

US EPA ARCHIVE DOCUMENT

# EPA Region 9 Sustainable Water Infrastructure and Climate Change Initiative

Eric Byous

Manager, Infrastructure Office

Water Division



# Background

## **EPA Headquarters Office of Water**

- National Water Program Strategy: Response to Climate Change

## **EPA Region 9**

- Energy and Climate Change Strategy
- Created Infrastructure Office in Water Division

# Infrastructure Office

- Created in February 2008
- Responsibilities include Earmark Grant Management, State Revolving Fund, Border Infrastructure, Sustainable Infrastructure, and coordinating Water Division climate change activities



# Why focus on Sustainable Infrastructure?

- Water systems are aging, Population increasing
  - \$500 Billion payment gap over next 20 years
- Climate change will impact infrastructure needs
  - weather changes, storm severity, snowpack losses
  - rising sea levels, storm surges, saltwater intrusion
- Water infrastructure uses a large amount of energy
  - for CA: 1/5 electricity, 1/3 natural gas
  - In U.S.: 75 million metric tons CO<sub>2</sub> eq. emitted per year
- Rising energy costs, already 1/3 (on average) of utility operating costs
- Energy efficiency projects have reduced operating costs by over 30%

# Why focus on Sustainable Infrastructure?

## Energy efficiency at water/wastewater facilities....

- Reduces operating costs
- Frees up funding for capital improvements and/or hiring more operators
- Leads to improved effluent (and receiving water) quality
- Reduces greenhouse house emissions, and incrementally reduces adaptation needs



# Sustainable Infrastructure Program Goals

## **Our mission statement:**

*Promote sustainable infrastructure and reduce greenhouse gas emissions by increasing water and energy efficiency in water, wastewater, and stormwater infrastructure throughout Region 9.*

# Sustainable Infrastructure Program Goals

- (1) Use EPA's program and funding resources to implement energy and water efficiency projects and activities in Region 9 water and wastewater utilities**
- (2) Help organize other major sources of Fed/State/Local/Nonprofit funding and technical assistance for energy and water efficiency for utilities of all sizes**
- (3) Communicate local and national water industry sustainability successes and innovation throughout Region 9 and between small, medium, and large utilities**
- (4) Develop and outreach a tangible energy management process water and wastewater utilities can follow to become more energy efficient**



# Sustainable Infrastructure Program Goals - Implementation

## **Our Process: 4 Steps to Sustainability**

Step 1- Conduct Energy STAR Portfolio Manager Analysis

Step 2- Conduct Energy Audit

Step 3- Implement Recommendations/Replace Equipment

\*\*Developing an EMS program is common

Step 4- Repeat Step 1

## **Coordination with State programs and Utilities**

## **Outreach and Training**

## **Website**

<http://epa.gov/region09/waterinfrastructure>