

## PLANNING COMMISSION MEETING

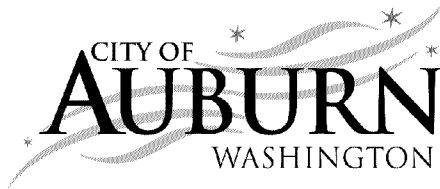
March 17, 2015  
SPECIAL MEETING AGENDA

---

- I. **CALL TO ORDER – 6:00 p.m., Council Chambers**
- II. **ROLL CALL/ESTABLISHMENT OF QUORUM (Pledge of Allegiance)**
- III. **APPROVAL OF MINUTES**
  - A. **March 3, 2015**
- IV. **PLANNING DEPARTMENT REPORT**
  - Update on Community Development Services activities.*
- V. **PUBLIC HEARINGS**
  - A. **Communal Residence Code Update\* (Tate)**
    - Summary: Review the Communal Residence Code updates to Auburn City Code 18.04.
- VI. **OTHER BUSINESS**
  - A. **2015 Comprehensive Water Plan – Initial Briefing\* (Tobin)**
    - Summary: Initial briefing on the 2015 Comprehensive Water Plan as part of the overall Comprehensive Water Plan update.
- VII. **ADJOURNMENT**

The City of Auburn Planning Commission is an eight member advisory body that provides recommendations to the Auburn City Council on the preparation of and amendments to land use plans and related codes such as zoning. Planning Commissioners are appointed by the Mayor and confirmed by the City Council.

Actions taken by the Planning Commission are not final decisions; they are in the form of recommendations to the City Council who must ultimately make the final decision.



**DRAFT  
PLANNING COMMISSION**

**March 3, 2015**

**MINUTES**

---

**I. CALL TO ORDER**

Chair Judi Roland called the meeting to order at 7:00 p.m. in the Council Chambers located on the first floor of Auburn City Hall, 25 West Main Street, Auburn, WA.

**II. ROLL CALL/ESTABLISHMENT OF QUORUM**

Planning Commission Members present were: Chair Judi Roland, Vice-Chair Copple, Commissioner Lee, Commissioner Mason, Commissioner Baggett, Commissioner Pondelick, and Commissioner Smith.

Staff present included: Assistant Director of Community Development Jeff Tate, Planning Services Manager Jeff Dixon, Office Assistant Jennifer Oliver, and Community Development Secretary Tina Kriss.

Members of the public present: Russ Campbell and Colin Thorpe of the Village Square Condominiums.

**III. APPROVAL OF MINUTES**

**A. January 6, 2015**

The Commission asked that staff correct the minutes to include Commissioner Lee and remove Commissioner Couture.

Commissioner Copple moved and Commissioner Smith seconded to approve the minutes from the January 6, 2015 meeting as corrected.

Motion carried unanimously. 7-0

**IV. PUBLIC COMMENT**

There were no public comments on any item not listed on the agenda for discussion or public hearing.

**V. PLANNING DEPARTMENT REPORT**

Assistant Director Tate reported that the TREX building continues to progress and staff is expecting to see a Certificate of Occupancy date around April 30, 2015. The owner of the building will be seeking a temporary Certificate of Occupancy to set up a leasing office, model units, and efforts to fill the market-rate rental housing units. On the ground level there will be mixed-use commercial but tenants are not known.

The Merrill Gardens Senior Living project, south of the TREX apartments, has begun development. The demolition of existing building has taken place and grading for a pre-load is underway.

The City has received a proposal to build an apartment complex called "Promenade Apartments" on Lea Hill. The Complex will be located east and adjacent to "The Seasons at Lea Hill Village". This project is the early stages of application with a lot of work left to review and discuss.

As part of the 2015-2016 biennial budget approval, City Council included a new program budgeted item called the Downtown Façade Improvement Program. The program allows the city to create and market a grant program for downtown businesses for facade improvements.

Assistant Director Tate updated the Commission on the Comprehensive Plan update review timeline and materials that will be brought forward, including a utility draft plans which will be brought forward by staff at the next meeting.

## **VI. PUBLIC HEARINGS**

There were no Public Hearing items scheduled.

## **VII. OTHER BUSINESS**

### **A. Communal Residences.**

Assistant Director Tate presented the staff report regarding Communal Residences. Staff provided background information on the previous Ordinance No. 6477 and the draft code amendments for consideration to this Ordinance and to eliminate the moratorium. A strikethrough and underlined version of the draft code amendments was distributed by staff. An email from Colin Thorpe to staff regarding the draft code amendments for consideration was also provided to the Commission.

The Commission and staff discussed options to determine the number of tenants per an overall square footage ratio and if this would be a reasonable standard and other options for determining the number of tenants. The International Property Maintenance Code Standards were discussed. Staff reviewed the code in regards to parking requirements for communal housing and the requirements of Auburn City Code.

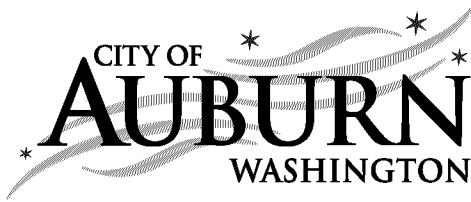
Staff briefed the Commission on the activity to date by Green River College regarding college housing. A discussion was held regarding business licensing requirements and the inspections for those properties. A discussion was held regarding the number of cases noted to date regarding code enforcement of those in violation of the City's code on communal housing.

Planning Commissioner Scot Pondelick announced that as of this evening he would be resigning from his position as a Planning Commissioner due to taking on a leadership position at a non-profit and a King County advisory board for veterans as well as other commitments.

The next meeting will be held March 17, 2015 from 6:00 p.m. to 9:00 p.m.

## **VIII. ADJOURNMENT**

There being no further business to come before the Planning Commission, Chair Roland adjourned the meeting at 8:25 p.m.



## Memorandum

**To:** Judi Roland, Chair, Planning Commission  
Ron Copple, Vice-Chair, Planning Commission  
Planning Commission Members

**From:** Jeff Tate, Assistant Director of Community Development Services

**Date:** March 11, 2015

**Re:** Communal Residences – Refinements to February 23, 2015 Transmittal

---

On February 23<sup>rd</sup> staff transmitted a memo and draft code amendments to the Planning Commission for discussion at the March 3<sup>rd</sup> Planning Commission meeting. Since that time, staff has had the opportunity to review one public comment that was submitted, reflect upon some of the questions that were asked during the March 3<sup>rd</sup> meeting, and to discuss the draft amendments internally with Code Enforcement and Planning staff. Attachment A provides an updated version of the draft code amendments. A general explanation of the attached revisions is as follows:

1. Modifications are shown in blue.
2. Several minor modifications are proposed that are intended to clarify meaning and intent.
3. Staff proposes to make the following modifications that simplify the meaning and implementation of the regulations:
  - a. Remove the reference to the R16 and R20 zones that further restrict occupancy based on parking and expand the parking section to make reference to the need to have one parking space per tenant. The existing code language already requires one space per tenant irrespective of zoning. This standard will continue to work for the high density communities located in the R16 and R20 zoning designations since it also requires that each space be exclusively dedicated.
  - b. Remove the reference to bedrooms and simply cap the occupancy number at 4. The rationale for removal of this standard is that the parking space standard will more effectively further limit occupancy and that it is an obvious external indicator of maximum occupancy since it is easy to count parking spaces outside and to know if a garage can occupy one, two or three automobiles. Furthermore, staff is in a better position to demand that a property owner open a garage and verify if it can be used for parking vs. demand entry into a home.
  - c. Remove the amortization schedule in order to eliminate confusion on its meaning as we move forward with implementation.
4. In the definition of Communal Residence staff proposes to clarify that these properties are not only a type of dwelling unit but that they are also operating as a business.

Attachment A: Revised Draft Code Amendments

## EXHIBIT A

### 18.04.031 Adult family home.

"Adult family home" means a residential home licensed by the State in which a person or persons provide personal care, special care, room, and board to more than one but not more than six adults who are not related by blood or marriage to the person or persons providing the services. Adult Family Homes are not Communal Residences.

### 18.04.125 Assisted living facility.

"Assisted living facility" means a combination of housing, supportive services, personalized assistance, and health care designed to respond to the individual needs of those who need help with activities of daily living. An establishment with a central or private kitchen, dining, recreational, and other facilities, with separate bedrooms or living quarters, where the emphasis of the facility remains residential. An Assisted Living Facility is not a Communal Residence.

