

CITY OF LINCOLN

**NON-POTABLE WATER USE
PLANNING AND
IMPLEMENTATION**

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Got
Questions?

Get
Answers



City of Lincoln General Plan



CITY OF LINCOLN GENERAL PLAN

Award-Winning
General Plan
Document

March 2008



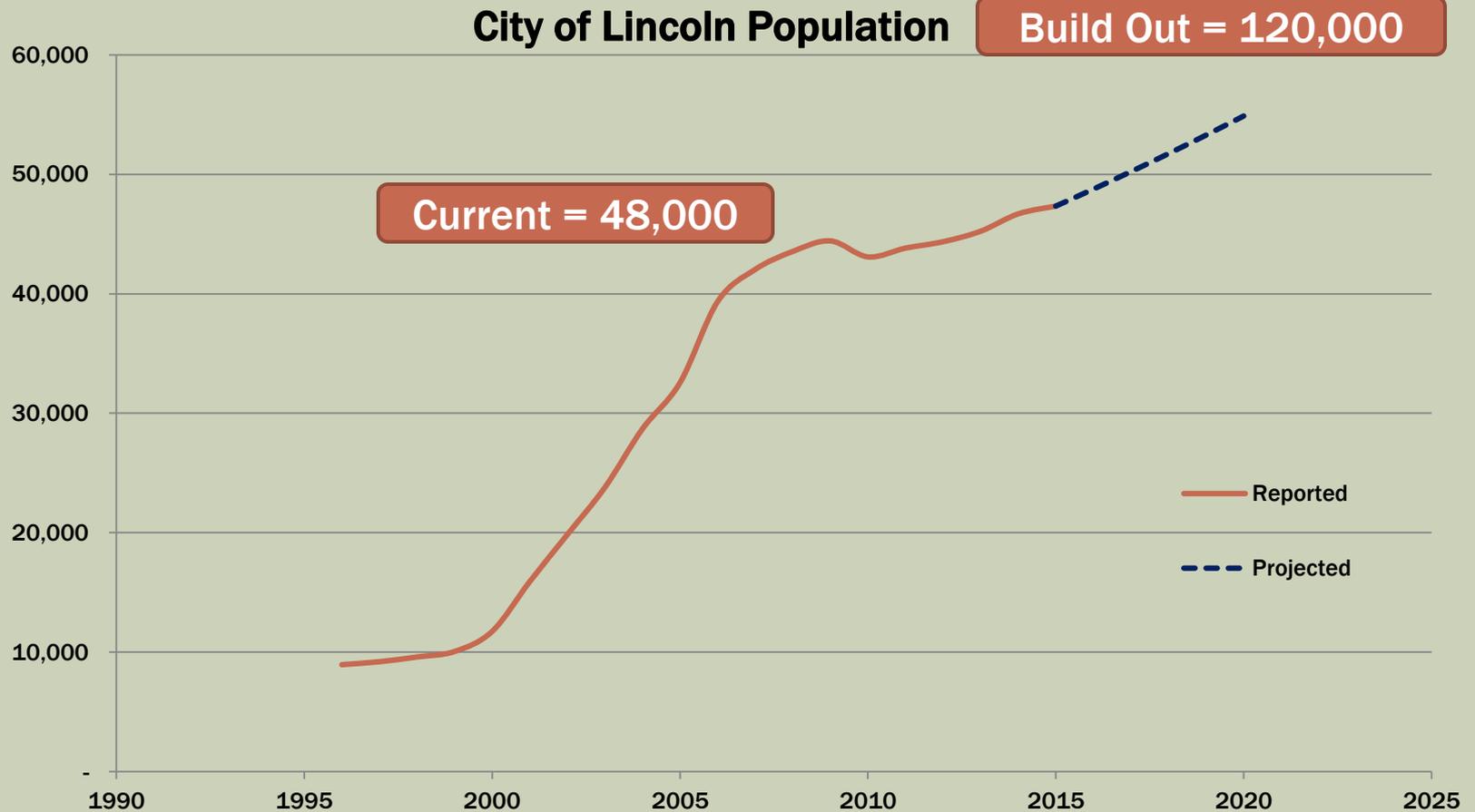
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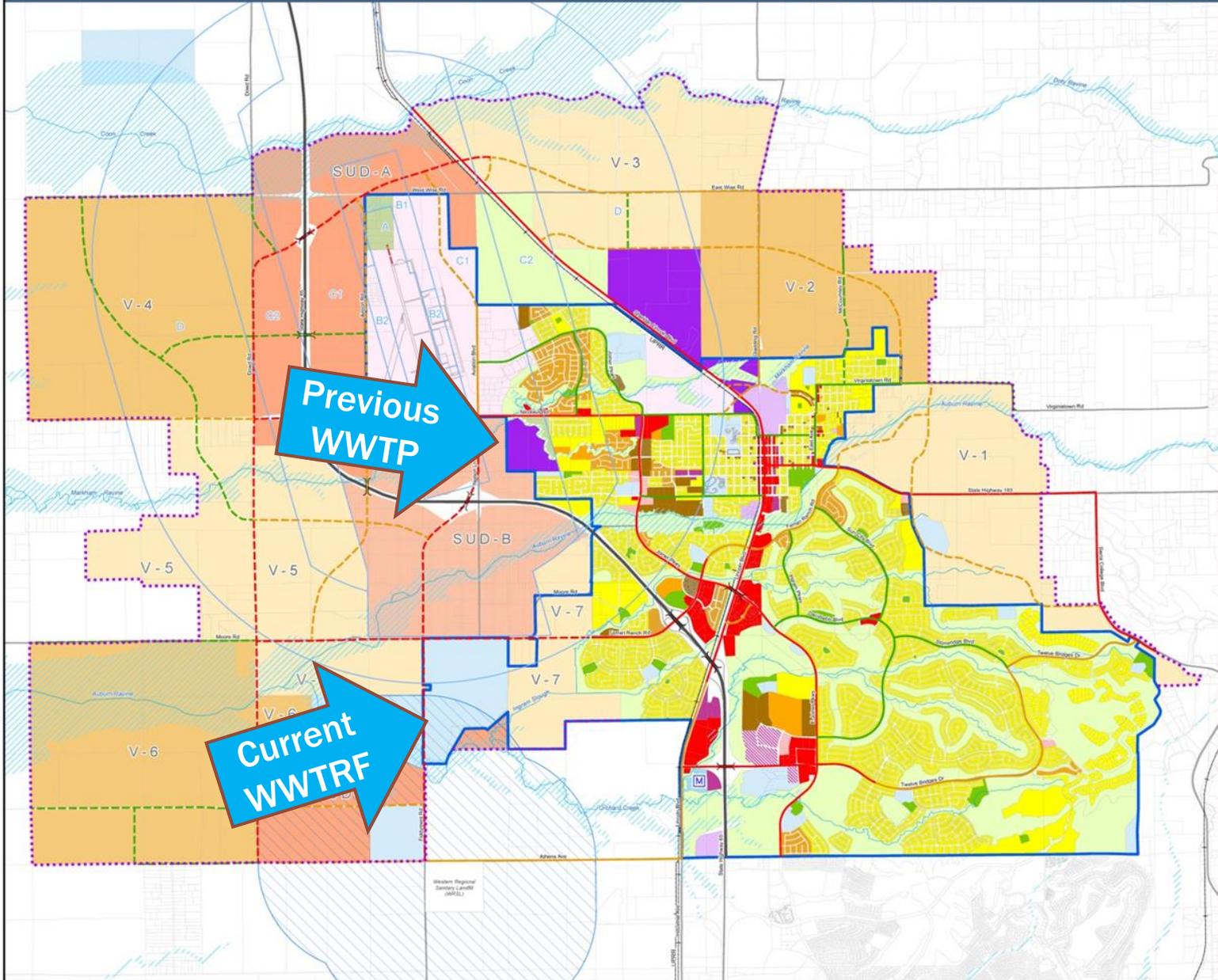
OPEN SPACE & CONSERVATION ELEMENT

