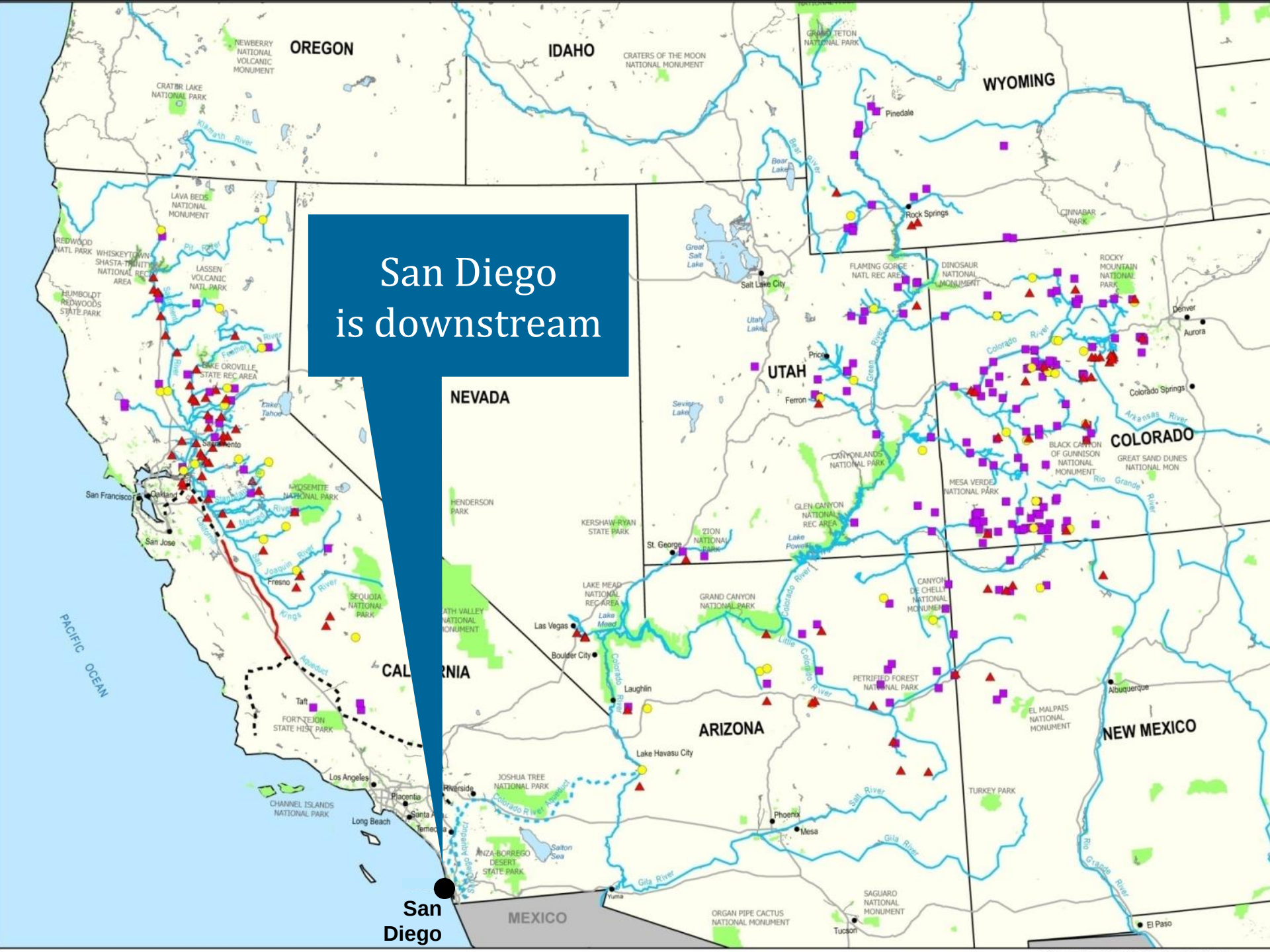
Water Purification | Demonstration Project

