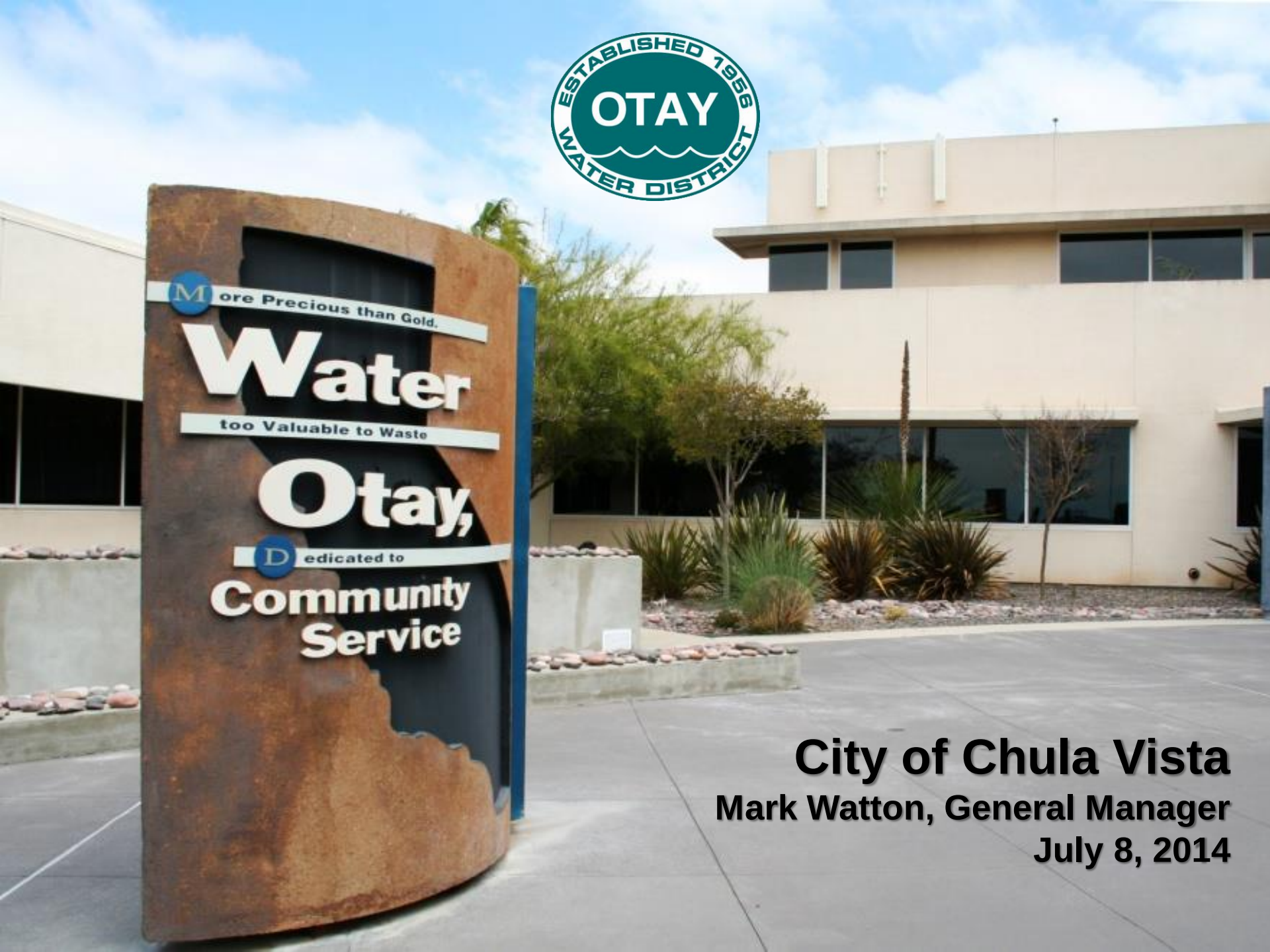


Transfers: Lining the Coachella Canal

Metropolitan Water District
Diamond Valley Lake

Regional Projects add Diversity & Reliability

- Carlsbad Desalination Project
  - New, local, drought-proof water supply – 50 mgd
  - Public-private partnership between Water Authority and Poseidon Resources
  - Expected online in fall 2015
- San Vicente Dam Raise
  - Will increase local reservoir capacity by 152,000 AF
  - To be completed Summer 2014



