



2017



Water Management and Conservation Plan



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City of Albany

Water Management and Conservation Plan

August 2017

City of Albany
Water Management and Conservation Plan

Table of Contents

Introduction iii

1. Existing System Description 1

 Description of Sources..... 1

 South Santiam River 1

 Santiam River 3

 Municipal Water Rights..... 4

 Service Area 6

 Estimate of Population Served..... 6

 Water Demands 8

 Calculated Water Loss Due to Leaks..... 10

 Water Demands and Beneficial Use of Permit No. S-44388 13

 Customer Class Characteristics 14

 Water Distribution System..... 15

2. Required Conservation Measures 19

 Annual Water Audit..... 19

 Metered Accounts, Meter Testing and Meter Maintenance 21

 Water Rate Structure..... 23

 Leak Detection and Line Replacement 23

 Public Education and Outreach..... 28

 Water Re-use, Recycling and Non-Potable Water Opportunities 28

 Technical and Financial Assistance 29

 Other Measures..... 30

 Summary of Conservation Measure Goals 31

3. Water Curtailment Plan..... 33

 STAGE ONE: Alert for a Potential or Minor Water Supply Shortage 35

 STAGE TWO: Water Supply Shortage 35

 STAGE THREE: Severe Water Supply Shortage..... 36

 STAGE FOUR: Critical Water Supply Shortage..... 36

4. Water Supply Element 39

 Service Area and Population Projections..... 39

 Projected Water Demands 40

 Residential Demand..... 42

 Non-Residential Demand..... 42

 Water Loss Due To Leaks 45

 Summary of Projected Demands 45

 Meeting Projected Demands 48

 Source Alternatives..... 48

 Water Rights to Support Future Water Demands 48

 Full Beneficial Use of Permit S-44388..... 49

 Mitigation Issues..... 49

 Distribution System Improvement Projects 49

Water Management Plan Update Schedule..... 50

List of Appendices

Appendix A - Community Comments.....	A
Appendix B - Municipal Water Rights	B
Appendix C - Dumbeck Lane Domestic Water Supply District Agreement.....	C
Appendix D - North Albany County Service District Service Agreement	E
Appendix E - Jointly-Owned Water Facilities Intergovernmental Agreement.....	E
Appendix F - 5-Year Capital Improvement Program (Water).....	G

List of Tables

Table 1: Location of Division 86 Requirements	iv
Table 2: South Santiam Stream Flow Dependent Species Listed as Sensitive, Threatened, or Endangered	2
Table 3: South Santiam Listings as Water Quality Limited	3
Table 4: Santiam River Listings as Water Quality Limited	3
Table 5: City of Albany’s Municipal Use Water Rights.....	4
Table 6: Estimate of Population Served	6
Table 7A: Summary of Demands from 1994 through 2000	9
Table 7B: Summary of Demands from 2010 through 2016	9
Table 8: City of Albany’s Municipal Use Water Rights.....	13
Table 9A: Customer Data for Fiscal Year 2002-2003.....	14
Table 9B: Customer Data for Calendar Year 2016	14
Table 10: Unit Demands for Non-Residential Customers	15
Table 11: Required Conservation Measures	19
Table 12A: Water Audit CY 2007 through CY 2011.....	20
Table 12B: Water Audit CY 2012 through CY 2016.....	20
Table 13: Meter Inventory.....	21
Table 14: Leak Detection and Steel Line Replacement Programs	24
Table 15: Summary of Conservation Measure Goals.....	31
Table 16: Population Projections	40
Table 17: Projected Population Densities Per Acre.....	41
Table 18: Projected Population at Buildout	41
Table 19: Non Residential Land Uses in the UGB	42
Table 20: Unit Demands for Non-Residential Uses.....	42
Table 21: Projected Water Demand at Buildout.....	45

List of Figures

Figure 1: Average Daily Raw Water Intake 2007-2016.....	5
Figure 2: Average Monthly Raw Water Intake 2007-2016	5
Figure 3: Existing Service Area.....	7
Figure 4A & 4B: Production, Demand, and Unaccounted for Water 1994 to 2000 and 2007 to 2016	11-12
Figure 5: Existing Service Area.....	17
Figure 6: Sample Billing Statement	22
Figure 7A, B, & C: Steel Pipeline Replacement Program.....	25-27
Figure 8: Buildout Land Uses Used to Forecast Water Demand.....	44
Figure 9: Water Demand Projections	47

Introduction

The City of Albany's first Water Management Plan was completed in 2006 and approved by the Water Resources Department (WRD) on February 27, 2007. Albany's 2006 Water Management Plan was prepared concurrent with the development of the City's 2004 Water Facility Plan¹. The Facility Plan was completed using evaluations by the City of Albany² and the City's consultants^{3 4}. A subsequent progress report to WRD in 2012 highlighted the City's progress in achieving five year benchmarks established in the original Plan.

Albany's 2017 Water Management and Conservation Plan provides updated information on several aspects of the City's water system including the system description, water rights, and recent water demands. This Plan does not include a comprehensive re-analysis of future population projections or long-term water demands. Population growth and land use patterns are substantially unchanged from the analysis completed in the original plan, and therefore, are considered valid for system planning purposes.

The purpose of this Water Management and Conservation Plan (WMCP) is to describe the City of Albany's (City's) water supply and distribution system, to review and update water conservation and curtailment measures, and to assess the ability of the water system to provide for future growth and development of the community while efficiently managing our water resources.