City of San Diego
PUBLIC UTILITIES
Water & Wastewater

Exploring Water Reuse Options in San Diego

Jennifer Casamassima
Recycled Water Program Manager
May 10, 2012


San Diego
is downstream
OREGON
IDAHO
WYOMING
NEVADA
UTAH
COLORADO
ARIZONA
NEW MEXICO
CALIFORNIA
MEXICO
PACIFIC OCEAN
San Diego

Water Supply Challenges

- Limited local supplies
- Increasing cost of imported water
- Pumping restrictions
- Recurring drought conditions
- Internal population growth
- Natural disasters

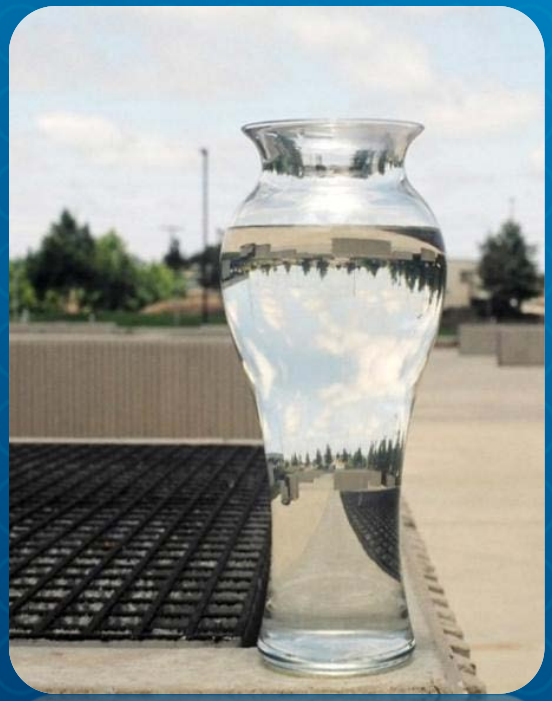
Water Purification Demonstration Project

Components:

- Operate 1 MGD facility
- San Vicente Reservoir study
- Define regulatory requirements
- Conduct energy and economic analysis
- Public education and outreach

Outcomes:

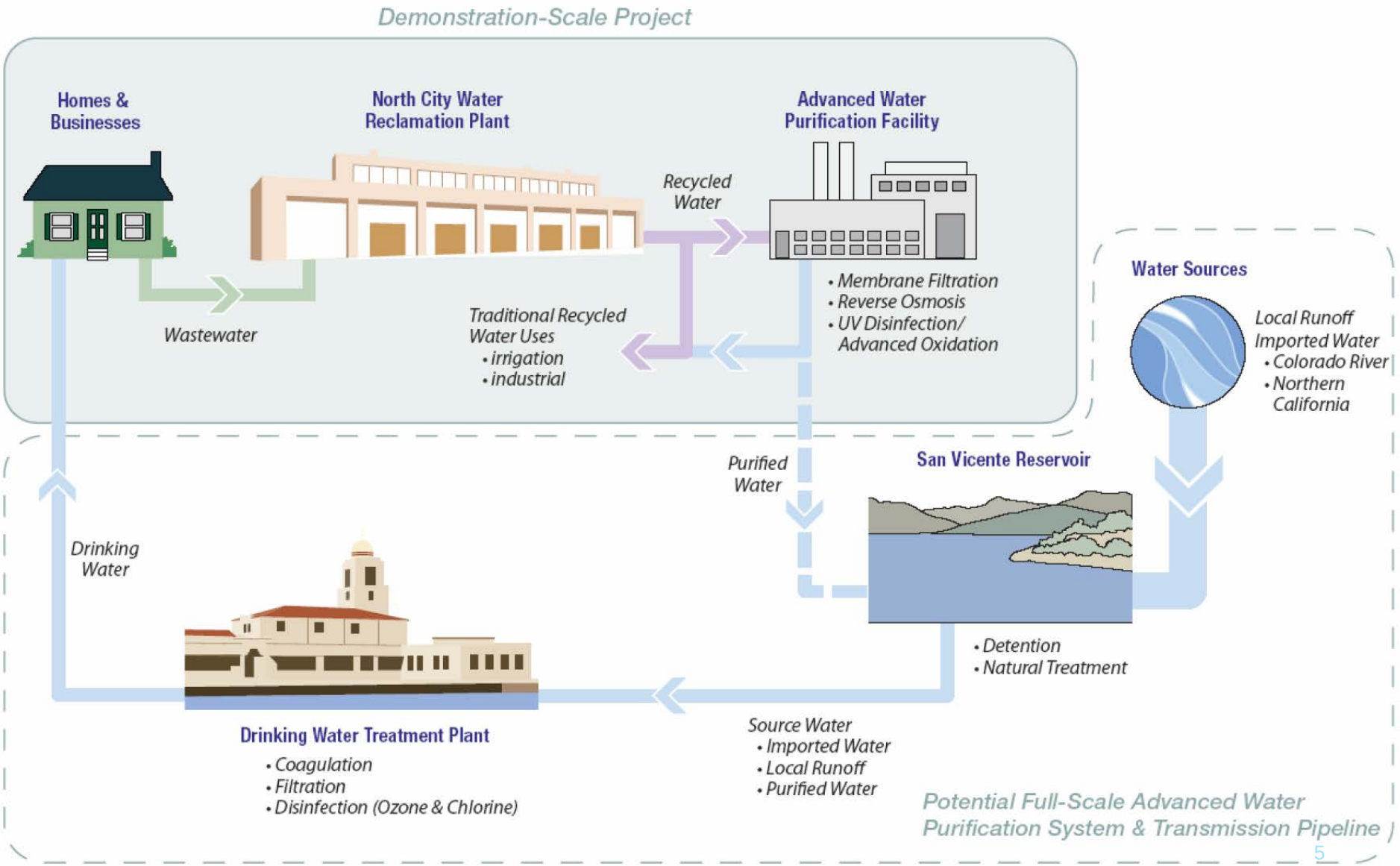
- Validate treatment process
- Gain regulatory approval
- Evaluate cost
- Public acceptance