City of Chula Vista

Mark Watton, General Manager

July 8, 2014

Otay Water District

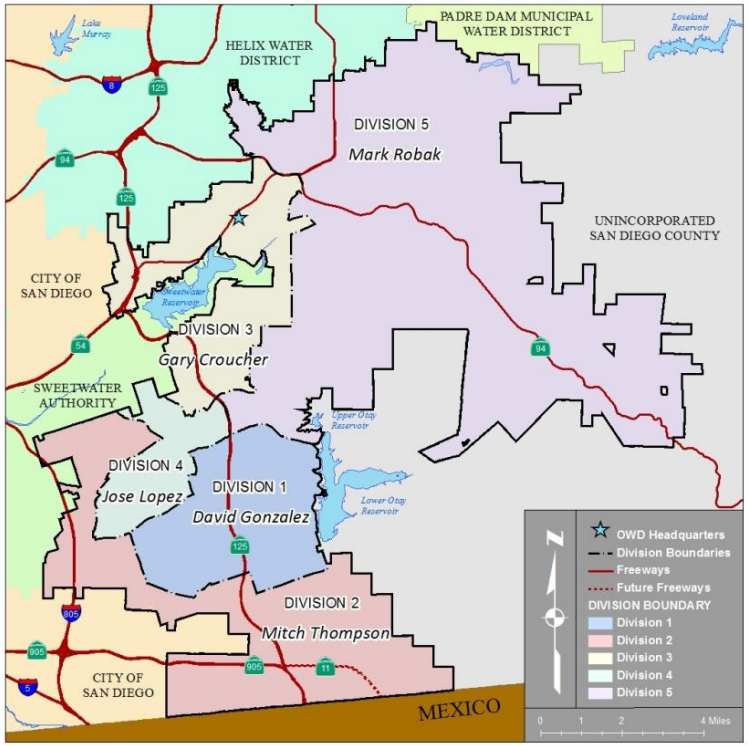
David Gonzales
Division 1

Mitch Thompson
Division 2

Gary Croucher
Division 3

Jose Lopez
President

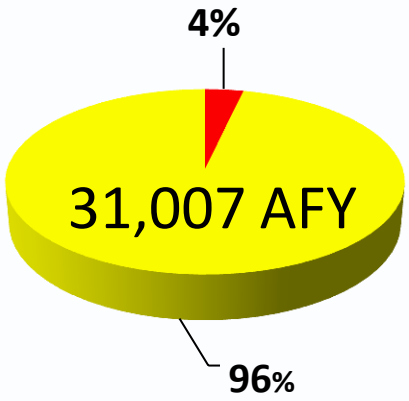
Mark Robak
Division 5



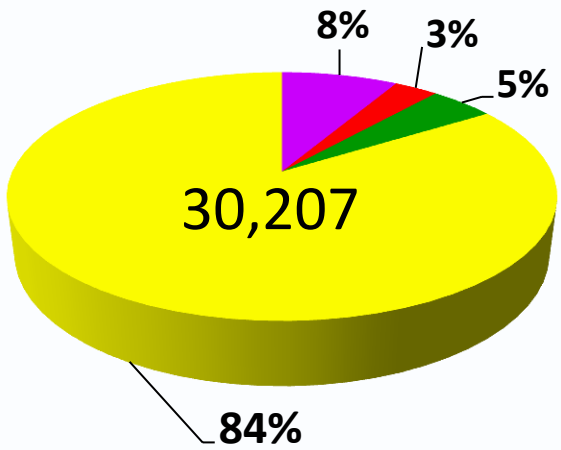
- Otay Water District was established in 1956 as a California Special District
- Governed by elected five member Board of Directors, serving five divisions
- Otay is one of 24 member agencies that make up the San Diego County Water Authority
- Serving a 125.5 square mile service area with 213,000 customers in Spring Valley, Rancho San Diego, Jamul, La Presa, eastern Chula Vista and Otay Mesa