CITY OF LINCOLN GENERAL PLAN

Award-Winning
General Plan
Document

POPULATION GROWTH TREND WITHIN CITY OF LINCOLN





Legend

- LAND USE DESIGNATIONS**
- Rural Residential (RR)
 - Country Estates (CE)
 - Low Density Residential (LDR)
 - Medium Density Residential (MDR)
 - High Density Residential (HDR)
 - Special Use District (SUD)
 - Village (V)
 - Mixed Use (MU)
 - Neighborhood Commercial (NC)
 - Community Commercial (CC)
 - Regional Commercial (RC)
 - Business and Professional (BP)
 - Employment Center (EC)
 - Industrial Planned Development (IPD)
 - Light Industrial (LI)
 - Industrial (I)
 - Open Space (OS)
 - Agriculture (AG)
 - Parks and Recreation (PR)
 - Public Facilities (PF)
 - Medical Center (MC)
- ROADWAY CLASSIFICATIONS**
- | | |
|--|---|
| Existing | Proposed |
| Freeway | Freeway |
| Major Arterial | Major Arterial |
| Minor Arterial | Minor Arterial |
| Collector | Collector |
- BOUNDARIES**
- City Limits
 - Sphere of Influence
 - ALUCP Compatibility Zones
- OTHER**
- Airport Runway Expansion
 - Railroad
 - Landfill
 - 1-Mile Buffer
 - 100 Year Flood Zone
 - Waterways



