# Water Education Foundation

## Water Leaders Class of 2008

# Water Recycling:

## Importance of Public Perception

WATER EDUCATION FOUNDATION

# What is recycled water?

*"…water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource."*

–California Water Code
Section 13050(n)

# Examples of Use

- Urban Uses and Landscape Irrigation
- Agricultural Irrigation
- Commercial/Industrial
- Environmental Uses
- Groundwater Recharge

*Examples from "Water Facts No. 23: Water Recycling," published by CA DWR, Oct. 2004*
*Available http://www.owue.water.ca.gov/recycle/docs/WaterFact23.pdf*

# Mentors to 2008 Water Leaders

- Elaine Archibald - California Urban Water Agencies
- Alf Brandt - Consultant to Assembly Committee on Water, Parks and Wildlife
- Chris Brown - California Urban Water Conservation Council
- Celeste Cantu - Santa Ana Watershed Project Authority
- Dan Carlson - City of Santa Rosa
- Grant Davis - Sonoma County Water Agency
- Joe Grindstaff – California Bay Delta Authority
- Ann Hayden - Environmental Defense
- Laura King Moon - State Water Contractors
- Michael Markus - Orange County Water District
- Mike McCollough - Northern California Golf Association
- Bert Michalczyk - Dublin San Ramon Sanitary District
- Jonas Minton - Planning & Conservation League
- Rich Nagel - West Basin Municipal Water District
- Rick Soehren - California Department of Water Resources
- Marsi Steirer - City of San Diego
- Patricia Tennyson - Katz and Associates
- Gary Wolff - State Water Resources Control Board

# Limitations Identified by Mentors

## Quality Concerns

"Compared to average potable water, no, there are no additional public health concerns with recycled water. Remember, all water is recycled."

"High standards must be maintained for recycled water used for drinking water in order to maintain public faith in recycled water."

## Economic Limitations

"Capital cost is about $10,000 per af of distribution capacity to install purple pipe. That's very expensive, and irrecoverable, for most agencies."

"New potable water sources would be more expensive to develop than new recycled water supply."

# Limitations Identified by Mentors

## Environmental Limitations

The environmental impacts "can be significant depending on the area they are at."

"Potential adverse impacts are important and need to be reduced to the greatest extent possible; however, the environmental impacts of not using recycled water are far greater than those that could be caused by its use."

## Regulatory Limitations

"The permitting is too complicated."

"Generally, the regulations don't necessarily limit recycled water use, but they don't facilitate and encourage more water recycling."

## Public Perception . . .

# Public Perception


*Rod Clement*
*Australian Financial Review, 2006*

*"Politically, the largest barriers are presented by the public's perception or misperception of recycled water projects." – Mentor*

# Public Perception

*Media & Politics: Help or Hinder?*

## Negative Sensationalism

Toilet
to
Tap


= Loss of Public Support

## Accentuate the Positives

"Water shortage solved:
**RECYCLED WATER**
to the **RESCUE**!"

- ✓ ***Purified***
- ✓ ***Renewable***
- ✓ ***Drought Proof***

= Embraced by Public

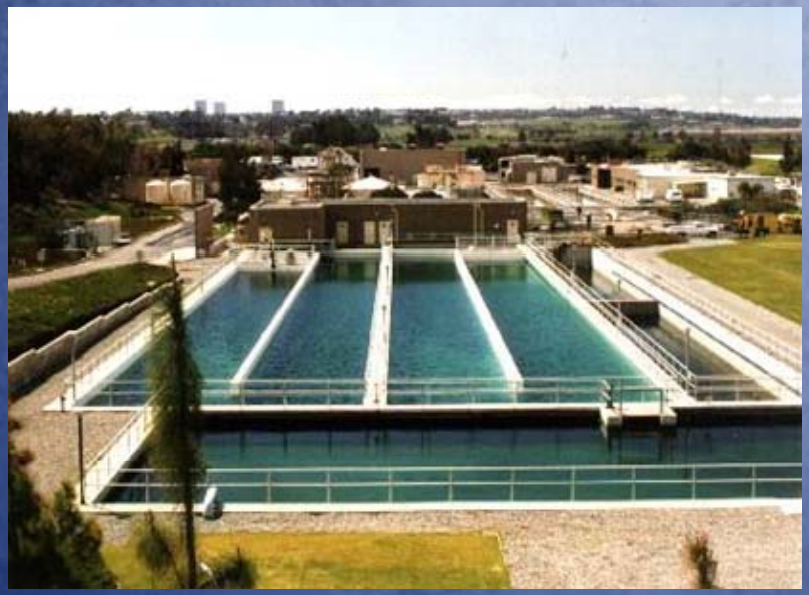
# Case Studies

Examples of successful recycled water projects identified by mentors or that may be applicable to California