Otay Water Supply Diversification

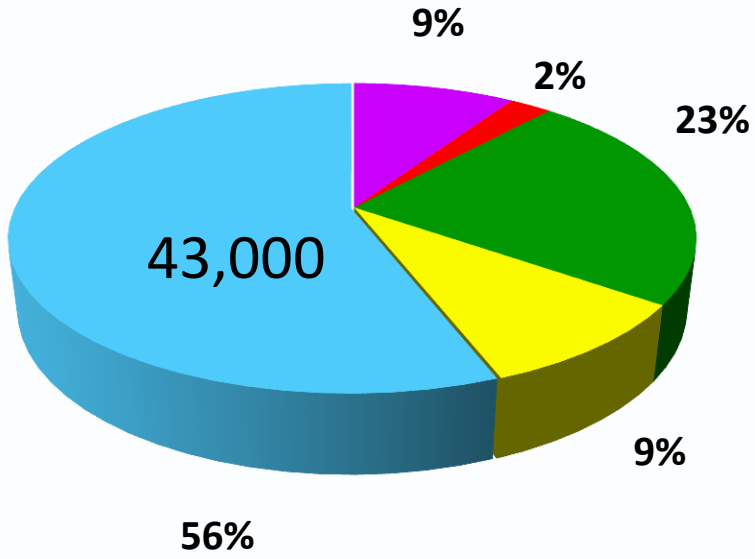
2000



2013



2020



CWA – Pipeline 4

CWA – Levy WTP

Desalination

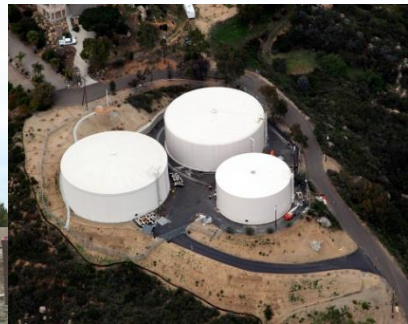
Recycled - Chapman Plant

Recycled – South Bay Plant

Otay Water District's Asset Management Program

- District has very large infrastructure
- Over $500 million in-ground assets
- Approximately 250,000 tracked assets
- Otay's infrastructure is in very good condition



Asset Management Program

Key Components

Strategic Plan Focuses on Asset Management

- Specific objectives and measurements reported and published
- Budget based on Strategic Plan priorities

Preventative Maintenance Programs

- Approximately 70% of all field work is preventative maintenance
- Extensive programs in meter and valve maintenance
  - More than 49,000 meters, 21,000 valves, 6,000 hydrants
- Targeting asset maintenance based on:
  - Age
  - Criticality (highest value work)

Leak Detection Program

- Listened for leak noise on more than
  - 6,700 meters, 3,100 valves, 77 miles (potable)
  - 371 meters, 442 valves, 31 miles (recycled)

- Identified
  - 6 service lateral leaks (not noticeable from surface)
  - 30 leaks in meter boxes
  - 22 leaks on customer properties

- The Leak Detection Program Will Save
  - 85.5 acre feet of water per year (or 2.7 million gallons)
  - $124,402 in potentially lost revenue (for $28,000 invested)