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

2016 WATER MASTER PLAN INFORMATION

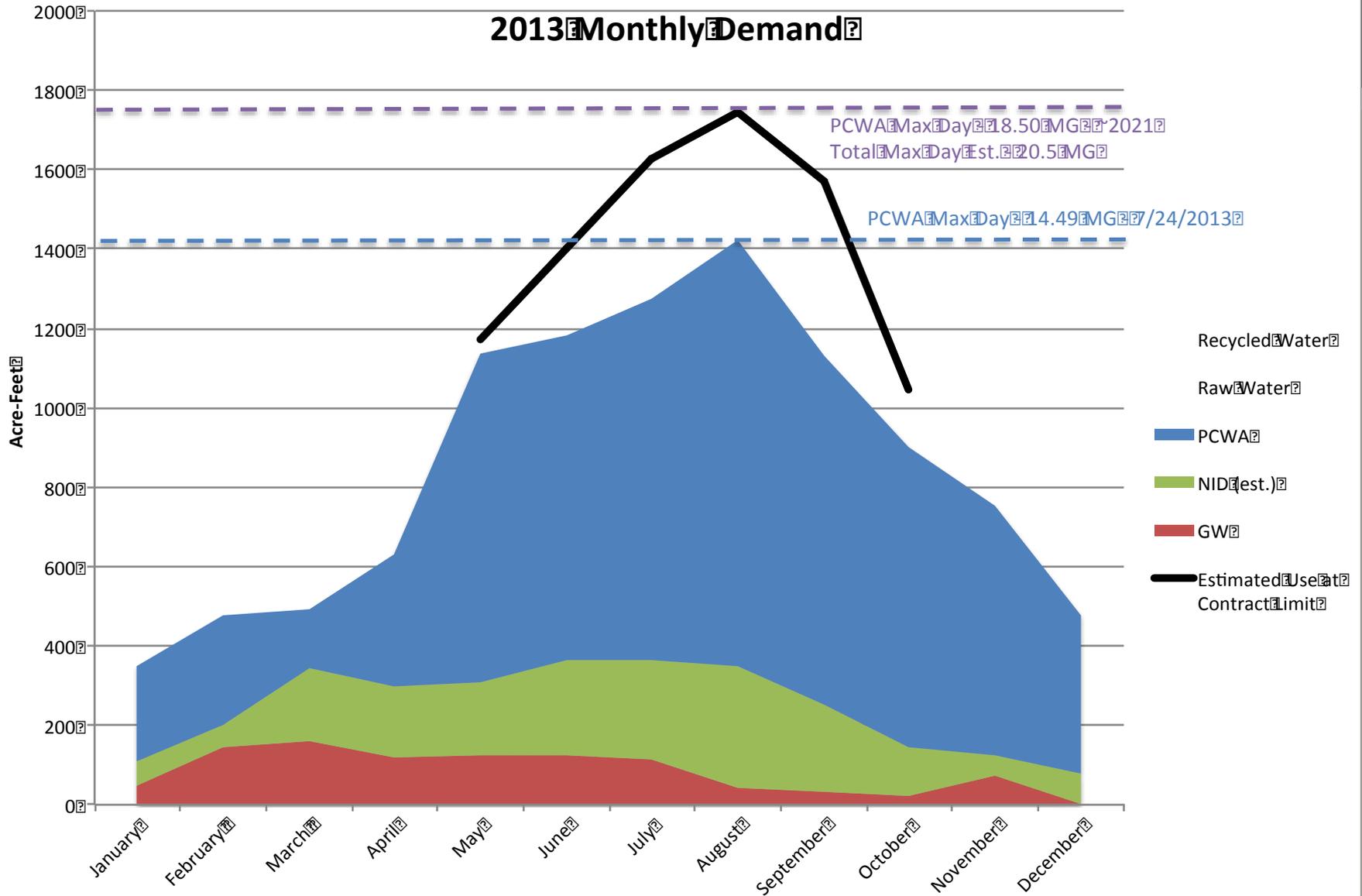
Water Demand Characteristics

- Build-out Demand – 36,000 AFY

- Peak Day Demand (67 MGD)
 - 57 MGD Potable
 - 10 MGD Public Non-Potable

WATER MASTER PLAN DEMAND ANALYSIS

2013 Monthly Demand



2016 WATER MASTER PLAN INFORMATION

Identified Sources to meet Non-Potable Demands

- Reclaimed Water

- Non-Potable Groundwater Wells

- Raw (Ditch) Water
 - PCWA
 - NID

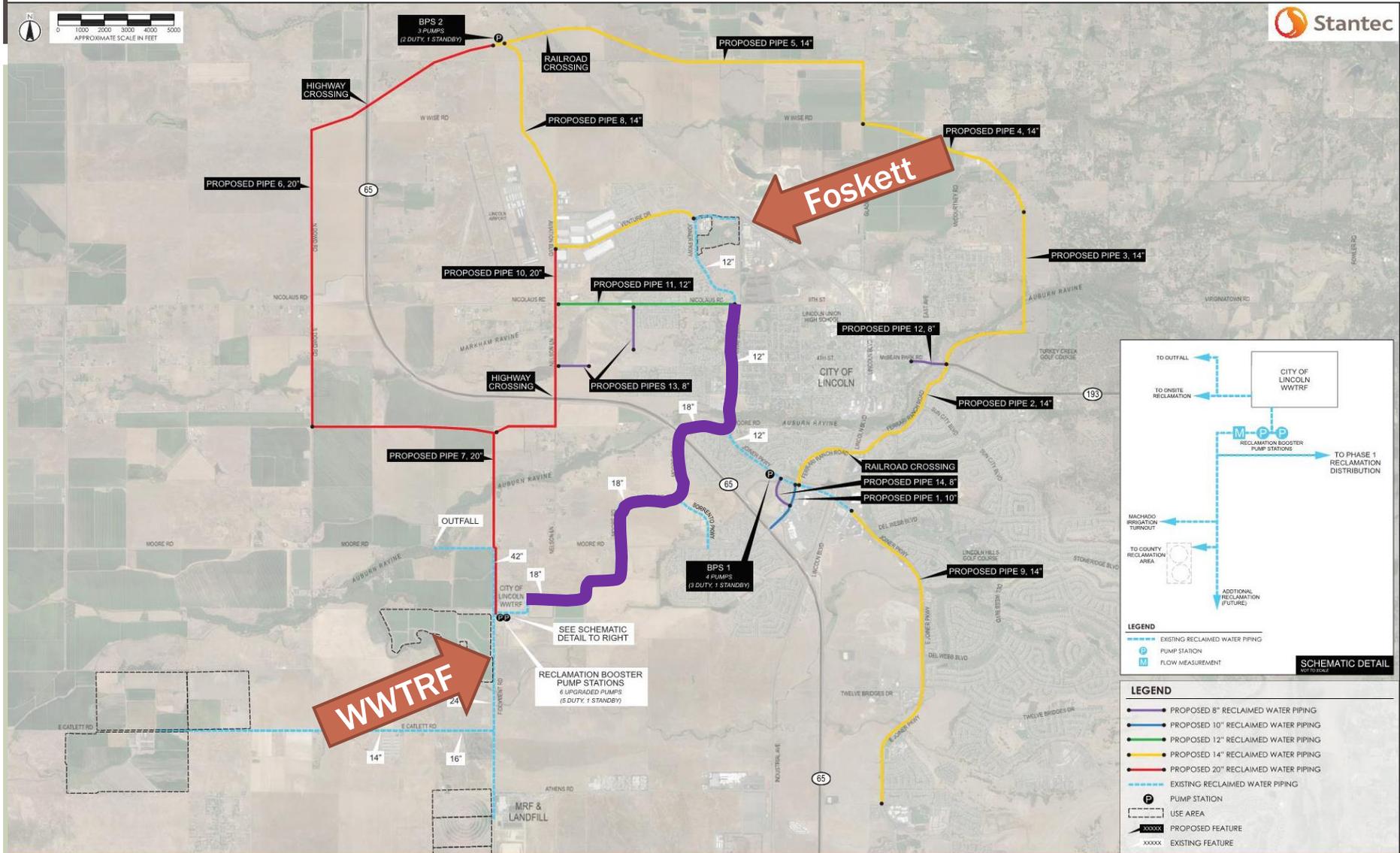
WWTRF INFORMATION

- 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

WWTRF INFORMATION

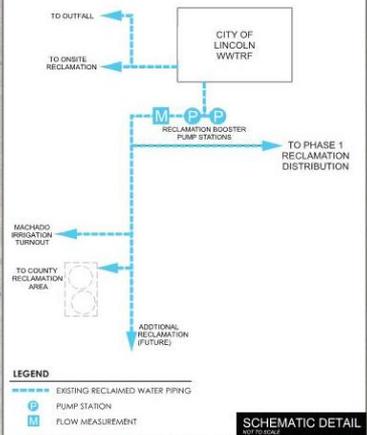
- Regional WWTRF with connection of Placer County (SMD-1) completed in 2015
- Agricultural irrigation (effluent) primary disposal method currently
- Requirement to discharge to Auburn Ravine during “shoulder months”
- Recent commission of Reclaimed Water Transmission Main in City and conversion of Foskett Park
- Negotiating agreement with Industrial User for reclaimed water use