### 18.04.249 Communal residence.

"Communal residence" ~~means-is a business where a~~ dwelling unit, without an owner occupant, ~~that~~ is rented to a group of unrelated individuals. Adult Family Homes, Foster Care Homes, Group Residence Facilities, Special Needs Housing, and Supportive Housing are not Communal Residences.

### 18.04.390 Foster care home.

"Foster care home" means a home which provides regular care for up to four developmentally disabled adults, or up to four adults who are recipients of state or federal financial assistance services, or up to four foster children under the age of 18, or up to three expectant mothers in a residential structure of the person or persons under whose direct care and supervision the people are placed. A Foster Care Home is not a Communal Residence.

### 18.04.440 Group residence facility.

"Group residence facility" means a facility licensed by the state and operated with full-time supervision for housing resident persons who, by reasons of their mental or physical disability, addiction to drugs or alcohol, or family and social adjustment problems, require a transitional nonmedical treatment program for rehabilitation and social readjustment. For the purposes of this title, a nonmedical treatment program consists of counseling, vocational guidance, training, group therapy and other similar rehabilitative services but does not include drug and/or alcohol detoxification. Monitoring the taking of prescription medication shall be permitted. The use of

medication by any resident shall be incidental to that person's residence in the facility and shall not be a criterion for residence in the facility. This definition does not include residential dwellings which meet all other requirements of this title, that provide programs related to this definition or which provide services of a nursing home as defined by ACC 18.04.660. A Group Residence Facility is not a Communal Residence.

#### **18.04.660 Nursing home.**

"Nursing home," "rest home," "convalescent home," "guest home" and "home for the aged" means a home operated similarly to a boardinghouse but not restricted to any number of guests or guest rooms, the operator of which is licensed by the state or county to give special care and cure to his or her charges, and in which nursing, dietary and other personal services are furnished to convalescents, invalids and aged persons, and in which homes are performed no surgery, maternity or any other primary treatments such as customarily provided in hospitals, and in which no persons are kept or served who normally would be admitted to a mental hospital or to a group residence facility. This definition does not include group residence facilities as defined in this title. A Nursing Home is not a Communal Residence.

#### **18.04.794 Renting of rooms.**

"Renting of rooms" means the provision of rooms for lodging purposes to not more than two persons in addition to the owner occupied unit, and/or family who lives in the residence.

#### **18.04.835 Special needs housing.**

"Special needs housing" is housing that meets the definition of nursing home, group home, or other housing that meets the needs of special populations that need assistance or special accommodation in housing. See Chapter 18.49 ACC. Special Needs Housing is not a Communal Residence.

#### **18.04.891 Supportive housing.**

"Supportive housing" means a multiple-family dwelling owned or sponsored by a nonprofit corporation or government entity, designed for occupancy by individual adults that are either (A) homeless or at risk of homelessness; (B) are experiencing a disability that presents barriers to employment and housing stability; or (C) generally require structured supportive services to be successful living in the community; is permitted at a greater unit density than otherwise allowed within a particular zone; and is intended to provide long-term, rather than transitional, housing. Long-term housing is approximately longer than two years, whereas transitional housing is no more than two years. Supportive Housing is not a Communal Residence.

| P = Permitted A = Administrative C = Conditional Use X = Not Permitted |                     |     |     |     |      |      |      |
|------------------------------------------------------------------------|---------------------|-----|-----|-----|------|------|------|
| Land Uses                                                              | Zoning Designations |     |     |     |      |      |      |
|                                                                        | RC                  | R-1 | R-5 | R-7 | R-10 | R-16 | R-20 |
| A. Residential Uses.                                                   |                     |     |     |     |      |      |      |
| Communal residence four or less unrelated individuals                  | P                   | P   | P   | P   | P    | P    | P    |
| Communal residence more than four unrelated individuals                | C                   | C   | C   | C   | C    | C    | C    |

### 18.31.130 Communal residence standards.

A. Parking Requirements. There must be one off-street parking stall that meets City standards of ACC 18.52.050, 'Parking design, development, and maintenance standards' per renter-tenant. The applicant must demonstrate that each off-street parking space is under their ownership. In condominium or townhouse communities that applicant can also provide legal documentation that demonstrates that they have exclusive use of a common area parking space. The City shall ~~A landlord may~~ reduce the off-street parking requirement if the property owner provides and maintains a notarized affidavit is signed separately by each tenant, certifying that a tenant does not own a vehicle or have control of a vehicle while at the residence. A copy of the affidavit must be provided to the City upon request.

#### B. Solid Waste Management Requirements.

1. ACC 8.08.070 requires all occupied ~~units~~ communal residences to have minimum garbage service. The landlord is required to provide tenants with adequate garbage and recycle receptacles meeting the minimum garbage service level of this code section.
2. The landlord is responsible to provide each tenant with the solid waste collection schedule at the time of the tenant's initial occupancy and that a current schedule is must to be posted displayed within a common area of the communal residence the unit.

C. Annual Inspection Required. An annual building inspection is required for a communal residence as part of the required initial issuance and annual renewal of the rental housing business license.

#### D. Occupancy limits.

1. International Property Maintenance Code occupancy requirements are applicable to a communal residence regardless of the number of individuals living in the residence.

2. The occupancy limit for a Communal Residence shall conform to the following: shall not exceed 4 people.

1. No more than one occupant per approved bedroom is allowed, provided that two adults who are bonded under a legal union that is recognized under State law, may occupy a single bedroom once it has been verified that the bedroom meets the minimum square footage requirements established in the International Property Maintenance Code. The King County Assessor records will be used to determine the number of approved bedrooms, provided that a city building permit that has been approved, issued, and inspected and that adds additional bedrooms may supplement the County records.

2. Within the R16 and R20 zones the occupancy limit for a Communal Residence shall comply with subsection 1 above and shall also not exceed the number of on site parking spaces that are exclusively dedicated to the residence. Within apartment complexes, condominium complexes, and other high density housing layouts, shared community parking spaces may not be used when demonstrating satisfaction with this requirement unless the applicant can provide documentation that the owner or responsible Association has authorized exclusive use of the parking space. For example, if there are two on site parking spaces there shall be no more than 2 occupants because single family residential communities are designed with a minimum parking requirement of 2 spaces per dwelling unit.

3. Under no circumstance are more than four occupants allowed.

F. Amortization Schedule. Existing communal residences have until December 31, 2013, to become compliant with the regulations outlined in this title and ACC Title 5 as it pertains to communal residences.

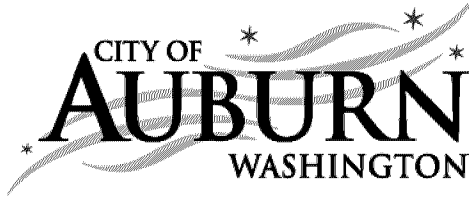
F. The following criteria are required to be met for any communal residence over four unrelated individuals in addition to the required criteria for a conditional use permit under ACC 18.64.040. As stated in ACC 18.07.020, a conditional use permit is required.

1. Adequate living space based on the International Property Maintenance Code standards will be taken into account when a request for more than four unrelated individuals is requested.

2. A designated property manager that is available 24 hours a day, seven days a week is required.

3. The request for more than four unrelated individuals will not adversely impact the surrounding community.

4. The applicant must show how noise will be mitigated



## MEMORANDUM

**TO:** Judi Roland, Chair, Planning Commission  
Ron Copple, Vice-Chair, Planning Commission  
Planning Commission Members

**FROM:** Susan Fenhaus, Water Utility Engineer  
Lisa Tobin, Utilities Engineering Manager

**DATE:** March 9, 2015

**RE:** 2015 Comprehensive Water Plan – Initial Briefing

---

The City is in the process of updating the Comprehensive Water Plan (Water Plan). The final plan will consist of two large binders; one containing data, analyses, and proposed improvements; and one containing appendices. The City Council recently completed its initial review of the entire plan at a February 2015 study session.

Since the last water plan was prepared (in 2009, with adoption in 2012), the water utility has supplemented its own water supply sources with additional supply from the regional surface water system (Tacoma's Pipeline 5). Of the 26 projects and programs identified in the 2009 Comprehensive Water Plan, 23 of the projects and programs have been or will be completed this year.

The Executive Summary of the Water Plan is attached for your review prior to the initial Planning Commission briefing on March 17, 2015. At the Planning Commission meeting, Water Utility staff will provide a chapter-by-chapter summary of the key information contained in the plan, especially the policy chapter (Chapter 3) and the near-term (6-year) and long-term (20-year) capital improvement program (Chapter 10).

