

TECHNICAL MEMORANDUM

TO: Duane Huffman, Kris Nilsen, Steve Maughan
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DATE: January 8, 2026
SUBJECT: West Bountiful City Developments
JOB NO.: 206-22-01

INTRODUCTION

Ivory Land Corporation and Seddie LLC & Jolly Property Holdings have proposed density changes on the west side of West Bountiful City that may impact the City's water master planned improvements. Bowen Collins & Associates (BC&A) prepared the last water master plan and has been asked by the City to review the proposed development densities and their potential impacts on required system improvements as identified in the Master Plan. The purpose of this memo is to summarize the review of the proposed densities and impacts on City infrastructure.

CURRENT ZONING

The historic zoning used for planning by the City is shown in Figure 1. The area is primarily zoned as "Blended Use" or is unincorporated with an estimated density of 1 unit/acre. Planned densities for the current zoning is summarized in Table 1.

Table 1
Current Zoning Summary – Developable Area

	Total Developable Area+ (acres)	Undeveloped Area+ (acres)	Zoned Density (Units/ 1 Acre)
Agricultural Specialty District (A-S)	31	4	1
Residential District (R-1-10)	538	87	4.3
Agricultural District (A-1)	353	172	1
Residential District (R-1-22)	284	117	2
Blended Use District (B-U)	148	145	1
Commercial Neighborhood District (C-N)	55	40	3*
Commercial General District (C-G)	64	3	3*
Commercial Highway District (C-H)	52	10	3*
Light Industrial (L-I)	39	24	3*
Industrial General District (I-G)	75	7	3*
Annexation (Unincorporated)	170	170	1
TOTAL	1,808	780	-

+ Represents net developable area. Excludes existing and expected future roadways and other undevelopable right-of-way.

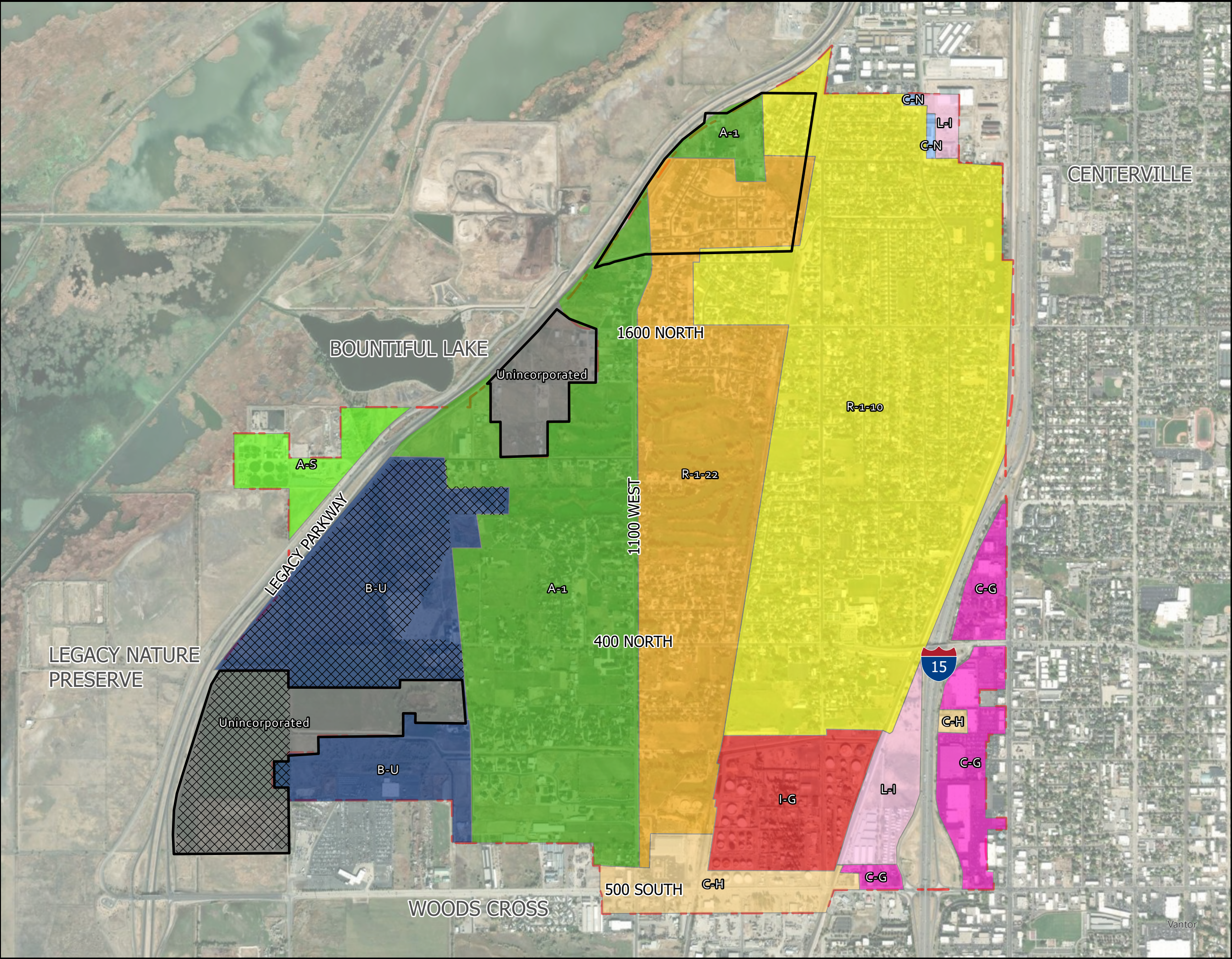
* Density for commercial zoning is based on an assumed density of 3 “Equivalent Residential Connections” or ERCs per acre. Commercial densities are highly variable depending on the type of commercial development built, but 3 ERCs/acre was considered a conservative planning value for most commercial development types. The ERC definition is discussed in further detail in the master plan.