30% RECYCLED WATER MASTER PLAN



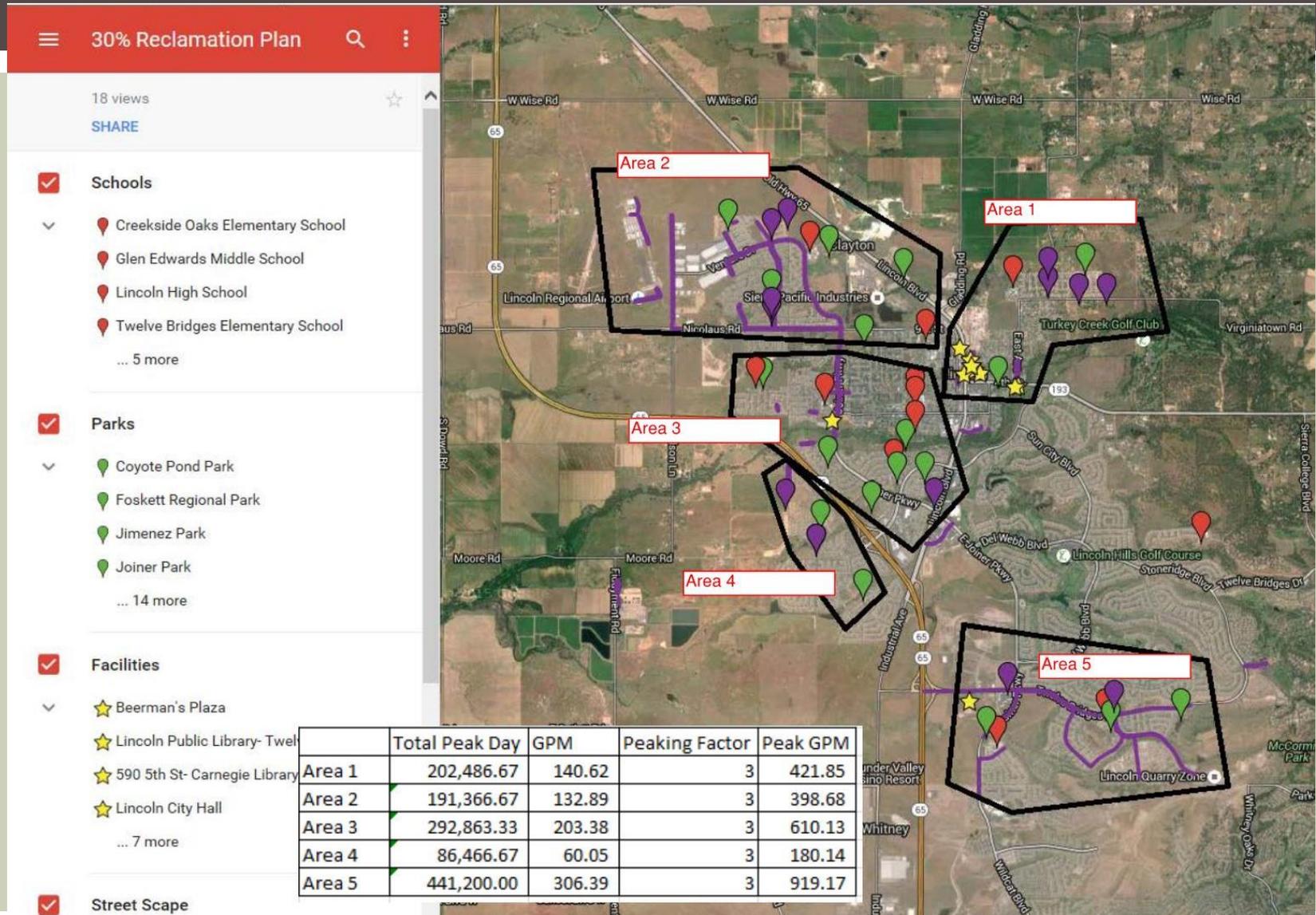
WWTRF

Foskett



- LEGEND**
- EXISTING RECLAIMED WATER PIPING
 - PUMP STATION
 - M FLOW MEASUREMENT
- LEGEND**
- PROPOSED 8" RECLAIMED WATER PIPING
 - PROPOSED 10" RECLAIMED WATER PIPING
 - PROPOSED 12" RECLAIMED WATER PIPING
 - PROPOSED 14" RECLAIMED WATER PIPING
 - PROPOSED 20" RECLAIMED WATER PIPING
 - EXISTING RECLAIMED WATER PIPING
 - P PUMP STATION
 - USE AREA
 - PROPOSED FEATURE
 - xxxxx EXISTING FEATURE

NEAR TERM USE PROJECTION MODELING



**NON-
POTABLE
WATER
DEMANDS
FOR
BUILD-OUT**

**(FROM 30%
RECLAIMED
MASTER
PLAN)**

Table 1 Demand Summary

Location	Total Peak Day Demand (gallons)	Total Peak Day Demand (gpm)	Peaking Factor	Peak Demand (gpm)
Area 1	202,487	141	3	422
Area 2	191,367	133	3	399
Area 3	292,863	203	3	610
Area 4	86,467	60	3	180
Area 5	441,200	306	3	920
Village 1	866,070	601	1	601
Village 2	827,578	575	1	575
Village 3	846,824	588	1	588
Village 4	577,380	401	1	401
Village 5	1,635,910	1,136	1	1,136
Village 6	866,070	601	1	601
Village 7	1,010,415	702	1	702
SUDA	288,690	200	1	200
Foskett Park	1,201,729	834	1	834
Lincoln Crossing	1,500,000	1,041	1	1,041
Lincoln High	449,568	312	1	312
Total Demand	11,284,618	-	-	9,522