An electronic version of the Preliminary Draft Comprehensive Water Plan can be found on the City's website at  
<http://weblink.auburnwa.gov/External/ElectronicFile.aspx?docid=256143&dbid=0>

---

## COMPREHENSIVE WATER PLAN

### ES.1 INTRODUCTION

This executive summary presents a brief overview of the City of Auburn (City) Comprehensive Water Plan (Plan) including the need for this Plan and proposed improvements for anticipated future growth. The City initiated this Plan recognizing the importance of planning, developing, and financing water system facilities to provide reliable and efficient service for existing customers and to serve anticipated growth. The Plan is designed to meet state, county, and local requirements. It complies with the requirements of the Washington State Department of Health (DOH) as set forth in the Washington Administrative Code 246-290-100, Water System Plan.

This Plan contains timeframes that are the intended framework for future funding decisions. However, these timeframes are estimates and may change depending on factors involved in the processing, project work, and availability of funding. The framework does not represent actual commitments by the City.

### ES.2 PLANNING CONSIDERATIONS

The City's Retail Water Service Area (RWSA) boundaries were initially defined through both the South King County and Pierce County coordinated water-system planning process. The RWSA boundary includes areas within the City limits and potential annexation areas (PAA) as shown on Figure ES.1.

Several water purveyors adjoin the City of Auburn RWSA, as shown in Figure ES.2. These include the cities of Algona, Bonney Lake, Kent, Pacific, and Sumner. Also included are the Covington Water District (CWD), Lakehaven Utility District (LUD), Water District #111 (WD#111), Highline Water District (HWD), and the Muckleshoot Indian Tribe (MIT). Since the last Plan (adopted in 2012), minor adjustments to the boundary with Bonney Lake in Pierce County have been agreed upon in principal. Council approvals of the new boundaries are expected in 2015.

Interties provide a tool that water utilities use to move water between systems to meet supply needs, to increase reliability and to respond to emergencies. The City maintains wholesale supply interties with three adjacent water systems: Algona, CWD, and WD#111. The City also has emergency interties with LUD, WD#111, and the cities of Bonney Lake, Kent, and Pacific.

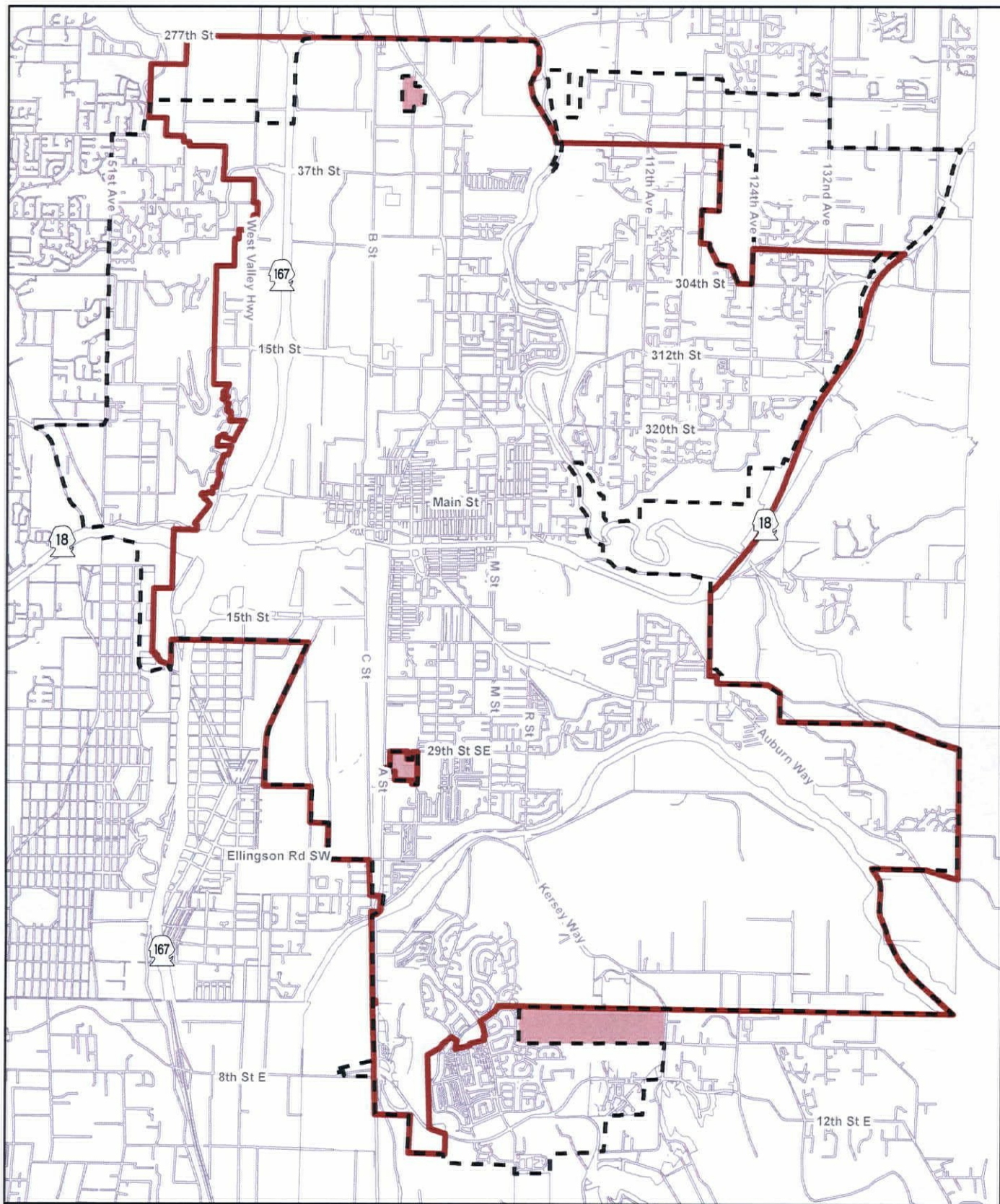
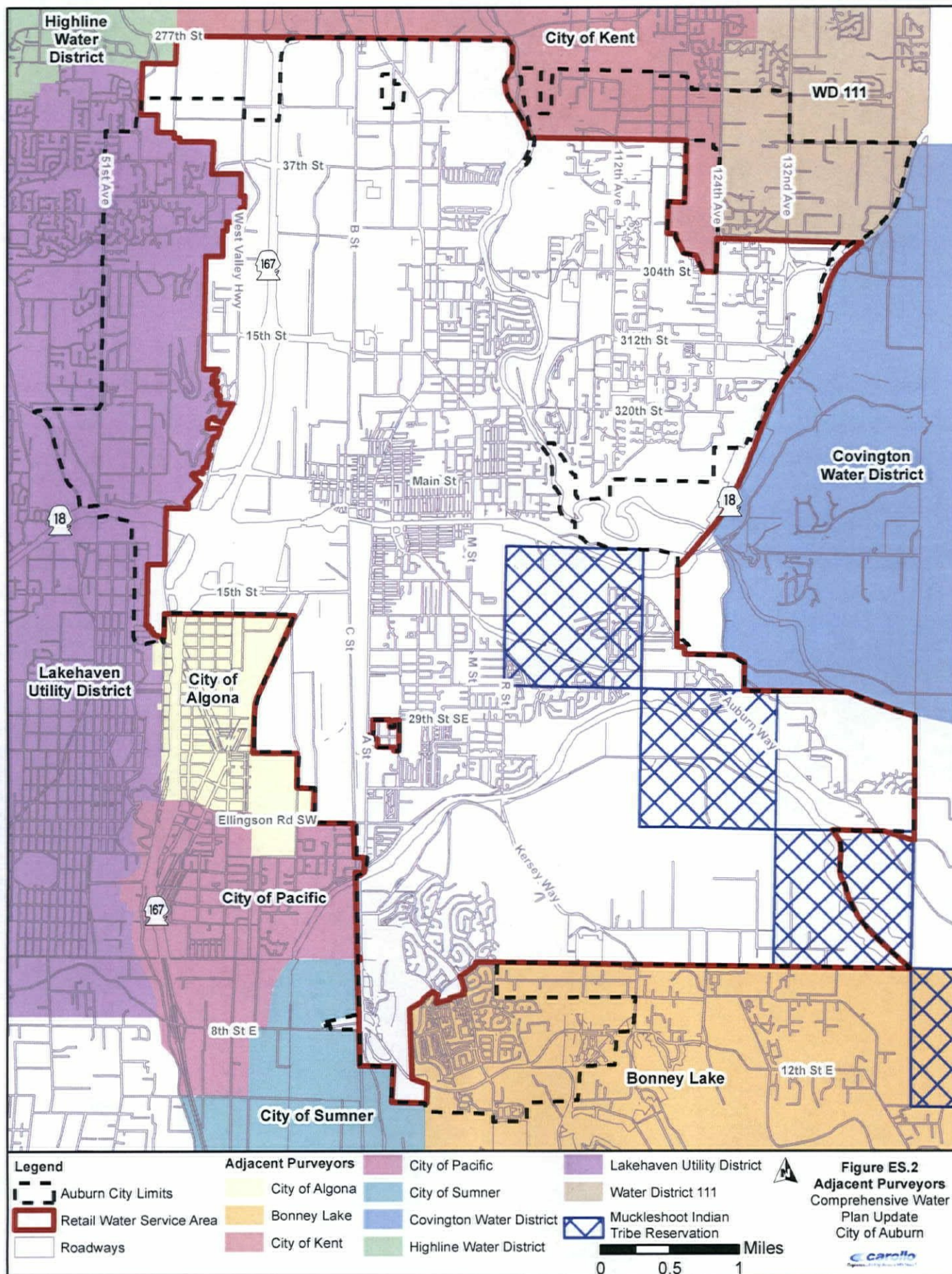