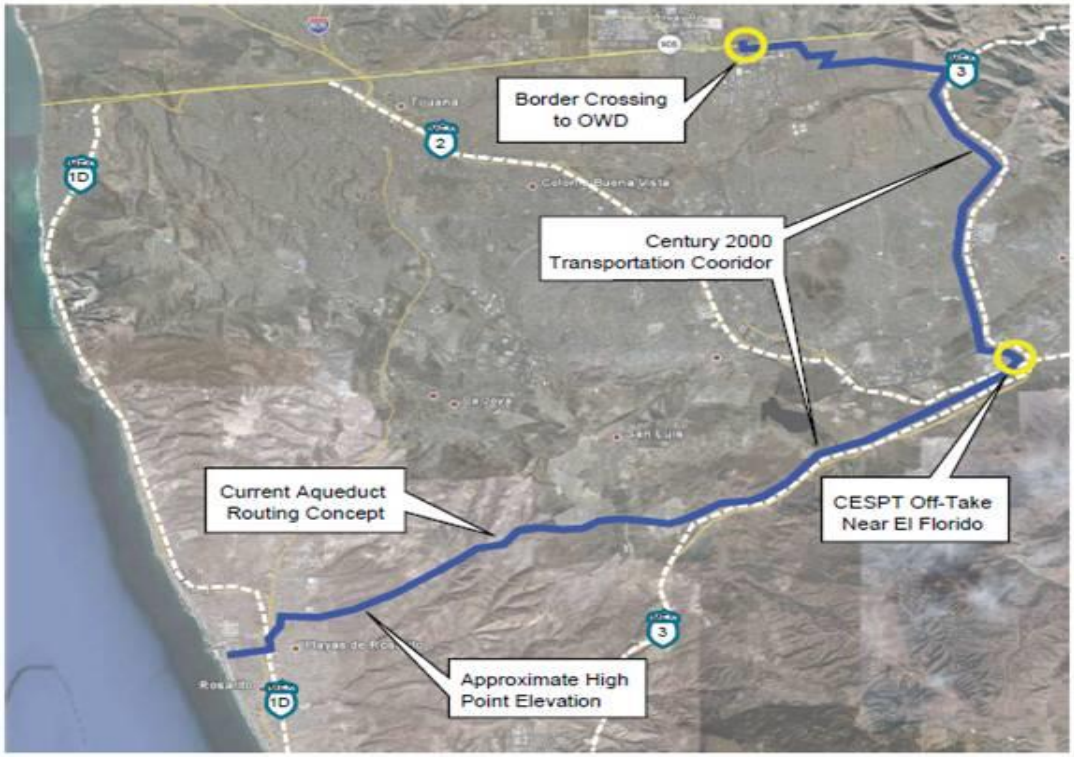
Rosarito Project Background

- 100 MGD desalination plant in Rosarito, Baja California Mexico
- Adjacent to the existing power plant
- Use of existing ocean intake and cooling ocean water from the power plant
- 25 mile pipeline to the border
- Majority of the water for Tijuana and Rosarito Beach, with the excess production water for Otay Water District
- Water quality to meet Mexican and CDPH's standards
- Proposed facilities on the U.S. side include monitoring stations, UV Treatment, and an existing storage tank (37 MGD)

Rosarito Project Update (NSC Agua)

- Land – NSC Agua has closed escrow on the land adjacent to the power plant
- Environmental reports submitted to SEMARNAT, completed the piloting of the pre-treatment process, and started planning the pipeline alignment
- CFE Agreements – Lease to take cooling water for the desalination plant, and for CFE property for the intake and outfall structures

Pipeline From Rosarito to U.S. Border



Rosarito to El Florido ~ 17 Miles
El Florido to U.S. Border ~ 8 Miles
Total ~ 25 Miles

PROPOSED AQUEDUCT ROUTING TO TIJUANA & INTERNATIONAL BORDER

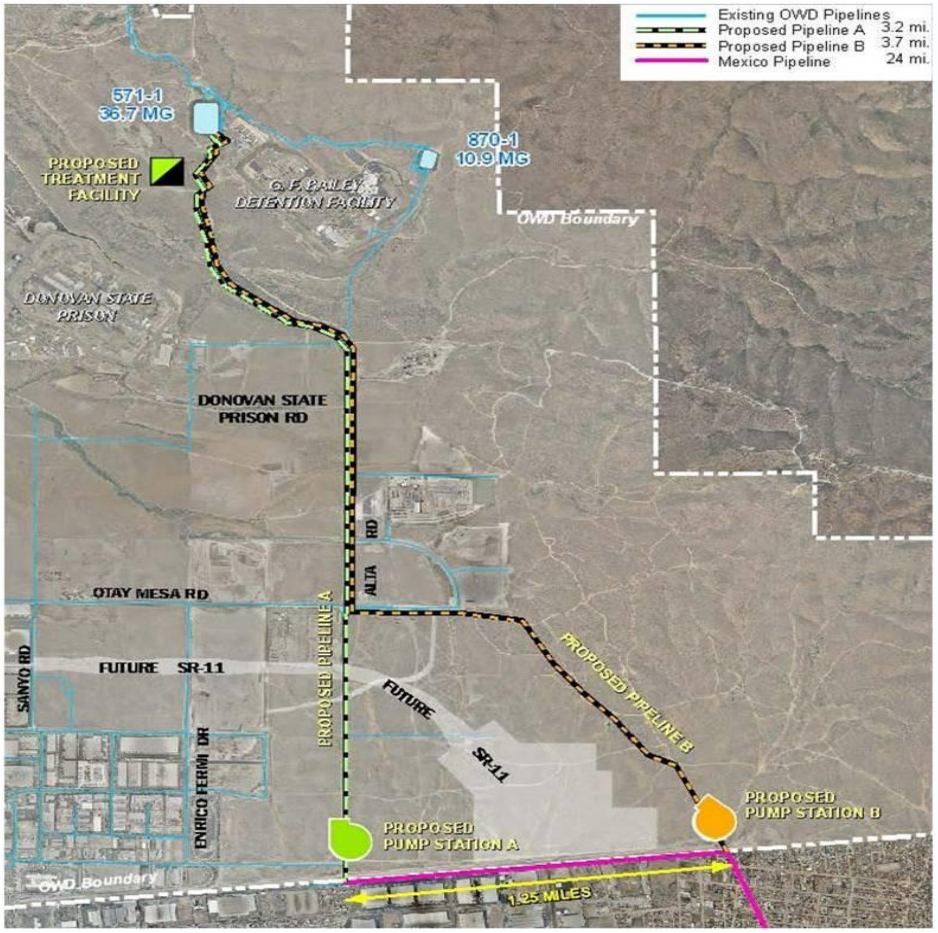
FIGURE 8

carollo Engineers...Working Wonders With Water®

Rosarito Project Progress Report

Otay

- Engineering underway, feasibility and economic reviews for the project performed
- State EIR (CEQA), Federal (NEPA), and Presidential Permit published in the Federal Register. Meeting with CDPH on approval process and additional pilot testing if needed.

