CITY OF LINCOLN

NON-POTABLE WATER USE PLANNING AND IMPLEMENTATION

By: Matthew J. Wheeler, P.E.
Lincoln Community Development Director
Matthew.Wheeler@lincolnca.gov
Open Space & Conservation Element
City of Lincoln Population

- Current = 48,000
- Build Out = 120,000

Population Growth Trend Within City of Lincoln
UPCOMING DEVELOPMENT PROJECTS IN LINCOLN AND SPHERE OF INFLUENCE

Specific Plans

- Village 7: 703 acres; 3,285 dwelling units (DU)
  - Annexed in 2013
  - First Phase Development anticipated in 2017

- Village 1: 1,832 acres; 5,641 DU
  - Annexation of 1,700 acres complete in August 2016
  - First Phase Developments anticipated in 2017

- Village 5: 4,787 acres; 8,200 DU
  - Approx 4-million sqft Employment & Commercial
  - Specific Plan & EIR anticipated Spring 2017
Water Demand Characteristics

- Build-out Demand – 36,000 AFY
- Peak Day Demand (67 MGD)
  - 57 MGD Potable
  - 10 MGD Public Non-Potable
2013 Monthly Demand

- PCWA Max Day - 18.50 MG - ~2021
- Total Max Day Est. - 20.5 MG
- PCWA Max Day - 14.49 MG - 7/24/2013

- Recycled Water
- Raw Water
- PCWA
- NID (est.)
- GW
- Estimated Use at Contract Limit
2016 WATER MASTER PLAN
INFORMATION

Identified Sources to meet Non-Potable Demands

- Reclaimed Water
- Non-Potable Groundwater Wells
- Raw (Ditch) Water
  - PCWA
  - NID
City’s Wastewater Treatment and Reclamation Facility (WWTRF) commissioned in 2004

Treatment to Disinfected Tertiary quality

Master Reclamation Permit (R5-2005-0040-01) and Waste Discharge Permit R5-2014-0007 (NPDES No. CA0084476)

City’s use of recycled water governed by water right order (WR0066)

WWTRF Build-Out Capacity = 12 MGD ADWF

Current design capacity = 5.9 MGD ADWF
Regional WWTRF with connection of Placer County (SMD-1) completed in 2015

Agricultural irrigation (effluent) primary disposal method currently

Requirement to discharge to Auburn Ravine during “shoulder months”

Recent commission of Reclaimed Water Transmission Main in City and conversion of Foskett Park

Negotiating agreement with Industrial User for reclaimed water use
30% RECYCLED WATER MASTER PLAN
NEAR TERM USE PROJECTION MODELING
### Table 1  Demand Summary

<table>
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<tr>
<th>Location</th>
<th>Total Peak Day Demand (gallons)</th>
<th>Total Peak Day Demand (gpm)</th>
<th>Peaking Factor</th>
<th>Peak Demand (gpm)</th>
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<td><strong>Total Demand</strong></td>
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**PLANNING ASSUMPTIONS FOR BUILD-OUT**

- Projected (City generated) WWTRF ADWF flow at City build-out population 120,000 = 7.63 Mgd
- Additional flows from Placer County may not be available for City of Lincoln use
- Based on Water Balance analysis, 515 MG reclaimed water storage necessary to meet peak season irrigation demands
- Current storage at WWTRF = 190 MG
Bulk of reclaimed water storage provided at WWTRF

Primary system booster pumps located at WWTRF

Each Specific Plan Area will have local storage and booster systems to accommodate demand peaks

Ability to transfer/convey different non-potable source water across distribution system
  - Reclaimed Water
  - Non-Potable Groundwater (wells)
  - Raw (Ditch) Irrigation Water from PCWA
  - Raw (Ditch) Irrigation Water from NID
PLANNING ASSUMPTIONS FOR BUILD-OUT

- Non-Potable distribution systems designed to Reclaimed Water use standards

- Interim use of Potable Water and/or Raw Water while waiting for future backbone infrastructure
Questions?