Source of Recycled Water

- Produced at the Burbank Water Reclamation Plant (BWRP)
  - In use since 1967
  - Treats 8.5 MGD of sewage
  - Produces Tertiary Treated Wastewater
Recycled Water Uses

- Surface Irrigation
- Cooling Tower Makeup
- Industrial Processes
- Structural/Wildfire Fire Fighting
- Decorative Fountains
- Dust Control
- Sewer Flushing
- Cleaning roads, sidewalks, and outdoor areas
Power Generation

- **Magnolia Power Project**
  - 310 MW natural gas-fired combined cycle generating plant
  - Uses our recycled water for:
    - Cooling Towers
    - Heat Recovery Steam Generator (demineralized)

- **Lake One Power Plant**
  - 45 MW natural gas-fired “peaker” plant
  - Uses our recycled water for:
    - Cooling Towers
Recycled Water Usage

- Power Generation: 36%
- Irrigation: 45%
- HVAC Cooling: 9%
- External Agencies (Proposed): 9%
- Miscellaneous: 1%

~3300 AFY in Sales

Source: Burbank Leader
Major Partners

- Burbank Town Center
- Burbank Unified School District
- Caltrans SR-134 and I-5
- City of Burbank Parks and Recreation
- Costco Wholesale
- Debell Golf Course
- Empire Center
- Fry’s Electronics
- Hollywood Burbank Airport
- Ikea
- Los Angeles Department of Water and Power
- Providence Saint Joseph Medical Center
- Talaria Burbank
- Valhalla Cemetery
- Walt Disney Studios and ABC 7
- Warner Brothers
- Worthe Real Estate Group
Future Partners

- Avion Burbank
- Warner Bros. Second Century Project
- Burbank Community Chevrolet
- Hollywood Burbank Airport Replacement Terminal
- Caltrans I-5 Realignment
- Burbank Channel Bikeway

Source: Avion Burbank
Recycled Water Exchange with City of Los Angeles

Source: LADWP
Losing Half of your RW Supply
Beachwood Pump Station

- Burbank Sewage Flow
  - Northern half of the City reaches the BWRP under gravity conditions
  - Southern half flows into the Beachwood Pump Station
- BWRP treats 8.5 MGD
  - Design Capacity of 12.5 MGD, requires upgrade
- Pump Station and Force Main Upgraded in 2015
Pump Station Failure

- Complete Failure of Pumping Capability in April 2018
  - Three pumps failed one at a time across a number of months
  - Noise/vibration issues
  - Long lead times for repair materials
  - Limited availability of repair contractors
- Pump Station Bypassed to City of LA North Outfall Sewer ($$$)
Affected Supply and Demand

Max Day Demand

Average Day Demand

Available RW Supply

1700 gpm deficit
Supply Mitigation Efforts

- Rain For Rent Temporary Pumping
  - Expensive
- BWRP Optimization
  - Difficulty with permit compliance due to 50% reduction in influent
  - Focused on minimizing exceedances
More Supply Mitigation

- Lake Street GAC Plant (Powerplant Only)
  - Powerplant Demands typically 500 gpm
  - Lake Street Well 7 can produce up to 1050 gpm of raw groundwater

- Glendale Interconnect
  - Part of the RW system can be supported through RW provided by GWP

- Potable Makeup
Demand Mitigation

- Focused Targets
  - Magnolia Power Plant
  - City Owned RW Sites
    - Parks and Recreation
    - Medians, City Facilities
    - Municipal Golf Course
  - Burbank Unified School District

- Private Customers Not Targeted
  - Valhalla Cemetery
  - Empire Center
  - Disney
  - Warner Brothers
  - Hollywood-Burbank Airport
  - HVAC Cooling Tower Customers
Magnolia Power Plant

- Must always have water
- Regulatory Requirements
  - Uptime
  - Must maintain 24 hours of cooling water at max power demand
- Asked MPP to dial back usage around noon.
- Developed new Operating Procedures to take RW
- MPP Operators can turn on GAC Plant at press of a button.
AMR to the Rescue

Largest Parks – 48 Hour Demand

Largest Schools – 48 Hour Demand

6/11/18 was a Monday
Results

Summer Diurnal Demand

Available RW Supply

Average Day Demand
Lessons Learned

- Recycled Water is a Finite Commodity
- Develop relationships with your customers, they are eager to help out.
- Storage Needed in the Valley
- AMR Data can help customers optimize their usage
- Demand Management
- Consultant is conducting a Recycled Water System Optimization Study
- Avoid letting all your pumps and backup pumps fail
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