Figure ES.1  
Water Service Area  
Water Comprehensive  
Plan Update  
City of Auburn



## ES.3 POLICIES AND CRITERIA

City policies are established in order to support a vision or mission and to provide a framework for the design, operation, and ongoing well being of the City's water utility. The policies establish consistency and to ensure that adequate levels of service are provided throughout the system. The policies also provide documentation to current water-system customers, as well as those considering service from the City.

The City's Plan establishes the following mission statement for the water utility:

"The City will provide for the efficient, environmentally sound and safe management of the existing and future water system within Auburn's service area."

The policies included in this plan are developed specifically for the City's multi-source municipal water system (System Number 03350V). Table ES.1 summarizes key policies and criteria. The Plan summarizes policies and criteria relating to business practices, service area, operation and maintenance (O&M), financial, planning, environmental stewardship, and design and construction.

| <b>Table ES.1 Service Area Policies Summary<br/>Comprehensive Water Plan<br/>City of Auburn</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Policy Name</b>                                                                              | <b>Policy Statement</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Business Practices                                                                              | City desires to employ recognized best business practices which result in the efficient and cost effective operation of the utility. The City shall identify the key business functions within the utility and develop supporting best business practices for each. The utility will conduct a performance audit every six years in conjunction with its capital projects planning cycle to evaluate how well best business practices are being implemented and how effective they are. |
| Retail Service Area                                                                             | The City will plan for and provide water service to all customers with firm contracts. As supply permits, the City may provide water to customers without firm contracts.                                                                                                                                                                                                                                                                                                               |
| Conditions of Service                                                                           | For areas outside the current City limits, but within the RWSA, the City shall condition service on agreement that development is in compliance with City development standards.                                                                                                                                                                                                                                                                                                        |
| Service Extension                                                                               | Extension of the water system should be allowed provided the area to be served is within the City's RWSA, the proposed development is consistent with adopted development policies, and associated City costs are reimbursed. Property owners shall be responsible for extending the water system through the full extent of their property as required by Auburn City Code.                                                                                                            |
| Source of Supply                                                                                | It is the City's goal to have sufficient system-wide supply facilities (including both permanent and emergency interties) to meet the maximum daily demand (MDD) of the entire system with any single active water supply source out of service.                                                                                                                                                                                                                                        |
| Pump Stations                                                                                   | The City's goal is to have sufficient capacity to allow full service with any single pump out-of-service.                                                                                                                                                                                                                                                                                                                                                                               |

| <b>Table ES.1 Service Area Policies Summary<br/>Comprehensive Water Plan<br/>City of Auburn</b> |                                                                                                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Policy Name</b>                                                                              | <b>Policy Statement</b>                                                                                                                                                                                                                                                        |
| Reservoir Storage                                                                               | The City will provide sufficient storage volume so that each storage component (operational, equalizing, fire fighting and emergency) is provided separately, recognizing that a fire could occur during an emergency (supply or pump station out-of-service).                 |
| Fire Flow                                                                                       | The City has established a fire flow criterion of 1,500 gallons per minute (gpm) for all single-family residential areas of the City and 2,500 gpm for all multifamily residential and all other non-residential land use areas, except parks and open spaces within the City. |
| Hydrants                                                                                        | The maximum distance between fire hydrants in single-family use district zones shall be 600 feet. The maximum distance between fire hydrants in commercial, industrial, and apartment (including duplex) use district zones shall be 300 feet.                                 |
| Dead-end Mains                                                                                  | Provisions shall be made wherever appropriate in any project for looping all dead-end or temporarily dead-end mains.                                                                                                                                                           |
| System Pressure                                                                                 | The City of Auburn has established an acceptable system pressure range of 35 to 80 pounds per square inch (psi) for all new facilities. During fireflow conditions, a minimum pressure of 20 psi is allowed.                                                                   |
| Distribution System                                                                             | Pipe velocities shall not exceed 8 feet per second in all water mains.                                                                                                                                                                                                         |
| Water Use Efficiency Goals                                                                      | The City will target a 1 percent reduction in equivalent residential unit value for each year until reaching a water use per Equivalent Residential Unit (ERU) of 172 gallons per day (gpd) per ERU.                                                                           |
| Non-revenue water (water leakage)                                                               | The City will strive to maintain levels of water leakage for its distribution system at less than 10 percent.                                                                                                                                                                  |

## ES.4 WATER REQUIREMENTS

The City's water requirements, or demand, was projected for each customer class (single-family residential/duplex, multifamily residential, commercial, manufacturing / industrial, schools, city accounts, and irrigation). Demand projections were expressed as Equivalent Residential Unit (ERU), average day demand (ADD), and maximum day demand (MDD). One ERU is defined as the average quantity of water beneficially used by one average, full-time, single-family residence per day. The quantity of water used by other customer classes, and by the whole system, can be expressed in terms of equivalent ERUs. The ADD is typically used in operational evaluations. The MDD represents the single largest day water demand during the year and is a key parameter for infrastructure sizing.

The City provided water to approximately 56,000 people through 13,910 retail accounts as of the end of 2013. Between 2008 and 2013 the average day demand (ADD) has ranged from 7.16 million gallons per day (mgd) in 2011 to 8.61 mgd in 2009 and averaged 7.74 mgd. The MDD has ranged from 11.43 mgd in 2011 to 14.36 mgd in 2009. From 2008 to 2013, the total number of connections increased by 6 percent, while the average annual total water consumed declined by approximately 10 percent. The decline was likely caused by multiple factors, including the economic downturn from 2008 to 2010, continued water

use efficiency (WUE) activities, and higher water use efficiency in new and renovated homes and offices.

The total projected annual ADD and MDD, along with wholesale demands, are summarized in Table ES.2. Projected demands were developed based on projected customer accounts, which used demographic growth rates provided by the City, and the expected water use. The expected water use was based on historical information. The City has historically used the 75th percentile statistic in its demand projections to provide a factor of safety, without being overly conservative. For comparison purposes, the average water use can be expressed in relation to ERUs where water use per ERU was 195 gpd/ERU. The peak demands can be expressed as an MDD/ADD peaking factor, which is the relative magnitude of MDD compared to the ADD. The City's MDD/ADD peaking factor was 1.82.

Distribution system leakage (DSL) was also included in the demand projections. DSL represents the difference between production and documented water use (retail, wholesale, and authorized unmetered). State rules require that the three-year average of distribution leakage be maintained at less than 10 percent of the supply. The total 3-year rolling average DSL for 2000 through 2013 was between 5.6 percent and 9.7 percent of the total production, meeting the regulatory requirements. The City has chosen a planning value of 9.5 percent for DSL by using the 75th percentile of the historical data.

The City has wholesale agreements to sell water to the City of Algona, CWD, MIT, and WD#111. The current contract with Algona is a firm wholesale agreement to deliver 525,000 gallons of ADD and 1,114,000 gallons of MDD. The City also needs to plan for supply to the MIT future fish hatchery. An agreement dated from 1986 requires that the City provide the tribe with a firm average annual demand of 2.5 mgd from Coal Creek Springs and a firm maximum demand during the summer of 1.9 mgd.

