



# Table of Contents

---

## Executive Summary

ES.1 Introduction .....	1
ES.2 Plan Adoption .....	1
ES.3 Plan Overview .....	2
ES.3.1 Service Area .....	2
ES.3.2 Water Demand .....	2
ES.3.3 Demand Management and Water Conservation .....	3
ES.3.4 Projected Water Supply .....	3
ES.3.5 Water Shortage Contingency Plan .....	5
ES.3.6 Climate Change .....	5
ES.4 On-Line Submittal to DWR Using DOST .....	5
ES.5 Demonstration of Plan Completeness .....	5

## List of Table

Table ES-1. City of Woodland Projected Water Use .....	3
Table ES-2. City of Woodland Current and Planned Water Supplies, af/yr .....	4

## List of Figures

Figure ES-1. Service Area .....	6
Figure ES-2. Existing System Facilities .....	7



## Executive Summary

---

### ES.1 INTRODUCTION

This 2010 Urban Water Management Plan (UWMP) has been prepared for the City of Woodland (City) by West Yost Associates (West Yost). This 2010 UWMP for the City describes the current and future water uses, sources of supply and its reliability, and existing and planned conservation measures.

This 2010 UWMP complies with the Urban Water Management Planning Act (UWMP Act), which was originally established by Assembly Bill 797 (AB 797) on September 21, 1983. The law requires water suppliers in California providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet per year (AFY) of water to prepare and adopt an UWMP every five years.

Several changes to the UWMP Act have been approved in recent years. Revisions to the UWMP Act include requiring a robust supply and demand comparison, as well as detailed discussion of groundwater resources, water recycling and desalination. Also, this 2010 UWMP is required to comply with the requirements of the Water Conservation Act of 2009 Senate Bill x7-7 (SBx7-7) which was enacted in November 2009. SBx7-7 requires urban retail water suppliers, such as the City, to develop per capita water use targets to be met by 2015 and 2020. The overall statewide objective of SBx7-7 is to reduce per capita water use by 20 percent by the year 2020.

The requirements of SBx7-7 extended the deadline for adoption of the 2010 UWMPs for urban retail water suppliers from December 31, 2010 to July 1, 2011.

### ES.2 PLAN ADOPTION

The City held a Public Hearing on July 5, 2011 to receive comments from members of the public and other interested parties. City Resident Christine Shewmaker provided comments which included adding a summation of climate change in the Executive Summary, incorporating an action item for the City's continued adaption and mitigation related to climate change, addressing the energy embodied in water, and encouraging rainwater capture. The comments and how they are addressed in the final 2010 UWMP are included in Appendix I.

The City adopted this 2010 UWMP on \_\_\_\_\_, 2011. Copies of the adoption resolution are included in Appendix C.

Following plan adoption, the 2010 UWMP was submitted to the Department of Water Resources (DWR) and to the California State Library. Copies of the adopted 2010 UWMP were also provided to the following agencies within 30 days of adoption:

- Yolo County Flood Control District
- RD 2035
- Farm Bureau
- Water Resources Association of Yolo County
- Yolo County
- City of Davis



## Executive Summary

---

- Woodland Chamber of Commerce, Water Task Force
- Woodland-Davis Clean Water Agency

Within 30 days of submitting the adopted 2010 UWMP to DWR, copies of the adopted 2010 UWMP will be made available during normal business hours at the following location:

- City of Woodland, Public Utilities Department Engineering Division, 655 North Pioneer Avenue

The adopted 2010 UWMP will also be available on the City's website ([www.cityofwoodland.org](http://www.cityofwoodland.org)).

Should this 2010 UWMP be amended or changed, copies of amendments or changes to the plan shall be submitted to DWR, the California Stat Library, and any city or county within which the City provides water supplies within 30 days after adoption.

### ES.3 PLAN OVERVIEW

#### ES.3.1 Service Area

The City and water service area encompass an area of approximately 14.5 square miles. Located within an important agricultural region, the City is completely surrounded by agricultural lands. The City serves the entire area encompassed by its City Limits including residential, commercial, industrial, and fire use. Municipal water supply for the City is currently based solely on groundwater. However, a joint project between the City of Woodland, the City of Davis, and the University of California, Davis is currently under way to incorporate surface water as a primary water supply source.

