

# IRP Steering Committee

April 13, 2010

# 2010 IRP Process Timeline



# Strategic Policy Review Summary

# Potential Policy Approaches

- Current Approach
  - MWD and Member Agency interdependency
- Imported Focus Approach
  - MWD develops and maintains imported supplies
  - Member Agencies develop local supplies
- Enhanced Regional Approach
  - MWD Imports and Develops new supplies through District programs and/or in partnership with Member Agencies and others

# Key Findings

- Proceed with current supply programs
  - Delta improvements
  - 20 by 2020 water-use efficiency actions
  - Local resources development
- Take adaptive management approach
  - First, low-risk, no-regret actions to assess feasibility of potential new supplies
  - Second, implement feasible, cost-effective supply programs only if triggered by uncertainties

# Adaptive Resource Options

- Conservation
- Recycled Water
- Seawater Desalination
- Groundwater
- Stormwater
- Graywater

# Review of Technical Workgroup Findings

- Goal of Workgroups:
  - Provide existing and potential inventory
  - Develop technical issue papers

# Recycled Water



# Recycled Water Projects

Current Status of Projects	2020 (Acre-feet)	2030 (Acre-feet)
Existing	304,000	330,000
Under Construction	25,000	25,000
Full Design & Appropriated Funds	22,000	22,000
Advanced Planning (EIR/EIS Certified)	29,000	33,000
Feasibility	123,000	138,000
Conceptual	51,000	74,000
Total	554,000	623,000

# Recycled Water Issue Paper

- Based on US Bureau of Reclamation 2002 study: Southern California's total recycled water potential is about 750,000 acre-feet by 2040
- Challenges to developing additional recycled water supplies fall within two categories:
  1. Regional Challenges
  2. Operational Challenges

# Recycled Water Recommendations

- Coordinated Regional Efforts
  - Public outreach and political support
  - Legislation
  - Local ordinances and regulatory measures
  - Permitting process
- Operational Challenges to Resolve
  - Diurnal and seasonal demand
  - Groundwater recharge and reservoir augmentation
  - Salt and brine management
  - Retrofit costs

# Graywater

# Graywater Defined

- California Water Code §14876.
  - "Graywater" means untreated wastewater which has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthy bodily wastes, and which does not present a threat from contamination by unhealthful processing, manufacturing, or operating wastes.
  - Graywater includes wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines, and laundry tubs but does not include wastewater from kitchen sinks or dishwashers.
- Graywater is not recycled water.

# Graywater in California (2007 CPC, Appendix G)

1. Only from showers, bathroom faucets, and clothes washers. Excludes water from toilets, kitchen sinks, and dishwashers.
2. ~~Only used for subsurface drip irrigation.~~
3. Must discharge to the sewer.
  - Graywater-cistern combination systems not allowed in CA.
4. Requires air gap if connected to a potable water system.
  - ~~Backflow prevention devices not allowed~~
5. Must never surface or become airborne.
6. Cannot be within ~~5 feet~~ of a neighboring property.
7. ~~Cannot be used for vegetables.~~

# Graywater Challenges

- Institutional
  - Regulatory Constraints, Undocumented Use
- Technological
  - Subsurface irrigation, Drain-line Carry, Reduction of Recycled Water, Sanitation Systems, Soil Salinity
- Public Acceptance
  - Consumer competence and dedication, Public Health
  - Graywater is not recycled water

# Recent Legislation and Activity

- SB 1258 (Lowenthal, 2008)
  - Requires CA Department of Housing and Community Development (HCD) to adopt and submit to the Building Standards Commission (BSC) for approval any building standards for graywater systems for indoor and outdoor use.
  - Terminates authority of DWR to adopt graywater standards for residential buildings upon BSC's approval of standards.
- Emergency standards as of August 2009
- Emergency standards made permanent standards as of January 2010
  - (Chapter 16A of 2007 California Plumbing Code)



# New Regulations (January 2010)

- Building and Standards Commission adopted Final Express Terms, on emergency basis for early adoption CA Plumbing Codes (18 months earlier than standard)
  - **Introduces tiered regulation**
    - Clothes Washer-only system does not require permit if meets standards
    - Simple ( $\leq$ gpd) and Complex ( $>250$  gpd) systems require permit and plans unless exempted by Enforcing Agency
  - **No more requirement for subsurface drip irrigation**
  - ***Indoor* graywater must meet same quality standards as Title 22 tertiary recycled water**
  - **Up to local enforcing agencies to interpret**

# Estimated Graywater System Costs Under Old Regulations (\$2009)

	<b>Service Area Project #1 (approved)</b>	<b>Service Area Project #2 (requires additional retrofits for approval)</b>
<b>Capital Cost</b>	<b>\$20,750</b>	<b>\$14,200</b>
<b>Water Savings</b>	<b>71,000 gallons /year</b>	<b>31,200 gallons /year</b>
<b>Capital Cost Per Acre-Foot, over 15 years*</b>	<b>\$95,200 /AF</b>	<b>\$148,000 /AF</b>
<b>Repayment Time of Capital Cost</b>	<b>94 years</b>	<b>146 years</b>

\*Excludes costs for annual inspection, operation, and maintenance

# Graywater Recommendations

- Overall

- Metropolitan should not take an active role in providing financial incentives for installing graywater systems because of:
  1. High costs (under previous design standards)
  2. Lack of data
  3. Long-Term Uncertainty in the regulatory environment
- Further research and development for graywater is needed
- When new graywater regulations are adopted, reevaluate the cost-effectiveness of incentives

# Graywater Recommendations

- Legislation

- Changes to facilitate permitting process
- Model guidelines to increase consistency from city to city

- Education

- Assist public information efforts to build public support for graywater
- Use the public's interest in graywater as an opportunity to promote other water efficient landscaping measures

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