The City's agreements with CWD and WD#111 is on an interruptible basis and requires the City to sell 2.5 mgd to CWD and 2.5 mgd to WD#111. CWD did not renew its purchase agreement in 2010; however, the City may provide supply per the Interlocal Agreement 2 upon request of CWD as determined by the City.

| <b>Table ES.2 ADD, MDD, and ERUs Summarized for Each Service Area with Wholesale Comprehensive Water Plan<br/>City of Auburn</b> |                   |                   |                   |                   |
|----------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------|-------------------|-------------------|
| <b>Area</b>                                                                                                                      | <b>2015 (mgd)</b> | <b>2021 (mgd)</b> | <b>2025 (mgd)</b> | <b>2035 (mgd)</b> |
| <b>Lea Hill</b>                                                                                                                  |                   |                   |                   |                   |
| Average Day Demand, mgd                                                                                                          | 1.26              | 1.37              | 1.45              | 1.60              |
| Maximum Day Demand, mgd                                                                                                          | 2.30              | 2.50              | 2.63              | 2.92              |
| Equivalent Residential Units                                                                                                     | 5,829             | 6,343             | 6,687             | 7,411             |

| <b>Table ES.2 ADD, MDD, and ERUs Summarized for Each Service Area with Wholesale Comprehensive Water Plan<br/>City of Auburn</b> |                   |                   |                   |                   |
|----------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------|-------------------|-------------------|
| <b>Area</b>                                                                                                                      | <b>2015 (mgd)</b> | <b>2021 (mgd)</b> | <b>2025 (mgd)</b> | <b>2035 (mgd)</b> |
| <b>Valley</b>                                                                                                                    |                   |                   |                   |                   |
| Average Day Demand, mgd                                                                                                          | 4.84              | 5.23              | 5.77              | 6.27              |
| Maximum Day Demand, mgd                                                                                                          | 8.81              | 9.52              | 10.51             | 11.41             |
| Equivalent Residential Units                                                                                                     | 22,370            | 24,169            | 26,677            | 28,964            |
| <b>Lakeland Hills</b>                                                                                                            |                   |                   |                   |                   |
| Average Day Demand, mgd                                                                                                          | 0.38              | 0.43              | 0.46              | 0.49              |
| Maximum Day Demand, mgd                                                                                                          | 0.69              | 0.78              | 0.83              | 0.89              |
| Equivalent Residential Units                                                                                                     | 1,757             | 1,983             | 2,113             | 2,247             |
| <b>Academy</b>                                                                                                                   |                   |                   |                   |                   |
| Average Day Demand, mgd                                                                                                          | 0.69              | 0.71              | 0.74              | 0.79              |
| Maximum Day Demand, mgd                                                                                                          | 1.26              | 1.29              | 1.35              | 1.44              |
| Equivalent Residential Units                                                                                                     | 3,187             | 3,266             | 3,419             | 3,665             |
| <b>Total Retail Customers</b>                                                                                                    |                   |                   |                   |                   |
| Average Day Demand, mgd                                                                                                          | 7.17              | 7.74              | 8.42              | 9.15              |
| Maximum Day Demand, mgd                                                                                                          | 13.06             | 14.09             | 15.32             | 16.66             |
| Equivalent Residential Units                                                                                                     | 33,142            | 35,761            | 38,897            | 42,287            |
| <b>Retail With Firm Wholesale (Algona)</b>                                                                                       |                   |                   |                   |                   |
| Average Day Demand, mgd                                                                                                          | 10.02             | 10.59             | 11.28             | 12.01             |
| Maximum Day Demand, mgd                                                                                                          | 15.44             | 16.47             | 17.71             | 19.06             |
| <b>Retail With Firm &amp; Interruptible Wholesale (CWD and WD#111)</b>                                                           |                   |                   |                   |                   |
| Average Day Demand, mgd                                                                                                          | 15.02             | 15.59             | 16.28             | 17.01             |
| Maximum Day Demand, mgd                                                                                                          | 20.44             | 21.47             | 22.71             | 24.06             |

## ES.5 EXISTING SYSTEM

The City owns and operates a multi-source municipal water system (DOH ID 03350V), which includes supply, treatment, storage, and distribution of potable water to residential, commercial, and wholesale customers. Service is provided to four major service areas,

which are further divided into pressure zones as required by local topography. The major service zones and associated service elevations are summarized in Table ES.3.

| <b>Table ES.3    Service Area Elevations<br/>Comprehensive Water Plan<br/>City of Auburn</b> |                             |
|----------------------------------------------------------------------------------------------|-----------------------------|
| <b>Service Area</b>                                                                          | <b>Elevation Range, ft.</b> |
| Valley                                                                                       | 39 - 235                    |
| Lea Hill                                                                                     | 58 - 513                    |
| Academy                                                                                      | 171 – 444                   |
| Lakeland Hills                                                                               | 78 - 578                    |

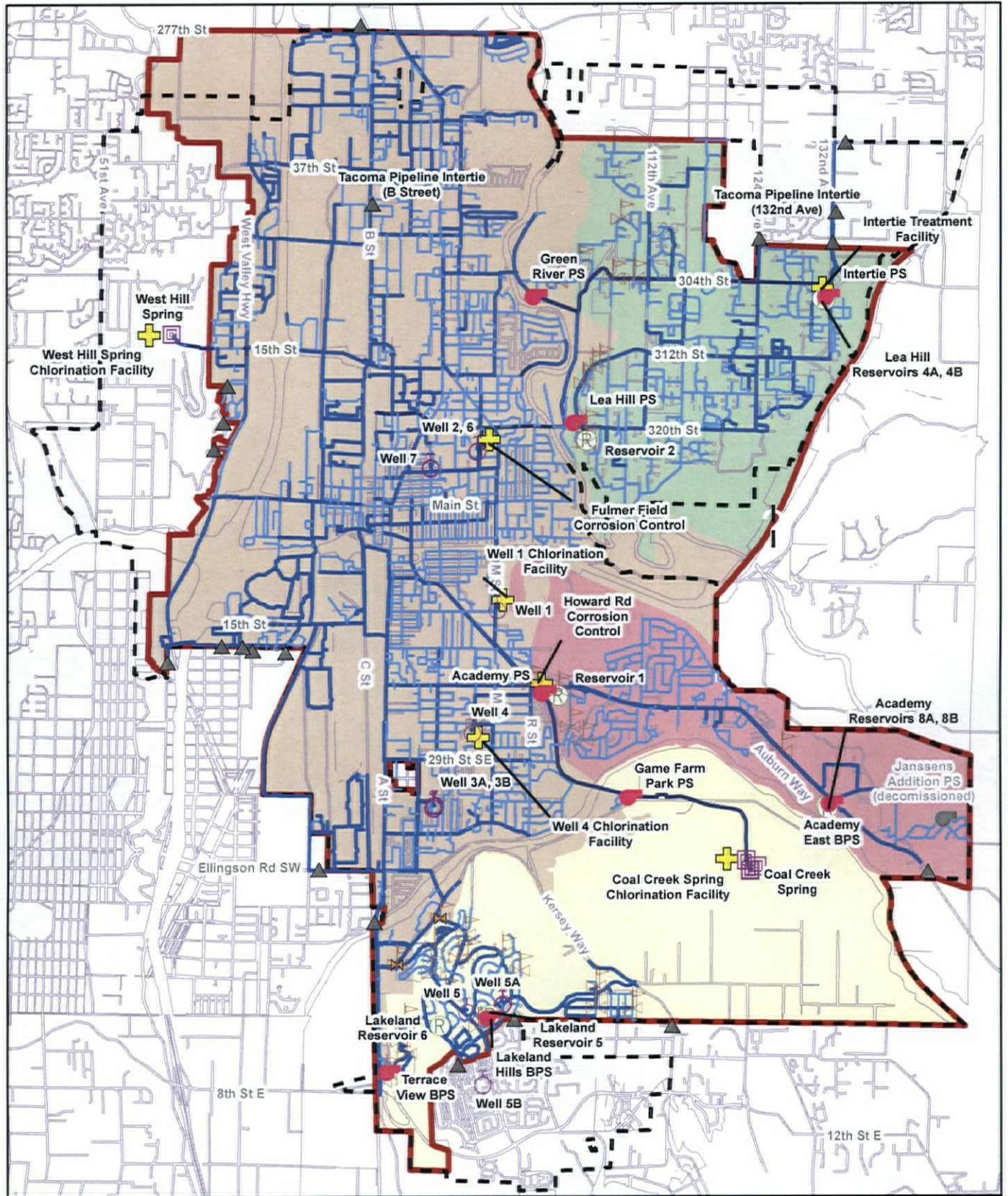
The City's four major service areas and the location of key elements of the water system are shown in Figure ES.3.

The City sources of supply include two springs, ten wells, and Tacoma wholesale water supply. Wells 1, 2, 3A, 3B, 4, 6, 7, Coal Creek Springs, and West Hill Springs provide water to the Valley service area, while Wells 5, 5A, and 5B provide water to the Lakeland Hills service area. Tacoma wholesale supplies are received through two interties: the B St NW Intertie in the Valley Service Area and the 132nd Ave SE Intertie in the Lea Hill Service Area.

