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AAEES West Coast Annual Conference

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City of Los Angeles
LASanitation

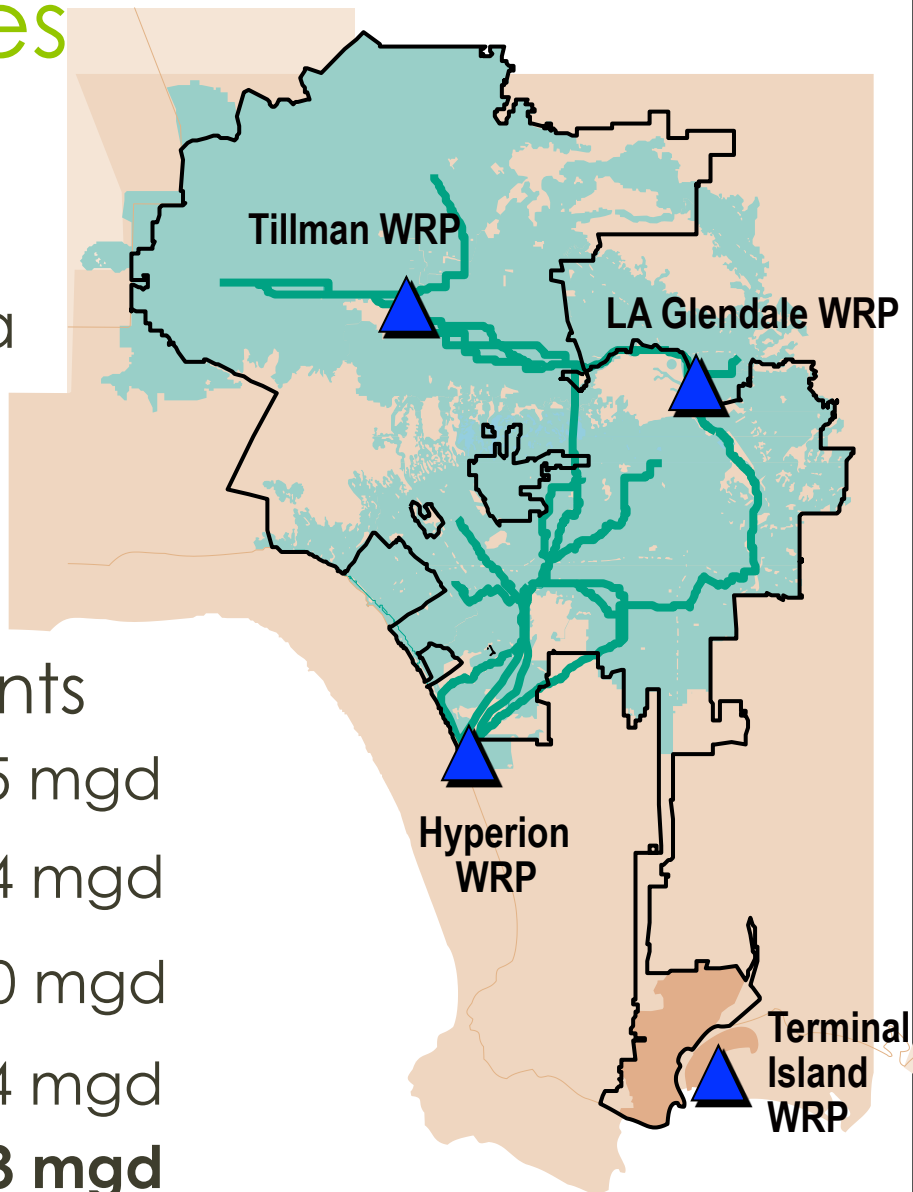
City of Los Angeles Clean Water Program

Sewershed

- 650 sq mile service area
- 6,500 miles of sewer
 - Laterals
 - Trunklines

Water Reclamation Plants

- Tillman WRP 35 mgd
- LA-Glendale WRP 14 mgd
- Hyperion WRP 260 mgd
- Terminal Island WRP 14 mgd
- TOTAL (2016/17) 323 mgd**