City of San Diego's

Water Purification Demonstration Project

Purification Process



A look inside…

This video explains the treatment processes

Recycled Water Study

During 2010 Point Loma Permit Renewal Process

- San Diego Coastkeeper and San Diego Chapter of Surfrider Foundation agreed to not oppose the Waiver
- City agreed to conduct Recycled Water Study
- Cooperative Agreement was executed in early 2009

Objectives

- Identify regional opportunities to increase recycling of wastewater for Indirect Potable Reuse and Non-Potable Reuse
- Determine the extent recycling can reduce wastewater flows to the Point Loma Wastewater Treatment Plant
- Determine implementation costs

Planning Horizon: Year 2035

Final Draft Study Report

- Summarizes two-year effort and findings
- To be presented to City Council in June 2012

Stakeholders

- City of San Diego
- San Diego Coastkeeper
- Surfrider Foundation
- Metro Wastewater Participating Agencies
- Independent Rates Oversight Committee
- San Diego County Water Authority

Key Tasks

- Wastewater system evaluation
  - Determined total system flow for Year 2050
  - Determined strategic locations to divert flow to new or existing reuse facilities
- Conducted market assessment of potential non-potable reuse (NPR) customers (both City retail and wholesale) and facilities required to serve new areas
- Evaluated indirect potable reuse (IPR) opportunities and related facilities
- Developed reuse alternatives that integrate both increased NPR and new IPR
- Estimated capital and operational costs associated with new reuse facilities

Recycled Water Study Next Steps

Financial and Policy Considerations

- Determine wastewater/water cost allocation & rate impacts
- Further evaluation of potential joint-agency projects

Technical Considerations

- Perform detailed site studies
- Integrate with other water and wastewater master planning efforts

Regulatory Considerations

- Coordinate with 2015 NPDES permit renewal process
- Coordinate with regulatory framework developed in the City's Water Purification Demonstration Project

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Jennifer Casamassima
City of San Diego
Public Utilities Department
(619) 533-7402
jcasamassima@sandiego.gov

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@PureWaterSD

YouTube Purewatersd