PROPOSED DEVELOPMENT

Figure 2 shows the proposed densities based on proposed development labeled with total units for various parts of the development. The net increase in total units for the area compared to the current zoning as used in the water master plan is 721 units. Tables 2 and 3 summarize the impact of this additional density on the City. Table 2 lists the planning requirements and the corresponding increase in demand and storage that would result from the proposed additional 721 units¹. Table 3 compares the new projected demands and storage needs against available resources. Based on the tables, a few major conclusions can be made:

1. The City has adequate peak production capacity (with or without conservation) to meet the projected peak day demands of the development.
2. There is insufficient annual supply in West Bountiful to meet project annual demands with the new development if no conservation occurs in West Bountiful. If the City meets its conservation goals, there is adequate annual supply.
3. Similar to the annual supply, West Bountiful has adequate storage at buildout if the City meets its conservation goals but will have a storage deficiency if the City does not meet its conservation goals.

¹ All values reported in this table assume secondary water is provided for all outdoor irrigation in the development, the same assumption used in the master plan.



LEGEND

West Bountiful City Boundary

Annexations

Zone

A-1 Agricultural

A-S Agricultural Special

C-G Commercial General

C-H Commercial Highway

C-N Commercial Neighborhood

B-U Blended Use

I-G Industrial

L-I Light Industrial

R-1-10 Residential

R-1-22 Residential

Unincorporated

New Development

NORTH:



SCALE:

0 600 1,200 Feet

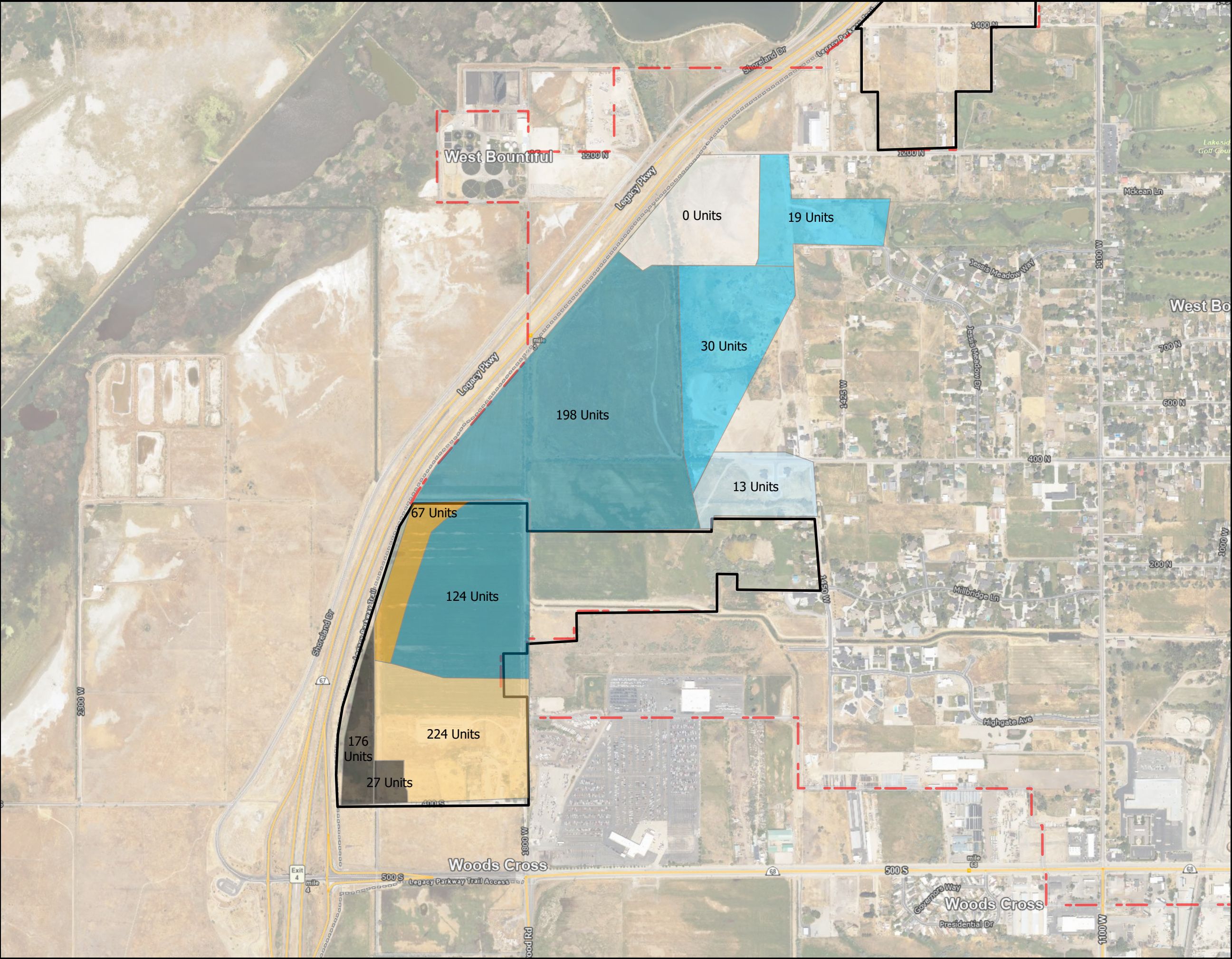
WEST BOUNTIFUL CITY
SERVICE AREA AND
EXISTING ZONING