- Irvine Ranch Water District
- El Dorado Irrigation District
- Orange County Water District
- Singapore's NEWater

# Irvine Ranch Water District (IRWD)

## - Irvine, California -



Non-potable reuse for: Landscape irrigation/industrial

- Scale: 19 mgd
- Years in Operation: 40+

Other Facts:

- Purple Piping: 300 miles
- IRWD meets 30% of demand with recycled water
- Users pay less for recycled water than potable

# IRWD Public Relations

*"Water is too valuable to be used only once"*

- No initial recycled water public relations campaign
- Public acceptance
  - Established in community – 40+ years
  - Investment in public relations will decrease over time
- Clear and upfront with community
  - Tours / Water Quality information on website
- Local news about recycled water mainly positive

Keys to PR: Transparency, education campaign

# El Dorado Irrigation District (EID)

## - El Dorado Hills, California -

Non-potable reuse for: Parks, schools, golf courses, front and back yard residential irrigation

- Scale: 2.2 mgd
- Years in Operation: 10+

EID's approach to recycled water has been *"…to be more user friendly as opposed to regulatory intensive"*

-Marie Gennette, EID Recycled Water Coordinator

# EID Public Relations

- Website
- Monthly orientation meeting for homeowners and contracted landscapers
- Recycled water use guidelines
  - BMPs, separation and labeling procedures, hose bibs, water hours, design, and inspection
- Two recycled water coordinators
- Welcome packet for new residents
- Quarterly mailings
- Residents go along with the use of recycled water because they have no choice

Keys to PR: Transparency, education campaign, no other option

# Orange County Water District (OCWD)

## - Orange County, California -

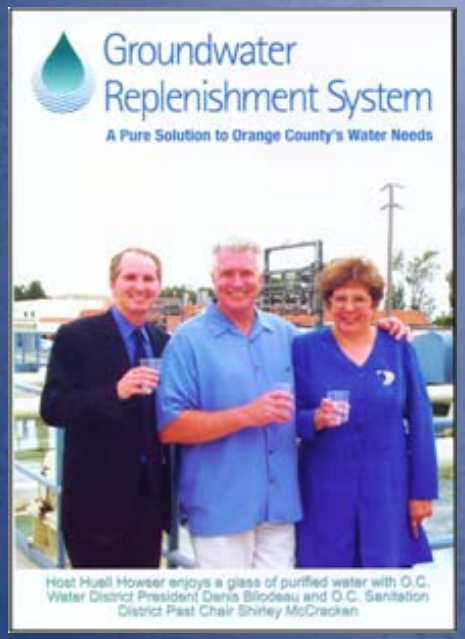
Indirect potable reuse for:
Groundwater recharge for drinking water supply, groundwater injection for sea water barrier, and industrial uses

- Scale: 70 mgd
- Years in Operation: 5+

Other facts:

- Relieves need for new ocean outfall
- Decreases reliance on imported water
- Improves groundwater quality and protects from seawater intrusion
- State of the art technology
  - Microfiltration, RO, UV Light, and Hydrogen Peroxide Treatment

# OCWD Public Relations




- Proactive face-to-face outreach with more than 1,200 presentations, 700 tours and many news stories resulted in strong community support
- Sustained Outreach Tactics/Activities
  - Community presentations
  - Tours of purification plant and recharge facility visits
  - Press releases, media coverage, media briefings on project for each new reporter

Keys to PR: Transparency, education campaign, early buy-in

# NEWater
## - Singapore -

Indirect potable reuse for: Drinking water supply and high grade industrial


- Scale: 78 mgd
- Years in Operation: 5+

Other facts:

- Autonomy of water supply
- 40-50% of supply from Malaysia
- End of Water Treaty in 2011
- Desire of outshining “first world”
- 8% annual economic growth
- Currently meeting 15% of water demand; 30% by 2011

# Singapore's NEWater Public Relations

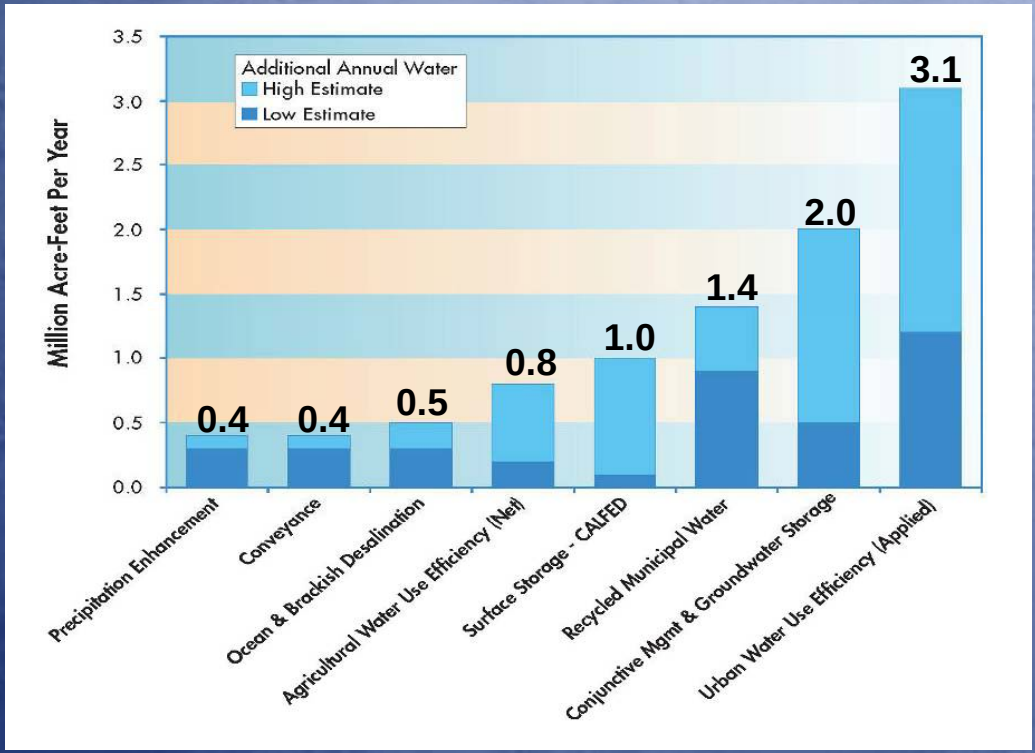
- Rigorous 2-year health effect study
- Product branding
  - NEWater
  - 3rd party audit, ISO certification
- Clear message carefully communicated
  - Based on psychology and marketing research
  - Award-winning visitor center
  - Endorsement from political leaders
  - Strong emphasis on education aspect
- Transparent communication
  - Full disclosure of ALL options
  - Effects of a drought

Keys to PR: Transparency, education campaign, early buy-in, sophisticated marketing, no other option

# Lessons Learned

- Proactive outreach campaign is vital
- Expect public resistance
- Promote transparency
- Employ professional communication & marketing strategy to:
  - Educate public
  - Manage media's message
  - Achieve and sustain political support

# What is the potential of water recycling?




*California Water Plan, Volume 2. 2005. Figure 1-1, 2030 Estimated Range of Additional Annual Water For Eight Resource Management Choices*

## Potential

- 1.4 to 1.7 million ac-ft by 2030 (280% - 340% increase)
- Can we recycle more?

## Requirements

- Investment of $11 billion
- Changes in regulations
- Continued devotion to high water quality
- Environmental protection

None of this will happen without public support.

**Public perception is key!**

# Special Thanks to….

- Water Education Foundation Board & Staff
- Water Leaders 2008 Mentor Volunteers
- Water Leaders' Sponsoring Employers

THANK YOU!

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