PLANNING ASSUMPTIONS FOR BUILD-OUT

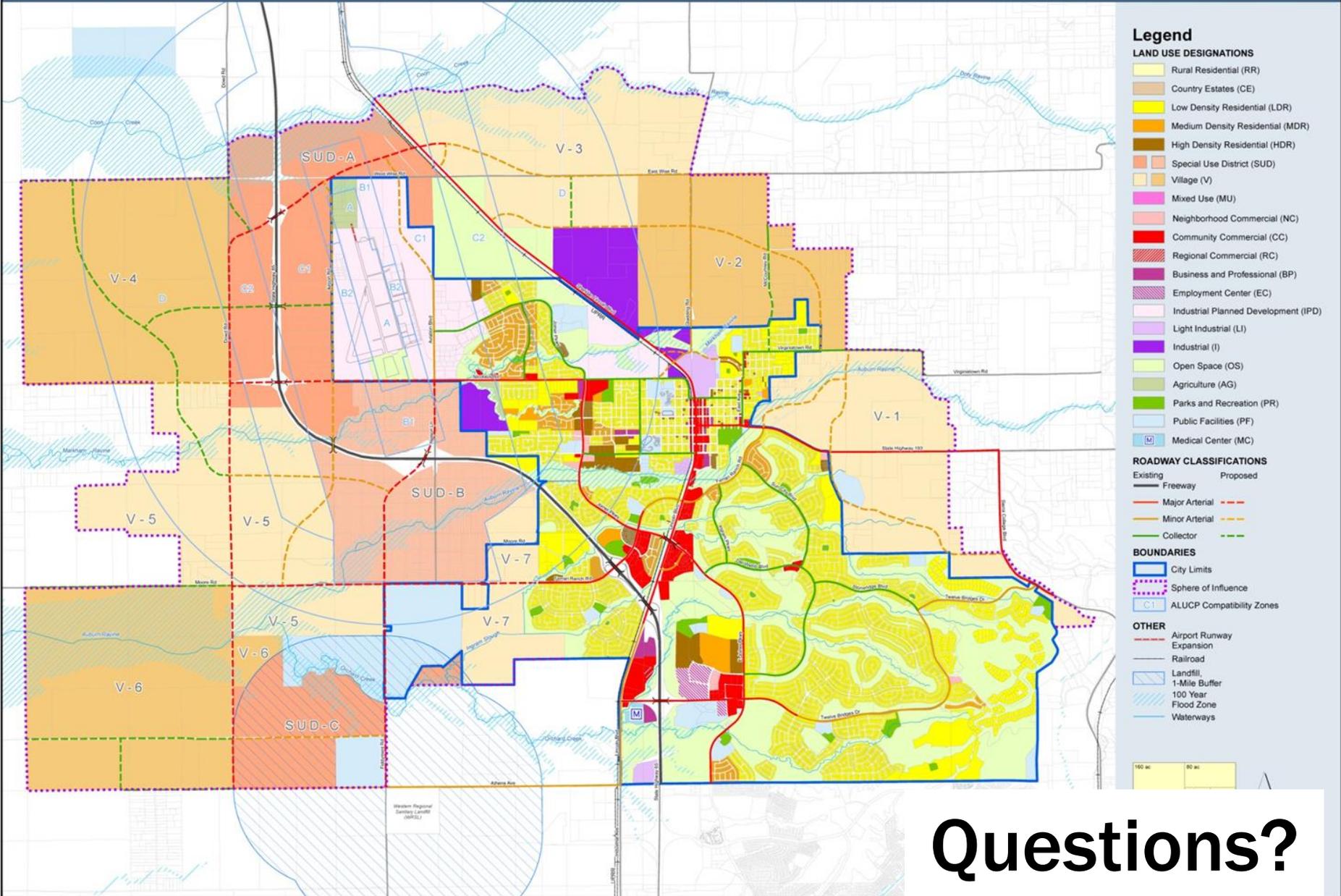
- Projected (City generated) WWTRF ADWF flow at City build-out population 120,000 = 7.63 Mgd
- Additional flows from Placer County may not be available for City of Lincoln use
- Based on Water Balance analysis, 515 MG reclaimed water storage necessary to meet peak season irrigation demands
- Current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

PLANNING ASSUMPTIONS FOR BUILD-OUT

- 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?