The City's population has grown at an average rate of 1.2% from 2000 through 2010 according to population estimates from DOF. Growth in the last few years has slowed significantly due to the national and statewide economic downturn.

For this 2010 UWMP, growth projections are based on recently updated growth projections from the Sacramento Area Council of Governments (SACOG) which takes into consideration the economic downturn and other local events. The recently published projections available from SACOG provide population estimates for the years 2013, 2018, and 2035. A straight-line interpolation was used to determine the population for the years ending in 0 or 5.

#### ES.3.2 Water Demand

Unlike past UWMPs, the projected water demand in this 2010 UWMP is primarily driven by the per capita water use targets mandated by the Water Conservation Act of 2009 (SBx7-7). As part of the City's compliance with SBx7-7, the City has established its baseline per capita water use and has established and adopted a 2015 interim per capita water use target and a 2020 final per capita water use target. The development of the City's baseline and target per capita water use are described in Chapter 4 and Appendix E and are summarized as follows:



## Executive Summary

- Baseline Per Capita Water Use: 289 gallons per capita per day (gpcd)
- 2015 Interim Per Capita Water Use Target: 260 gpcd
- 2020 Final Per Capita Water Use Target: 231 gpcd

Projected water demands were then determined by multiplying the per capita water use targets by the projected service area populations. Projected water demands are summarized in Table ES-1.

Table ES-1. City of Woodland Projected Water Use <sup>(a)</sup>					
Service Area	2015 Water Use, af/yr	2020 Water Use, af/yr	2025 Water Use, af/yr	2030 Water Use, af/yr	2035 Water Use, af/yr
City of Woodland	16,400	15,650	16,600	17,550	18,500
<sup>(a)</sup> Based on projected population multiplied by the SBx7-7 per capita water use targets. <sup>(b)</sup> Totals rounded to nearest 10 af/yr.					

### ES.3.3 Demand Management and Water Conservation

The City's compliance with the established SBx7-7 targets will be achieved through the implementations of the City's conservation efforts. As described in Chapter 8, the City has implemented or is in the process of implementing several of the Best Management Practices (BMPs) included in the California Urban Water Conservation Council (CUWCC) Memorandum of Understanding (MOU).

Implementation of these programs will allow the City to achieve the water reduction goals required by SBx7-7. In particular, the City's residential meter implementation program and billing based on metered usage, anticipated to be completed by the end of 2011, will help the City to monitor and track actual water use and reduce per capita water use through the City's water service area. The completion of the metering program will also allow the City to perform system water audits and assist the City in identifying and reducing system losses due to pipeline leaks.

### ES.3.4 Projected Water Supply

As described in Chapter 5, the City currently relies solely on groundwater to meet all customer demand needs. However, plans are proceeding to integrate surface water as a supply source into the system. The City is currently not pursuing recycled water opportunities beyond the current effluent discharge to Tule Canal primarily due to the high EC levels in the effluent. Once surface water is integrated into the City's supply system, the City will determine the economic feasibility of including recycled water in the future.



## Executive Summary

The City currently relies completely on groundwater to meet all system water demands. Even though the City is able to achieve compliance with drinking water standards, the City will struggle more and more in the future to meet its wastewater discharge requirements because of natural concentrations of salinity, boron, and selenium in its groundwater supply. In addition, while the City meets all current drinking water standards changes in the requirements may severely impact the City's ability to meet chromium IV (Cr 6) based on proposed standards. The current proposed public health goal (PHG) is 0.02 µg/l. The groundwater wells within the City have been tested for Cr 6 and the results show a range of 10 to 35 µg/l and an average of 19 µg/l. The introduction of surface water as a primary supply source in the future will greatly improve the water quality for these constituents. While the City is planning to use surface water as a primary supply starting in 2016, groundwater will continue to supply all water needs until 2016 and will be used to supplement surface water in the future.