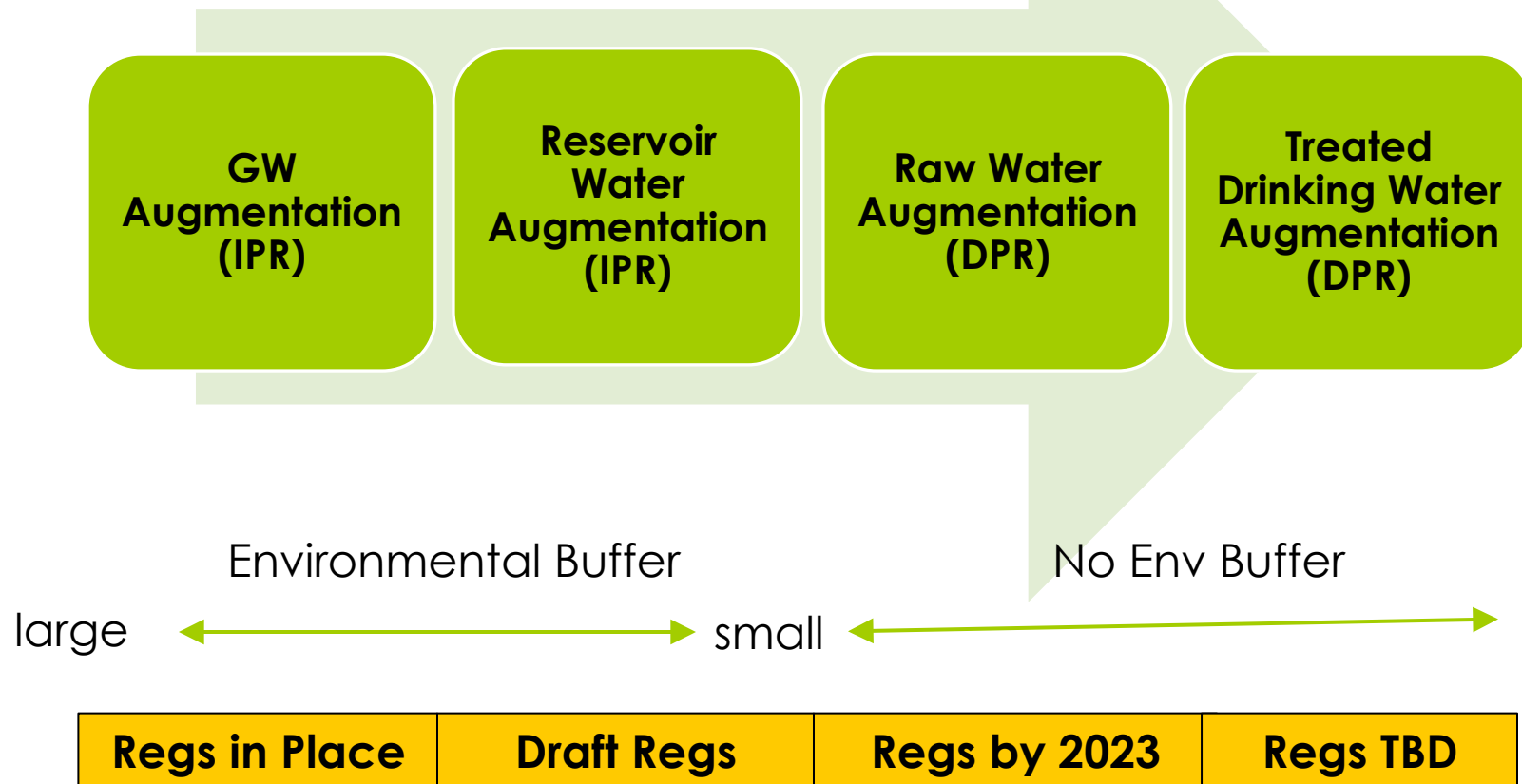
City of Los Angeles Recycled Water Current Projects

- TIWRP 16 mgd AWPf
 - Dominguez Gap sea water intrusion barrier
- DCT
 - 2018 - Ozone demonstration plant 10 mgd
 - 2023 - GWR 24 mgd
- Hyperion
 - 2018 - MBR Pilot
 - 2020 - 5 mgd AWPf Progressive Design Build

Potable Reuse Background

- 2010 - SB918 directed SWRCB to investigate feasibility of developing uniform water recycling criteria for DPR
 - Convene an expert panel
 - Report to legislature by Dec 2016
- 2013 – SB322 created an advisory group to advise expert panel and SWRCB
- 2016 - SWRCB Report to Legislature found it is feasible to develop RW criteria for DPR
- 2017 - AB574 requires SWRCB to adopt statewide regulations for raw water augmentation by Dec 2023

Potable Reuse Compendium



Advisory Panel

- 15 Members
- Stakeholder Representation
 - SWRCB and USEPA
 - Water and Wastewater Agencies
 - Environmental Groups and EJ Groups
 - Business Community
 - Taxpayer Advocates

Recommendations

- WW Source Control and Operational Optimization
- AWT Operator Certification
- Technical, Managerial, and Financial Capability
- Monitoring and Outreach
- DPR Research
- Bioassays

WW Source Control and Operation Optimization

- DPR integrated system = sewershed, ww treatment, AWT, DWT, distribution
- DPR regs should include ww source control programs and operation and optimization plans
 - Biological nutrient removal (BNR)
 - Flow equalization
 - Management of return flows from solids processing
 - Improved source control and pretreatment

Operator Certification

- Critical to achieve public acceptance, build trust, maintain confidence
- Recommend implementation of an AWT operator certification program
- Applicable to operators of DPR projects
- Program development underway w AWWA and CWEA

Technical, Managerial, Financial (TMF) Capacity

- TMF assessment needed for utilities seeking to implement DPR projects
- Assessment of **Technical and Managerial** ability required for all DPR projects
- Added Assessment of **Financial** ability required for Drinking Water Augmentation (flange-to-flange) projects

Monitoring and Outreach

- Robust monitoring regimen should be required
 - Continuous
 - Include wastewater quality
 - Include water quality
 - CECs
 - Regulatory compliance
- Transparency - results made available to public
 - Consumer Confidence Report (CCR)

Regulatory Approach to Environmental Impacts

- DPR projects may impact environment – RO concentrate discharge
- Multiple local, state, and federal regulatory agencies involved in permitting DPR projects
- Need coordinated approach in order to advance projects

Additional Research

- Consider expert panel recommendations and identify research topics that need further study
- Research low dose exposure to CECs
- Evaluate use of Biological Assessments (Bioassays)
 - human tissue analysis to determine biological activity of a chemical can provide measurements of toxicity

Supplemental Recommendations

- Public outreach
- Phasing of PR regulations
- Comparison of alternatives
- Determining feasibility – Triple Bottom Line
- Environmental Justice
 - Infrastructure impacts on communities
 - Equitable access to sustainable water supply
- Effects of DPR on environmental flows
- Water rates
- Expert and Advisory Panels

Questions