The City operates and maintains pump stations to move water throughout the piping network and to provide water at the required service pressures. Pump stations supply water from the Valley Service Area to the Lea Hill, Academy, and Lakeland Hills Service Areas. Additionally, booster pump stations are used to supply high elevation areas in the Academy, Lea Hill, and Lakeland Hills Service Areas. The City also operates the Intertie Pump Station in Lea Hill Service Area to provide wholesale supplies to WD#111.

The City currently maintains a total of 15.8 million gallons (MG) of water storage in eight water reservoirs. Each of the City's service areas contains two reservoirs to aid in system operation and maintenance.

Water treatment in the City includes chlorination, corrosion control treatment (CCT), and metals removal. All wells, except Well 5, are equipped with some level of treatment. Water quality improvements have recently been completed at several sites to convert the current gas chlorination systems to hypochlorite. Hypochlorite systems are a safer way to operate disinfection facilities.



#### Legend

- |           |                    |                                  |                           |                            |
|-----------|--------------------|----------------------------------|---------------------------|----------------------------|
| Reservoir | Pump Station       | <b>Water Distribution System</b> | City Limits               | <b>Water Service Areas</b> |
| Intertie  | Treatment Facility | 8" and Smaller                   | Retail Water Service Area | Academy                    |
| Spring    | Closed Valve       | 10 - 16"                         | Roadways                  | Lakeland Hills             |
| Well      | PRVs               | 18" and Larger                   | Lea Hill                  | Valley                     |
|           |                    | Pump Station (Decommissioned)    |                           |                            |



0 0.5 1 Miles

**Figure ES.3**  
**Water Facility Locations**  
 Comprehensive  
 Water Plan  
 City of Auburn

**carollo**  
 Engineers...Working Towards Better Days

The City's water transmission and distribution system includes nearly 250 miles of pipeline. Pipe size varies from 4 to 24 inches, with predominance of 8- and 12-inch diameter pipe. The existing data shows that over 90 percent of the distribution system is ductile-iron (DI) pipe. Pipes made of asbestos-cement, steel, and concrete cylinder make up the remaining pipes in the system. In 2015, the last remaining asbestos-cement pipes in the water system will be replaced with DI pipe.

## ES.6 WATER RESOURCES

The City currently holds certificated, primary water rights and claims with a total instantaneous flow (Qi) of 19,075 gpm (27.47 mgd) and an average annual flow (Qa) of 21,002 acre-foot per year (ac-ft/year) (18.75 mgd). The City's water rights are sufficient to supply the City through 2035; therefore, no new water rights applications are recommended.

The City's total instantaneous supply capacity is 14,686 gpm (21.15 mgd) and the total annual capacity is 17,104 ac-ft/year (15.02 mgd) mgd, based on the City's ability to pump from the existing system. The existing instantaneous supply capacity will be deficient starting in 2019. The City will need to provide a minimum additional supply of 2,100 gpm by the end of the planning period to address this deficiency. To meet the projected deficit, the City has developed a five-part water supply strategy as follows:

- Improve existing supply facilities: The source improvement strategy to meet the future demands includes improvements to Coal Creek Springs, manganese treatment of Well 7, and expansion of Howard Road CCT. Additionally, Well 2 and Well 3A/B will be replaced to maximize the capacity and operational flexibility of the water system. Manganese treatment may also be needed for Well 3A/B to make full use of these supplies.
- Use cost-effective wholesale supplies from Tacoma to their full extent: The City has obtained 3,556 gpm (5.12 mgd) of peak season and 1,736 gpm (3.5 mgd) of average day wholesale supplies from Tacoma. The City may also secure additional permanent or temporary (market-rate) supplies from Tacoma in the short-term planning period.
- Secure additional water rights: The City has an application into the Ecology for new primary water rights. The new rights will provide supply for the City, Algona, MIT, Covington Water District, and WD#111. The City may also consider securing additional wholesale supplies from Tacoma.
- Consider opportunities for water reuse: Water reuse, as reclaimed water, is a potential source of supply. No reclaimed water is currently available from King County Metro sewer system in the City, who treats the City's sewage. The City will continue to participate in local and regional wastewater reuse planning efforts to identify new opportunities.

- Continue an aggressive Water Use Efficiency Program: To reduce or delay the need for more supplies the City will continue to reduce demand through a WUE, which is discussed in more detail in an subsequent section.

## **ES.7 WATER QUALITY**

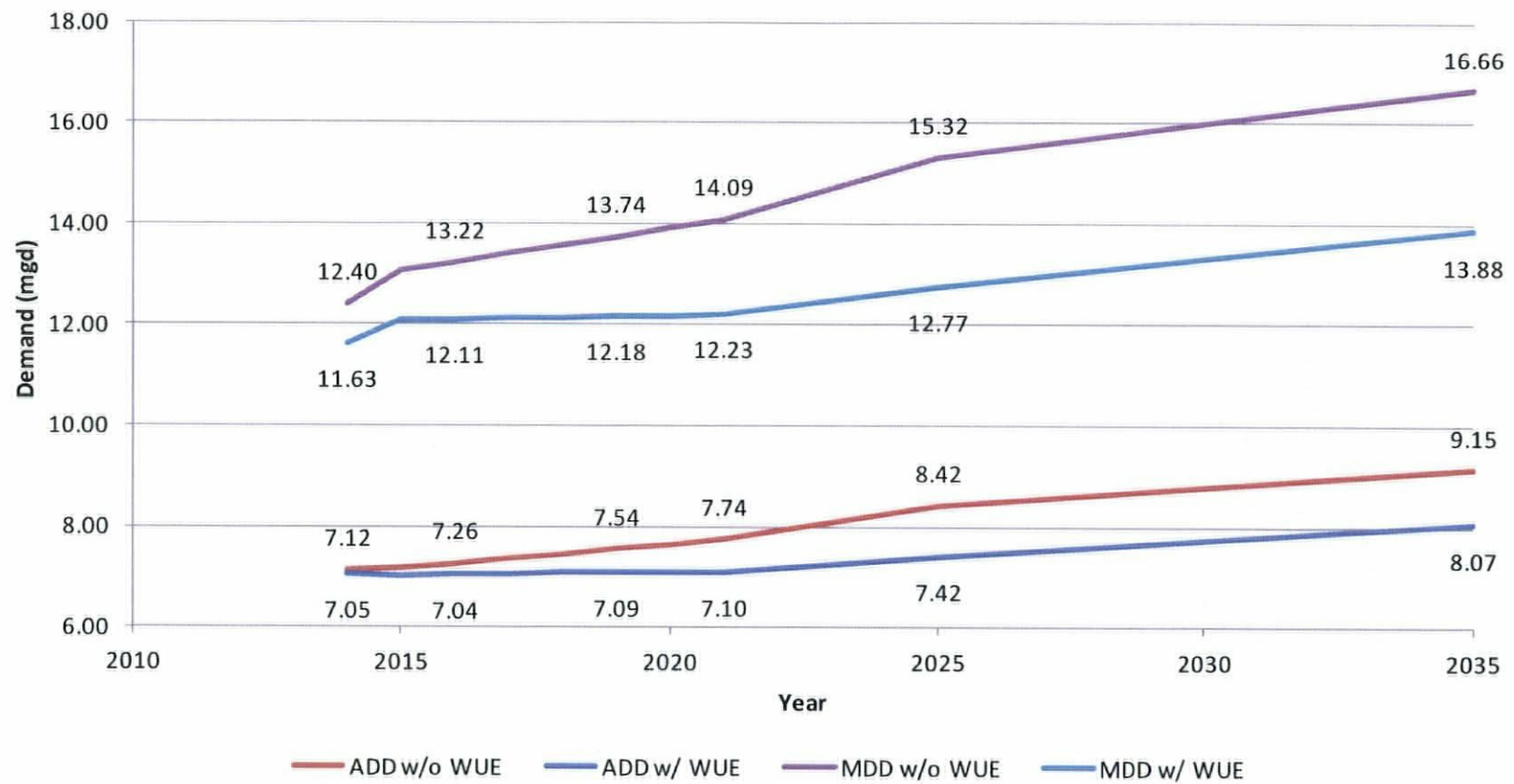
The City is in compliance with all current regulatory requirements, including monitoring requirements. The following actions are recommended to maintain future compliance:

1. It is recommended that the City continue its monitoring program. Continue to routinely evaluate water quality parameters and potential issues throughout the system to maximize the water supply benefit and minimize potential adverse water quality issues.
2. The City should continue to coordinate with Tacoma concerning the water quality of the wholesale supplies. It is recommended that the City add continuous chlorine analyzers at each intertie with supervisory control and data acquisition (SCADA) connections to monitor and record residual at the interties. Additional sampling at the Tacoma interties is recommended to fill in gaps in existing source water quality data.
3. Continue to take actions recommended by the DOH to correct deficiencies identified in the 2012 Sanitary Survey.
4. Contact the DOH regional engineer to determine whether treatment provided at the City's sources is sufficient to provide 4-log virus inactivation or removal, especially West Hill Springs and Well 1 (upon completion of the improvements).
5. Update the City's Water Quality Management Plan, as necessary, to address changes due to forthcoming source improvement projects.