The City currently does not use surface water supplies to meet demands. However, the City has partnered with the City of Davis (Davis) and the University of California at Davis (UCD) (collectively referred to as the Woodland-Davis Clean Water Agency (WDCWA)) for a joint project that would provide surface water supply for use within each of their service areas to meet a portion of their respective water supply needs. The new surface water supply will be integrated into a conjunctive use supply program, with surface water serving as the City's primary water supply in the future, and groundwater being used to help meet summer peak and emergency demands. The new surface water supply will be somewhat limited in summer months during drought periods, and groundwater pumping will be used in these periods to provide a larger portion of the water supply.

Table ES-2 summarizes the anticipated use of available water supplies to meet future demands.

Table ES-2. City of Woodland Current and Planned Water Supplies, af/yr						
Water Supply	Existing and Future Water Supplies during Normal Years					
	2010 (actual)	2015	2020	2025	2030	2035
Primary Water Right (30358) <sup>(a,b,c)</sup>	—	—	11,470	12,158	12,684	13,197
CPG Water Right <sup>(a,b)</sup>	—	—	5,750	5,750	5,750	5,750
Available Groundwater <sup>(d)</sup>	13,921	16,400	14,7050	13,620	12,550	12,550

(a) Surface water treatment plant to be on-line in 2016.  
 (b) Initial phase of surface WTP to be constructed to a capacity of 40 mgd. Woodland capacity of WTP approximately 57.5 percent.  
 (c) Three months of Term 91 restrictions (June through August) for normal years based on historic Term 91 information.  
 (d) Groundwater supplies all water needs through 2015. After surface water is available, the City will maintain adequate groundwater to meet emergency conditions in the future.



## Executive Summary

---

As described in Chapter 7, based on the anticipated reliability of the City's water supplies and conservation measures during normal, single dry, and multiple dry years, the City anticipates that it has adequate water supplies to meet projected water demands during all hydrologic conditions through 2035.

### ES.3.5 Water Shortage Contingency Plan

During events of water shortages due to prolonged drought conditions or other water supply outages, the City has an established Water Conservation Regulations Ordinance which specifies reduction objectives ranging from 15 to 50 percent of normal demand, depending on the water shortage stage declared. Currently the stages of action are determined by the City Council based on hydrologic conditions. In the future, with the addition of surface water as the primary water supply, the City is reviewing the triggers for declaring the various stages based on Term 91 and Shasta Critical Year Reduction information. The City plans to have updated triggers for the declaration of a Stage of Action for the 2015 UWMP.

