FOURTH WORLD WATER FORUM
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TOPIC- SESSION FT3.39:
“CHALLENGES AND PERSPECTIVES OF WATER IN MEGACITIES”

Case Study: City of Los Angeles

Presented by: Mr. Timothy Brick,
Board Member, Metropolitan Water District of Southern California

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Overview

- City of Los Angeles and Metropolitan Water District of Southern California: a unique partnership
- Water Management Challenges: a parallel trail
- Common-ground Solutions: water-use efficiency is a cornerstone
- The Road Ahead
Water System Overview

- **LADWP’s Water System:**
  - 544-kilometer (338-mile) Los Angeles Aqueduct system provides 50% of City’s water supply
  - Colorado River Aqueduct and State Water Project supplies provide, on average, 35% of City supply
  - Local groundwater provides 15% City’s water supply
  - 11,424 kilometers (7,100 miles) of distribution pipeline
Water System Overview

- **Metropolitan’s Water System:**
  - 1408 kilometers (875-miles) of pipelines, tunnels and canals
  - 5 regional water treatment plants combined capacity 113 cubic meters per second (4,000 cubic feet per second)
  - 389 kilometers (242 miles) Colorado River Aqueduct system
  - Storage and regulating reservoirs over 1,233 million cubic meters (one million acre-feet)
  - 15 hydro electric plants over 100 megawatts
Current Water Supplies

City of Los Angeles

- Local Wells: 13%
- Recycled Water: 1%
- Conservation: 15%

Los Angeles Aqueduct: 41%

Demand: 814 million cubic meters/yr (660,000 acre-feet/yr)

MWDSC

- MWD: 30%
- Local: 39%
- Conservation: 14%
- Storage and Transfers: 1%

Colorado River Aqueduct: 13%

State Water Project: 33%

Demand: 5,385 million cubic meters/yr (4.366 million acre-feet/yr)
Water Management Challenges

• Increasing demand
• Balancing environmental needs
• Competing uses
• Stringent water quality regulations
• Infrastructure reliability
• Climate change
Local/Regional Solutions

- Integrated Regional Planning
- Local resource development
- Intrastate coordination
- Water transfers
- Capital improvement programs
- Legislation
- **Water-use efficiency**
An Integrated Approach to Water Management Demonstrates the Potential for Multiple Benefits

Los Angeles Today

- Too Much Water
  - Flood Control: Retrofitting LA River
- Too Little Water
  - Water Supply: Finding New Sources of Water
- Too Much Green Waste
  - Sanitation: Trucking Green Waste
- Too Much Wastewater
  - Stormwater Pollution: Mitigation Measures
- Too Few Jobs
  - Economy: Create and Support Eco-Technologies
- Too Much Energy Demand
  - Air Quality and CO₂ Mitigation: Conservation Measures

Dis-Integrated Approach wastes resources, duplicates efforts and embraces unsustainable solutions

Los Angeles Potential

- New Water Source
  - Sanitation Mulching
  - Reduces Solid Waste
- Air Quality and CO₂ Mitigation
  - Tree Planting
- Reduced Water Demand
  - Flood Control
- Improved Water Quality
  - Cisterns Water Supply
- Reduced Run-Off
  - Stormwater Management
- Integrated Approach also creates jobs and supports emerging eco-technologies

Integrated Approach wastes resources, duplicates efforts and embraces unsustainable solutions
Existing Water Conservation Measures for Los Angeles

• Awareness/Support Measures
• Residential
• Commercial/Industrial/Institutional
• Landscape
• System Maintenance
WATER USE AND GROWTH IN LOS ANGELES

Actual Water Demand vs. Population

Fiscal Year

Acre-Feet x 1,000

Population x 1,000,000

70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04
WATER USE AND GROWTH IN LOS ANGELES
The Road Ahead

- Scarcity of water in southern California requires continued commitment to water-use efficiency
- Los Angeles and MWDSC will continue to take leadership roles in this area for the region
- Integrated solutions will be important in regional water resources management
- Government’s involvement is important to success
- Public information/education is critical for meeting resource management objectives