## **ES.8 WATER USE EFFICIENCY**

The development of the WUE program is the foundation for using water wisely. The 2015-2020 WUE program will be a continuation of the existing program with specific enhancements to the program to comply with current regulations. The proposed goal for the 2015-2020 WUE program will target a 1 percent reduction in the ERU value per year from the current planning ERU value of 195 gpd/ERU. Re-evaluate goal when the planning ERU value reaches less than 172 gpd/ERU. WUE measures are projected to reduce retail MDD by 1.72 mgd by 2020 and 3.53 mgd by the year 2035, as shown in the Figure ES.4.

The City is planning to implement water meter and billing system improvements that will provide advanced meter infrastructure (AMI) throughout the system during the 2015-2020 program period. In addition to the operational and financial benefits, AMI will provide a new tool for the WUE Program. For example, the AMI meters may be able to identify substantially more water loss reduction opportunities than previously possible.



## DEMAND SAVINGS

FIGURE ES.4

CITY OF AUBURN  
COMPREHENSIVE WATER PLAN

## **ES.9 SYSTEM ANALYSIS**

The City's water system includes pump station, storage, and distribution network. An analysis of the City's water system was conducted to identify deficiencies in the system and recommended improvement projects to resolve the identified deficiencies. Implementation of the improvement projects were assigned into three planning horizons: short-term from 2015-2021, medium-term from 2022-2025, and long-term from 2026-2035.

The pump stations (PS) and booster pump stations (BPS) were analyzed to ensure there was sufficient capacity to maintain the required level of service and identify improvements, where needed. Due to capacity considerations and age, one PS will be replaced and one PS will be decommissioned. Due to fire flow demands and reliability requirements, one BPS will be expanded and one BPS will be replaced. Additionally, backup power will be added to one PS.

Historically, the City has considered storage in each service area independently. New sources and PSs increase the ability of the system to operate as an interconnected whole. This new operational ability allows sharing of storage between the service areas and reduces the overall need for new storage. However, the analysis of storage indicates that the Valley Service Area will require additional storage. To meet the future storage requirements, a combination of new storage, improvements to existing reservoirs, and supply improvements are proposed.

The water distribution network was evaluated using demands and fire flows. To satisfy the City's criteria, the system should be able to maintain pressures of 35 psi at all times except during a fire. The system needs to provide fire flow under MDD conditions, while maintaining a minimum pressure of 20 psi or greater. The velocity in transmission and distribution mains should be less than 8 feet per second. The City's fire flow requirements are 1,500 gpm for residential areas and 2,500 gpm for all other land use areas, except City parks and open spaces. Hydraulic analysis showed a number of pipe improvements are required in the future to meet the City's criteria.

## **ES.10 CAPITAL IMPROVEMENTS PLAN**

The Capital Improvement Plan (CIP) was developed which identifies system improvements needed to meet customer demands through the 20 year planning period. Planning-level cost estimates were developed for each of the recommended projects for budgeting purposes. These costs are planning level estimates only and should be refined during pre-design of the projects. Cost estimates are presented as total project costs in October 2014 dollars.

Cost estimates were developed using a Class 5 budget estimate, as established by the American Association of Cost Estimators (AACE). This level of estimate is used for

strategic business planning purposes, including long-range capital planning. Planning costs include engineering, legal, administration, and construction management costs. Construction costs include the cost of material, labor, a 30 percent contingency, markup for contractor overhead and profit, and sales tax on both services and materials.

The capital projects identified are categorized into water supply (S), storage (R), pump stations (PS), distribution (D), and general improvements (G). The projects anticipated for the next six years total \$35.5M, which are summarized in Table ES.4. The project costs shown in Table 10.7 are divided into three categories: 1) upgrade; 2) expansion; and 3) repair and replacement. Projects may include elements of multiple categories. The City uses this information to develop rates and System Development Charges. The total costs for upgrade related projects over the next six years is \$7.9M, the total cost for expansion related projects over the next six years is \$7.9M, and the total cost for repair and replacement related projects over the next six years is \$19.8M.

## **ES.11 FINANCIAL**

The objective of the financial plan is to identify the total cost of providing water service and to provide a financial program that allows the water utility to remain financially viable during execution of the 2015-2021 CIP. This viability analysis considers the financial condition of the utility over the past six-year period (2008-2013), the sufficiency of utility revenues to meet current and future financial and policy obligations, and the financial impact of executing the CIP.

For the 2015-2021 planning horizon, the City identified 27 projects valued at \$35.51 million in current day dollars (\$41.27 million inflated). Sources of funding to support this CIP include revenue bonding of \$34.92 million (85 percent) and cash funding of \$6.35 million (15 percent). Annual debt service for existing and bond issuances is forecasted to total approximately \$2.69 million in 2015, increasing to \$4.87 million by 2021.

Operating expenses for the Utility, including annual debt service and rate-funded system reinvestment, is forecasted to increase from approximately \$13.67 million in 2015, to \$18.05 million by 2021.

To fund these financial obligations, the primary source of revenue for the utility is collections from water service charges. Total revenues are forecasted to provide \$13.85 million in 2015 and increase to \$18.45 million by 2021. The forecasted revenues were developed using the approved 3.5 percent annual increase in rates from 2015 through 2017 and an additional average 5.7 percent annual increase starting in 2018. As a result, the financial condition is forecasted to end 2015 with a surplus of about \$171,873 increasing to approximately \$410,176 by 2021.

## ES.12 MAINTENANCE AND OPERATIONS

The Maintenance and Operations (M&O) Water Division is led by the Assistant Director of Public Works Operations, the Water Manager, Water Operations Supervisor, and the Water Distribution Supervisor. The Water Manager is designated as the individual responsible for the water system M&O staff. The Water Manager is designated as manager of the Water Distribution Supervisor and Water Operations Supervisor.

The City maintains a robust communication system to contact Water Utility personnel during normal work-hours and after-hours. This system is necessary to respond to customer requests, routine maintenance, or emergency situations. Maintenance staff vehicles and other rolling stock are all equipped with radios and personnel carry cellular phones. The Water Utility also has access to an inventory of portable emergency use radio units should they be required.

Primary operation of the City's Water System is maintained via the SCADA computerized control system. A software program called "Wonderware" works in association with SCADA to provide real time graphical display of system data for staff monitoring and control. The City's SCADA system is located in the Public Works M&O Building, and responsibility for the system falls under the Water Operations Manager and associated staff.

The Water Operations Division maintains an active and ongoing program of water quality monitoring and reporting to ensure a safe, high quality water supply. Two staff members are responsible for water quality monitoring, sampling, control, and record keeping. The Water Operations Division also receives assistance from the Engineering Services - Water Quality Program Coordinator.

The City's Public Works Department has prepared a Public Works Emergency Response Manual as a guide for management of emergency situations. The manual is a valuable tool for responding to emergency situations. The primary objectives of the Manual are the protection of life and property and restoration of essential services.