### ES.3.6 Climate Change

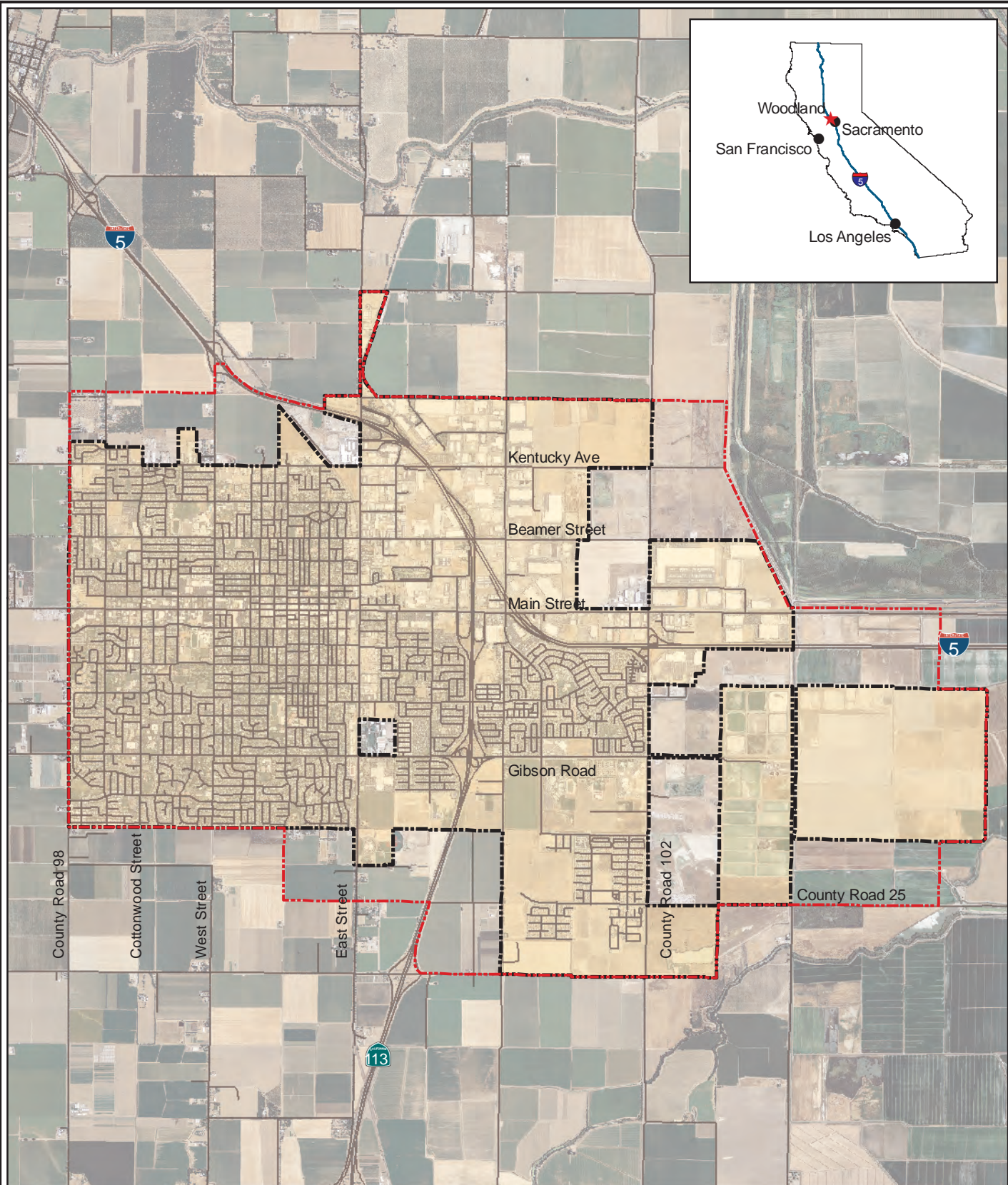
The DWR Guidebook notes that a climate change discussion is optional for an UWMP and not required by the UWMP Act. However, the information and analysis of how climate change affects the City's water supply is provided in Chapter 9 of the UWMP.

## ES.4 ON-LINE SUBMITTAL TO DWR USING DOST



This 2010 UWMP will be submitted to DWR using the DWR On-line Submittal Tool (DOST) when the DOST system becomes available.

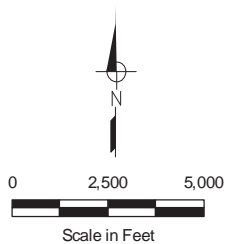
## ES.5 DEMONSTRATION OF PLAN COMPLETENESS

This 2010 UWMP complies with the requirements of the Urban Water Management Planning Act, as amended by recently enacted legislation. DWR's Urban Water Management Plan Checklist, as provided in the 2010 UWMP Guidebook as completed by West Yost for demonstration of the plan's compliance with applicable requirements. A copy of the completed checklist is included in Chapter 11.