WEST BOUNTIFUL CITY
DEVELOPMENT REVIEW

 **BOWEN COLLINS**
& ASSOCIATES

FIGURE NO.

1



LEGEND

West Bountiful City Boundary

Annexations

New Development

ERU/acre

0.0

0.1 - 1.0

1.1 - 2.0

2.1 - 4.0

4.1 - 8.0

8.1 - 11.0

11.1 - 25.0

NORTH:

SCALE:

0400800

Feet

PROPOSED DEVELOPMENT DENSITY

WEST BOUNTIFUL CITY
DEVELOPMENT REVIEW

BOWEN COLLINS
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FIGURE NO.
2

Table 2
Development Impacts on Demand and Storage Needs in West Bountiful City

System Capacity Category	Sizing Requirement	Additional Demand Associated with 721 ERCs
Peak Day Source Demand	0.229 gpm/ERC	165 gpm
Average Annual Demand	0.241 acre-ft/yr/ERC	174 acre-ft
Equalization Storage	215 gal/ERC	155,015 gallons
Fire Storage	1,104,000 gal	

Table 3
Available Supply and Storage Capacity for Additional Development

Type of Capacity Need	Projected Need Currently Identified in Water Master Plan	Additional Need With Proposed Additional Development	Available Capacity	Excess / Deficit
Buildout Peak Day Demand Production Requirement (gpm)	1,649	1,814	2,150	336
Buildout Annual Demand Production Requirement – Without Conservation (acre-ft/year)	1,664	1,838	1,750	-88
Buildout Annual Demand Production Requirement – With Conservation (acre-ft/year)	1,364	1,538	1,750	212
Storage Requirement – Without Conservation (gallons)	2,590,000	2,745,015	2,500,000	-245,015
Storage Requirement – With Conservation (gallons)	2,324,000	2,479,015	2,500,000	20,985

Impacts on City Distribution System

To identify any distribution deficiencies resulting from the proposed additional development, the projected additional 165 gpm of demand associated with the development was added to the City's water model at the southwest corner of the proposed development (on top of buildout demands already identified in the Master Plan). No deficiencies in either pressure or system velocities were identified as a result of the additional development demands. The master plan proposed projects still appear to be adequate for this proposed additional development. It should be noted that this analysis did not consider the pipe sizes of any specific distribution lines within the development, but just the transmission lines that would support the development.

CONCLUSIONS AND RECOMMENDATIONS

Based on an update of the master plan analysis prepared by BC&A, the following conclusions and recommendations can be made regarding the addition of 721 ERCs as proposed for development in the southwest corner of West Bountiful City:

1. **Conservation.** The addition of this development will only be possible if the City meets its water conservation goals. Without conservation, the City could expect supply shortages and storage deficiencies.
2. **Distribution Evaluation.** No significant pressure or velocity deficiencies occur in the City's transmission lines as a result of this development.
3. **Secondary Irrigation.** The proceeding conclusions are based on demand estimates assuming all outdoor irrigation will be provided by others. The City does not have sufficient culinary supply or storage to support outdoor irrigation for the proposed development.