| Table ES.4 Capital Improvements Program Costs and Phasing<br>Comprehensive Water Plan<br>City of Auburn |                                             |             |         |           |                      |              |             |                |                |                |                |                |                      |
|---------------------------------------------------------------------------------------------------------|---------------------------------------------|-------------|---------|-----------|----------------------|--------------|-------------|----------------|----------------|----------------|----------------|----------------|----------------------|
| CIP ID                                                                                                  | NAME                                        | Year        | Upgrade | Expansion | Repair & Replacement | FY 2015      | FY 2016     | FY 2017        | FY 2018        | FY 2019        | FY 2020        | FY 2021        | FY 2015 - 2021 Total |
| Supply                                                                                                  |                                             |             |         |           |                      |              |             |                |                |                |                |                |                      |
| S-01                                                                                                    | Well 1 On-site Improvements Project         | 2015        | 50%     | 0%        | 50%                  | \$50,000.00  | \$0.00      | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$50,000.00          |
| S-02                                                                                                    | Well 4 Emergency Power Improvements Project | 2015        | 100%    | 0%        | 0%                   | \$50,000.00  | \$0.00      | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$50,000.00          |
| S-04                                                                                                    | Cascade Water Alliance Water Purchase       | 2017-2029   | 0%      | 100%      | 0%                   | \$0.00       | \$0.00      | \$532,561.00   | \$532,561.00   | \$532,561.00   | \$2,164,491.00 | \$2,164,491.00 | \$5,926,665.00       |
| S-07                                                                                                    | Well Inspection and Redevelopment Program   | 2017-2033   | 20%     | 0%        | 80%                  | \$50,000.00  | \$0.00      | \$150,000.00   | \$0.00         | \$150,000.00   | \$0.00         | \$0.00         | \$350,000.00         |
| S-08                                                                                                    | Water Resources Protection Program          | Annual      | 20%     | 0%        | 80%                  | \$24,597.00  | \$25,335.00 | \$26,095.00    | \$26,878.00    | \$27,685.00    | \$28,515.00    | \$29,371.00    | \$188,477.00         |
| S-09                                                                                                    | Coal Creek Springs Collector Improvements   | 2018-2019   | 20%     | 0%        | 80%                  | \$0.00       | \$0.00      | \$0.00         | \$800,000.00   | \$2,600,000.00 | \$0.00         | \$0.00         | \$3,400,000.00       |
| S-13                                                                                                    | Algona Well 1 Decommissioning               | 2015        | 0%      | 0%        | 100%                 | \$39,000.00  | \$0.00      | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$39,000.00          |
| S-17                                                                                                    | West Hill Springs Flow Control Improvements | 2015        | 50%     | 0%        | 50%                  | \$455,000.00 | \$0.00      | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$455,000.00         |
| S-19                                                                                                    | Well 6 VFD Pump Project                     | 2015        | 100%    | 0%        | 0%                   | \$50,000.00  | \$0.00      | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$50,000.00          |
| Subtotal                                                                                                |                                             |             |         |           |                      | \$718,597.00 | \$25,335.00 | \$708,656.00   | \$1,359,439.00 | \$3,310,245.00 | \$2,193,006.00 | \$2,193,861.00 | \$10,509,142.00      |
| Storage                                                                                                 |                                             |             |         |           |                      |              |             |                |                |                |                |                |                      |
| R-01                                                                                                    | Lakeland Hills Reservoir 5 Improvements     | 2015        | 50%     | 0%        | 50%                  | \$735,000.00 | \$0.00      | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$735,000.00         |
| R-03                                                                                                    | Annual Reservoir R&R Program                | Annual      | 50%     | 0%        | 50%                  | \$50,000.00  | \$50,000.00 | \$50,000.00    | \$50,000.00    | \$50,000.00    | \$50,000.00    | \$50,000.00    | \$350,000.00         |
| R-05                                                                                                    | Reservoir Painting                          | 2020 & 2022 | 0%      | 0%        | 100%                 | \$0.00       | \$0.00      | \$0.00         | \$0.00         | \$0.00         | \$1,250,000.00 | \$0.00         | \$1,250,000.00       |
| R-06                                                                                                    | Reservoir Seismic Rehabilitation            | 2018-2019   | 80%     | 0%        | 20%                  | \$0.00       | \$0.00      | \$0.00         | \$357,500.00   | \$357,500.00   | \$0.00         | \$0.00         | \$715,000.00         |
| Subtotal                                                                                                |                                             |             |         |           |                      | \$785,000.00 | \$50,000.00 | \$50,000.00    | \$407,500.00   | \$407,500.00   | \$1,300,000.00 | \$50,000.00    | \$3,050,000.00       |
| Pump Stations                                                                                           |                                             |             |         |           |                      |              |             |                |                |                |                |                |                      |
| PS-03                                                                                                   | Green River PS Back-Up Power                | 2017-2018   | 50%     | 0%        | 50%                  | \$0.00       | \$0.00      | \$90,000.00    | \$600,000.00   | \$0.00         | \$0.00         | \$0.00         | \$690,000.00         |
| PS-04                                                                                                   | Intertie Booster Pump Station Improvements  | 2021        | 25%     | 25%       | 50%                  | \$0.00       | \$0.00      | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$1,303,000.00 | \$ 1,303,000.00      |
| PS-07                                                                                                   | Academy PS No. 1 Improvements               | 2017-2018   | 50%     | 0%        | 50%                  | \$0.00       | \$0.00      | \$925,000.00   | \$1,200,000.00 | \$0.00         | \$0.00         | \$0.00         | \$2,125,000.00       |
| Subtotal                                                                                                |                                             |             |         |           |                      | \$0.00       | \$0.00      | \$1,015,000.00 | \$1,800,000.00 | \$0.00         | \$0.00         | \$1,303,000.00 | \$4,118,000.00       |

**Table ES.4 Capital Improvements Program Costs and Phasing  
Comprehensive Water Plan  
City of Auburn**

| CIP ID              | NAME                                      | Year      | Upgrade | Expansion | Repair & Replacement | SHORT-TERM     |                |                |                |                |                |                |                      |
|---------------------|-------------------------------------------|-----------|---------|-----------|----------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------|
|                     |                                           |           |         |           |                      | FY 2015        | FY 2016        | FY 2017        | FY 2018        | FY 2019        | FY 2020        | FY 2021        | FY 2015 - 2021 Total |
| Distribution System |                                           |           |         |           |                      |                |                |                |                |                |                |                |                      |
| D-02                | Annual Distribution Improvements Program  | 2017-2031 | 20%     | 0%        | 80%                  | \$0.00         | \$0.00         | \$300,000.00   | \$1,000,000.00 | \$300,000.00   | \$1,000,000.00 | \$300,000.00   | \$2,900,000.00       |
| D-03                | SCADA Upgrades                            | 2015      | 50%     | 0%        | 50%                  | \$10,000.00    | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$10,000.00          |
| D-06                | Street Utility Improvements               | Annual    | 20%     | 0%        | 80%                  | \$1,519,895.00 | \$500,000.00   | \$500,000.00   | \$500,000.00   | \$500,000.00   | \$500,000.00   | \$500,000.00   | \$4,519,895.00       |
| D-09                | Water Repair and Replacements             | 2015-2031 | 20%     | 0%        | 80%                  | \$0.00         | \$0.00         | \$0.00         | \$300,000.00   | \$1,000,000.00 | \$300,000.00   | \$1,000,000.00 | \$2,600,000.00       |
| D-10                | Pipe Asset Management Study               | 2018      | 50%     | 0%        | 50%                  | \$0.00         | \$0.00         | \$0.00         | \$50,000.00    | \$0.00         | \$0.00         | \$0.00         | \$50,000.00          |
| D-13                | Lea Hill PRV Station Improvements         | 2015-2016 | 50%     | 0%        | 50%                  | \$50,000.00    | \$400,000.00   | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$450,000.00         |
| D-14                | Valley AC Main Replacement                | 2015      | 20%     | 0%        | 80%                  | \$50,000.00    | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$50,000.00          |
| Subtotal            |                                           |           |         |           |                      | \$1,629,895.00 | \$900,000.00   | \$800,000.00   | \$1,850,000.00 | \$1,800,000.00 | \$1,800,000.00 | \$1,800,000.00 | \$10,579,895.00      |
| General             |                                           |           |         |           |                      |                |                |                |                |                |                |                |                      |
| G-04                | Comprehensive Water Plan Update - 2014    | 2015      | 50%     | 0%        | 50%                  | \$50,000.00    | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$50,000.00          |
| G-05                | Utilities Field Operations Center         | 2015      | 100%    | 0%        | 0%                   | \$300,000.00   | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$300,000.00         |
| G-06                | MIT Master Meters                         | 2015      | 20%     | 0%        | 80%                  | \$400,000.00   | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$400,000.00         |
| G-09                | Water Meter & Billing System Improvements | 2015-2019 | 20%     | 0%        | 80%                  | \$1,000,000.00 | \$1,000,000.00 | \$1,500,000.00 | \$1,500,000.00 | \$1,500,000.00 | \$0.00         | \$0.00         | \$6,500,000.00       |
| Subtotal            |                                           |           |         |           |                      | \$1,750,000.00 | \$1,000,000.00 | \$1,500,000.00 | \$1,500,000.00 | \$1,500,000.00 | \$0.00         | \$0.00         | \$7,250,000.00       |
| TOTAL               |                                           |           | 22%     | 22%       | 56%                  | \$4,883,492.00 | \$1,975,335.00 | \$4,073,656.00 | \$6,916,940.00 | \$7,017,745.00 | \$5,293,006.00 | \$4,043,862.00 | \$35,507,037.00      |