**LEGEND**

-  Planning Area Boundary
-  City Limits

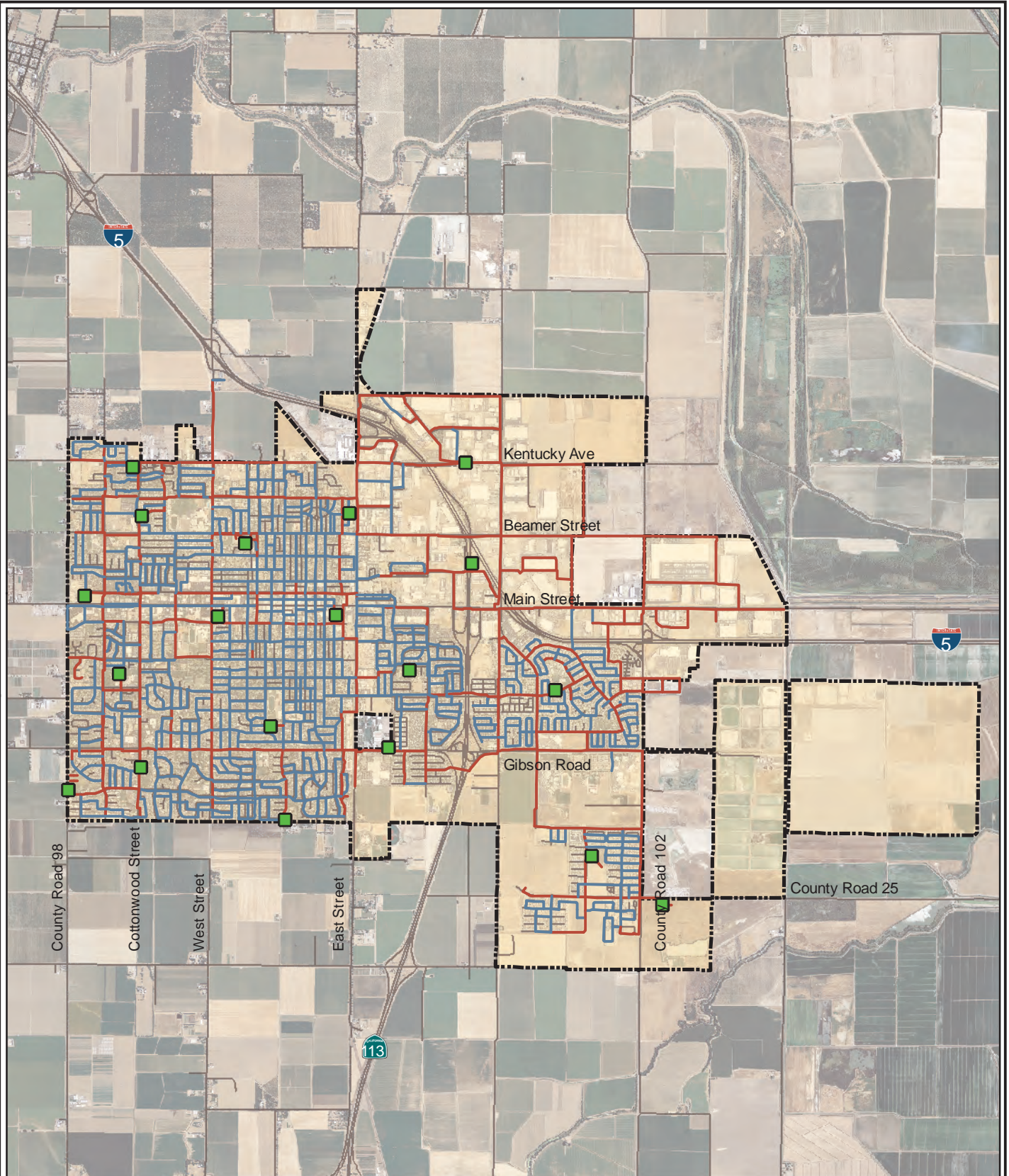


**FIGURE ES-1**





**City of Woodland  
Urban Water Management Plan 2010**

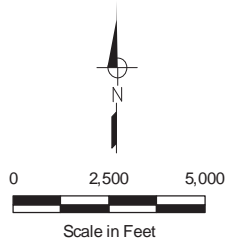
**SERVICE AREA**





**LEGEND**

-  Existing Well
-  8" and less diameter
-  10" and greater diameter
-  City Limits



**FIGURE ES-2**

**City of Woodland  
Urban Water Management Plan 2010**

**EXISTING SYSTEM FACILITIES**