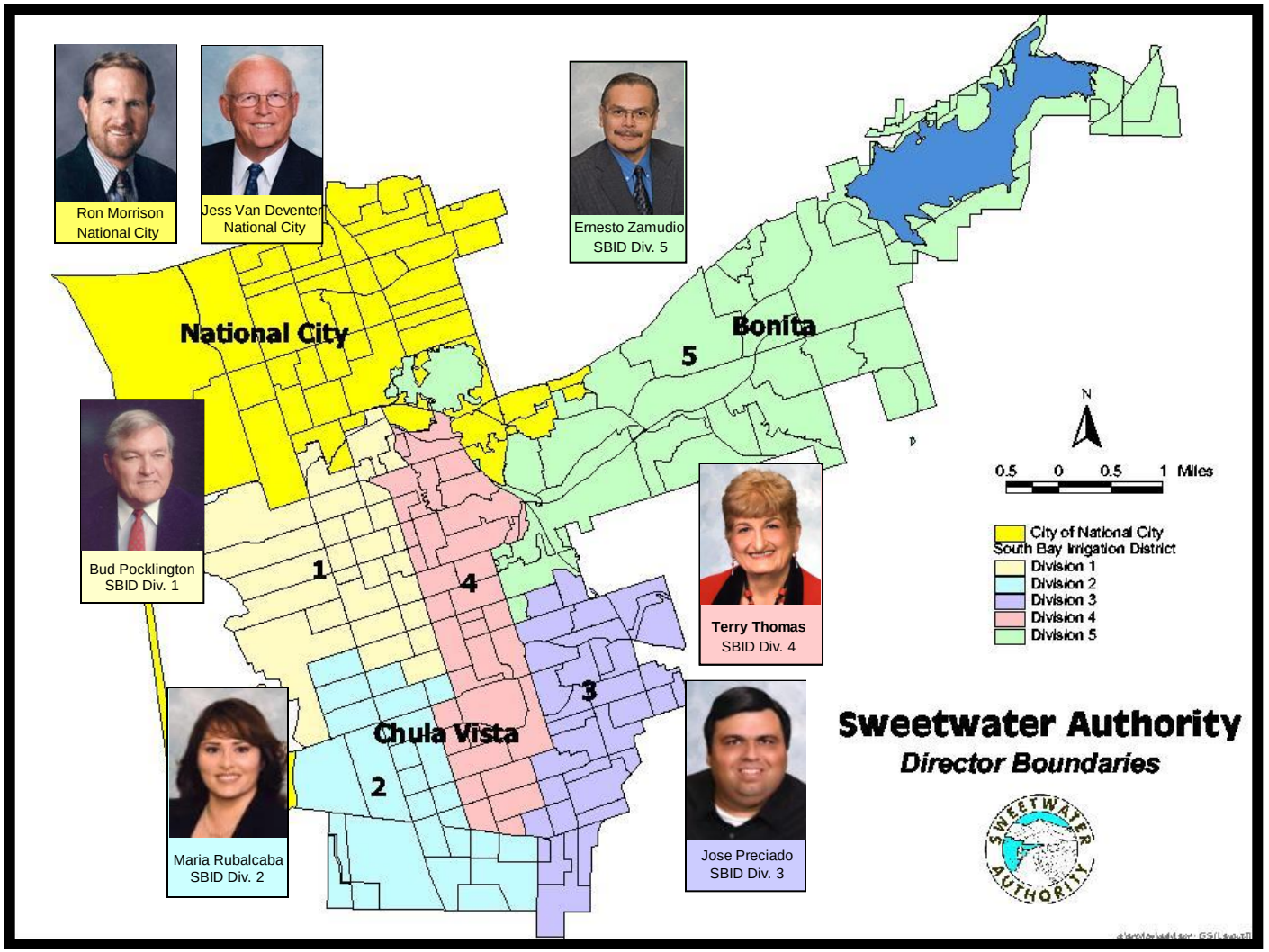


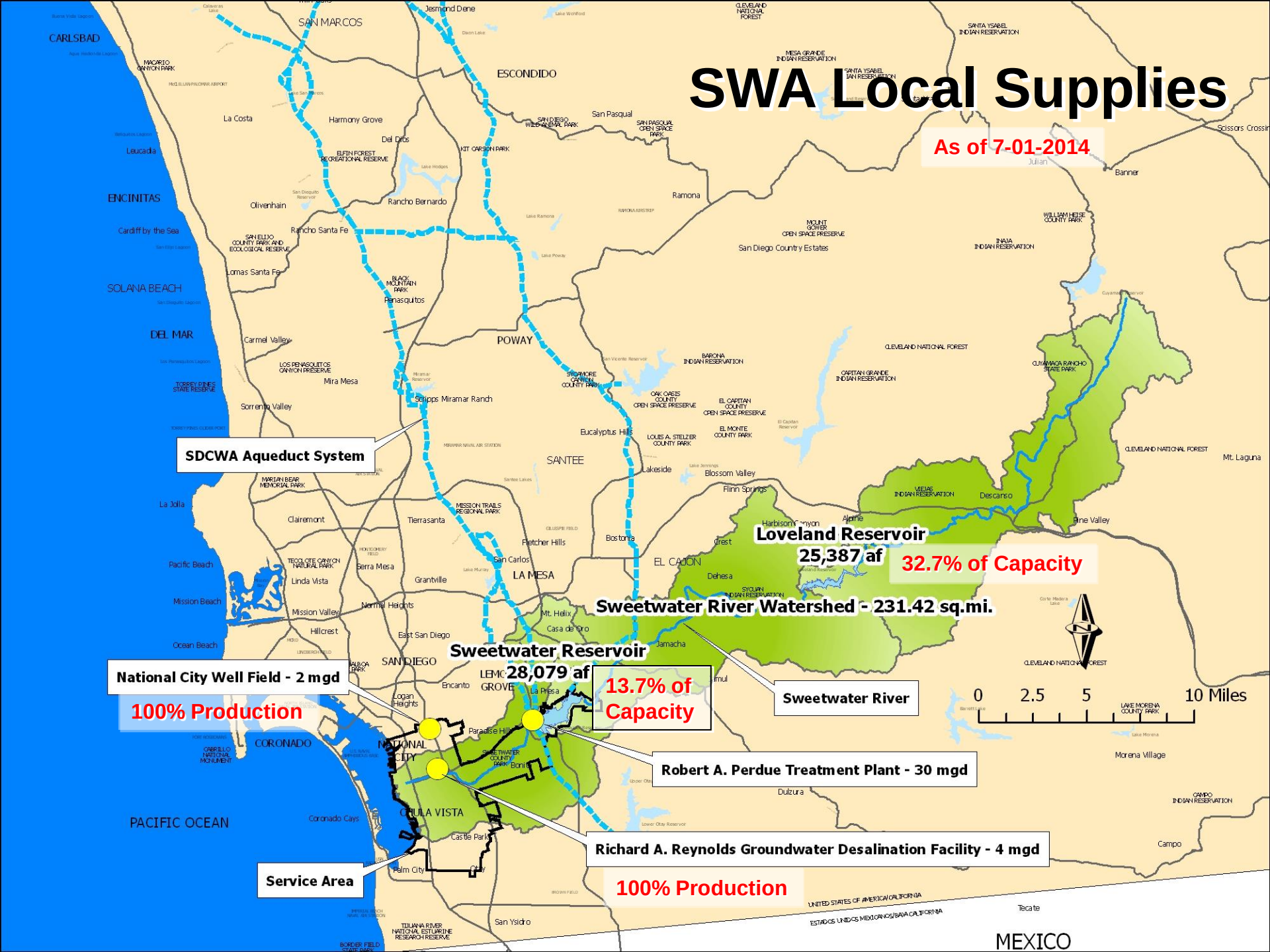
City of Chula Vista

Jim Smyth, General Manager

July 8, 2014

Our Governing Board




SWA Local Supplies
As of 7-01-2014
SDCWA Aqueduct System
Loveland Reservoir
25,387 af
32.7% of Capacity
Sweetwater River Watershed - 231.42 sq.mi.
Sweetwater Reservoir
28,079 af
13.7% of Capacity
National City Well Field - 2 mgd
100% Production
Sweetwater River
Robert A. Perdue Treatment Plant - 30 mgd
Richard A. Reynolds Groundwater Desalination Facility - 4 mgd
100% Production
Service Area
0 2.5 5 10 Miles
PACIFIC OCEAN
MEXICO
SAN MARCOS
ESCONDIDO
CARLSBAD
ENCINITAS
SOLANA BEACH
DEL MAR
POWAY
SANTEE
EL CAJON
LA MESA
CORONADO
NATIONAL CITY
CHULA VISTA
SAN DIEGO

Water Supplies

- Robert A. Perdue Water Treatment Plant
  - 100% imported water purchase
  - Providing 73% of total production
- Reynolds Groundwater Desal Plant
  - Providing 17% of total production
- National City Wells
  - Providing 10% of total production

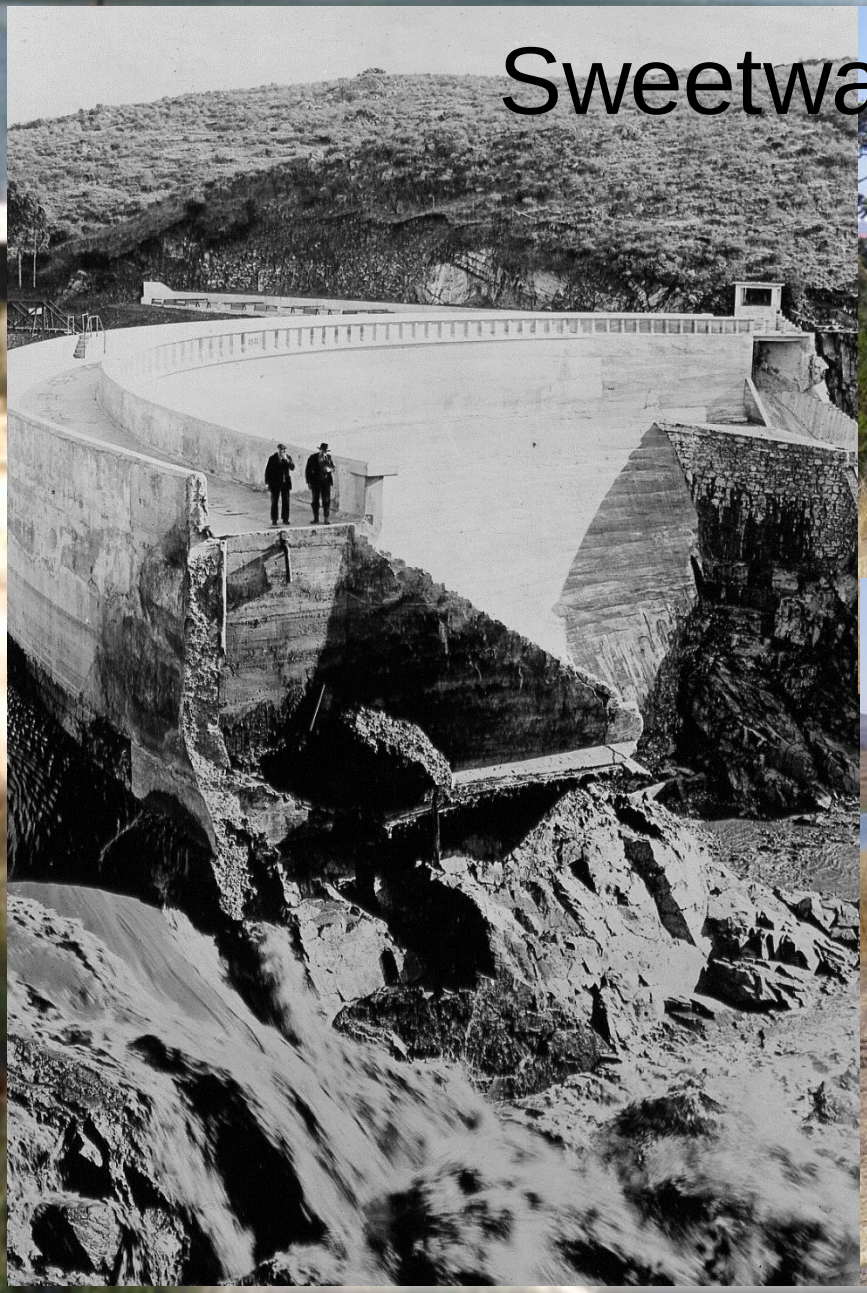
New Supply Project

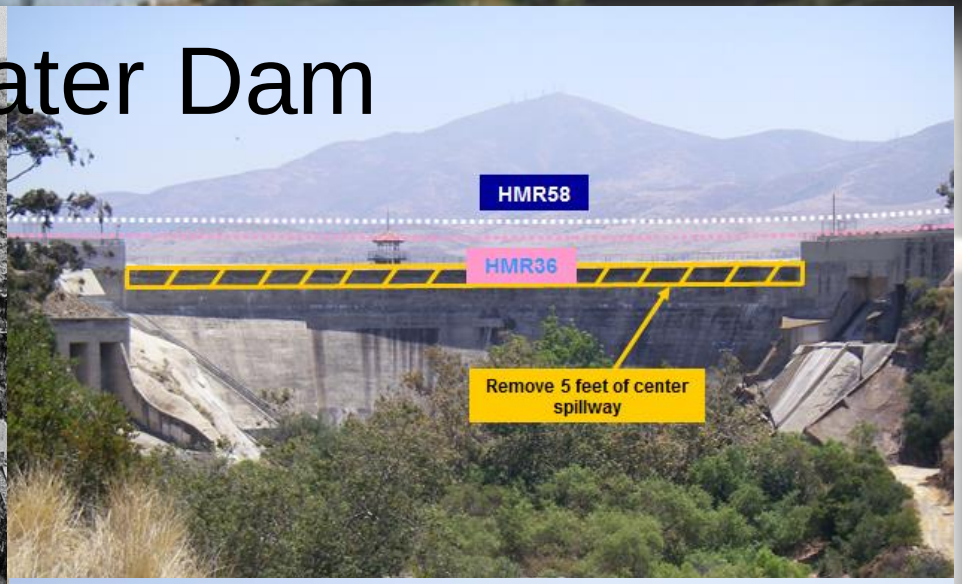
- Expand Reynolds Groundwater Desal Plant
- $38 million project
- Partnering with the City of San Diego
- Increases production or 13% increase in drought proof supply, or total 39% of total
- Have 45% grant funding and City of San Diego pays 28%
- Adds reliability

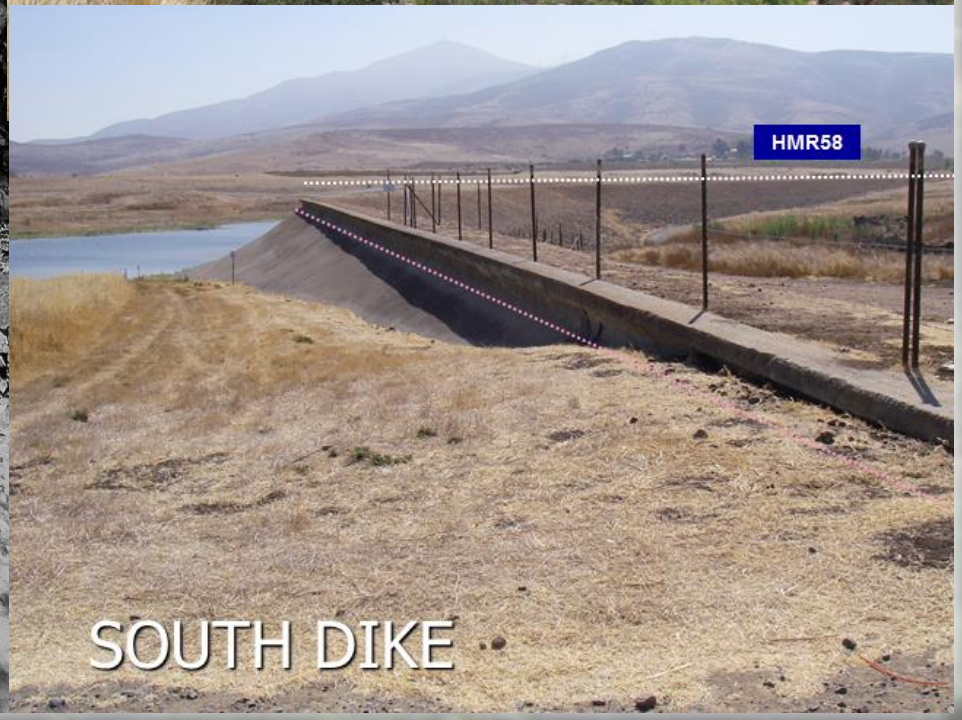
Long Term Projects

- Acquire new debt to complete deferred major capital projects:
  - Four miles of 16 and 36-inch main replacements ($21 million)
  - Replace stairway on Loveland Dam ($1 million)
  - Modify Sweetwater Dam to pass “probable maximum flow.” This includes repairs to south spillway structure and raising the south saddle dam/dike ($4 million)
  - Construct 1.2 MG water storage tank ($2.3 million)
- Analysis/Strategy of an AC pipe replacement program
- Next Improvements at Robert A. Perdue Water Treatment Plant

Sweetwater Dam







Loveland Dam

Conservation / Water Efficiency Programs

- Water-efficient rebates include:
  - Efficient toilets and clothes washers
  - Single-source gray water system retrofit
  - Turf-replacement program
  - Rain barrels, sprinkler nozzles, and other outdoor devices
- Free home or business water audits
- Other resources available at sweetwater.org, click on “Water Efficiency”


Sweetwater
Authority
Visit www.sweetwater.org
for more information