This Water Management and Conservation Plan has been prepared to satisfy the requirements set forth by the Water Resource Department in Chapter 690, Division 86 of the Oregon Administrative Rules. **Table 1** provides a summary of the Oregon Administrative Rules (OAR) requirements and identifies the location of the information satisfying those requirements in this Plan. Copies of this WMCP were made available to the cities of Millersburg, Lebanon, and Adair Village, the North Albany County Service District, the Dumbeck Lane Domestic Water Supply District, Linn County, and Benton County on August 15, 2017. Their comments are included as **Appendix A**.

¹ *City of Albany Water Facility Plan*, August 2004, City of Albany

² *Revised Water Demand Allocations*, February 2004, City of Albany

³ *City of Albany Water Facility Plan*, December 2003, Montgomery Watson Harza

⁴ *Water Distribution Modeling for the Albany-Millersburg Joint Water Supply Project*, January 15, 2004, CH2MHill

Table 1: Location of Division 86 Requirements

ITEM	OAR REFERENCE	PAGE
Water Supplier Description		
Description of Source	690-086-0140 (1)	1
Delineation of current service area	690-086-0140 (2)	6
Adequacy and reliability assessment of existing supplies	690-086-0140 (3)	1
Quantification of present and historic use	690-086-0140 (4)	8, 9
Summary of water rights	690-086-0140 (5)	4
Description of customers served/water use summary	690-086-0140 (6)	14
Interconnections with other suppliers	690-086-0140 (7)	6
Water system schematic	690-086-0140 (8)	17
Quantification of system leakage	690-086-0140 (9)	10-12
Water Conservation		
Metering of system	690-86-0150 (4)(b)	21
Meter testing and maintenance program	690-86-0150 (4)(c)	21
Annual Water Audit	690-86-0150 (4)(a)	19
Leak Detection Program	690-86-0150 (4)(e)	23
Leak repair or line replacement program	690-86-0150 (6)(a)	24
Rate structure based on consumption	690-86-0150 (4)(d)	23
Rate structure and billing practices	690-86-0150 (6)(d)	23
Public education and outreach	690-86-0150 (4)(f)	28
Technical and financial assistance programs	690-86-0150 (6)(b)	29
Retrofit/replacement of inefficient fixtures	690-86-0150 (6)(c)	28, 30
Reuse, recycling, non-potable opportunities	690-86-0150 (6)(e)	28
Other measures	690-86-0150 (6)(f)	30
Progress report on previous WMCP	690-86-0150 (1)	19-30
Documentation of water use measurement and reporting	690-86-0150 (2)	4
List of measures already implemented or required under contract	690-86-0150 (3)	19
Water Curtailment Element		
Assessing your water supply	690-086-0160 (1)	1, 33
Stages of alert	690-086-0160 (2)	33-37
Triggers for each stage of alert	690-086-0160 (3)	33-37
Curtailment actions	690-086-0160 (4)	33-37
Water Supply Element		
Delineation of current and future service areas	690-086-0170 (1)	39
Population projections for service area	690-086-0170 (1)	39, 40
Schedule for perfection of water permits	690-086-0170 (2)	49
Demand forecasts	690-086-0170 (3)	40-41, 45
Comparison of demands vs. available water rights	690-086-0170 (4)	47, 48
Alternative source analysis	690-086-0170 (5) and (8)	48
Quantification of maximum rate and monthly volume	690-086-0170 (6)	5, 47
Mitigation actions under state and federal laws	690-086-0170 (7)	49
Other items		
List of affected local governments and their comments	690-086-0125 (5)	iii
Date for submittal of next update	690-086-0125 (6)	50
Documentation, where additional time is requested to meet previous benchmarks or metering	690-086-0125 (7)	N/A

N/A: *Not applicable*

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1. Existing System Description

Description of Sources

Albany's sources of drinking water are the South Santiam River (Point of Diversion #1 - NW ¼ NW ¼, Section 19, Township 12 South, Range 1 West, Willamette Meridian) and the Santiam River (Point of Diversion #2 - SW ¼ NW ¼, Section 24, Township 10 South, Range 3 West, Willamette Meridian). The South Santiam River (POD #1) is the source of water for Albany's Vine Street Water Treatment Plant (Vine Street WTP) which was originally constructed in 1912. The Santiam River diversion (POD #2) is a relatively new (2005) source of water for Albany, and it is located just downstream of the confluence of the North Santiam River and the South Santiam River. It serves the Albany-Millersburg Water Treatment Plant (A-M WTP) jointly owned by the City of Albany and the City of Millersburg.

The South Santiam River has proven to be a reliable source of supply. Flows in the River and delivered to POD #1 are controlled by the Army Corps of Engineers with releases from Foster Reservoir targeted to meet minimum stream flows for multiple downstream uses. Albany has owned and operated the water system since 1984, and in that time there have been no source water supply shortages. Since Albany began operating the A-M WTP in 2005, there have been no source water supply shortages in the Santiam River. Flows in the River and delivered to POD #2 are controlled by the Army Corps of Engineers with releases from both Detroit Lake and Foster Reservoir targeted to meet minimum stream flows for multiple downstream uses. In addition, there are no known restrictions on the South Santiam River or Santiam River diversions that would limit water available under Albany's water right certificates or water right permit. Therefore, the South Santiam River and Santiam River will continue to be reliable sources of supply to meet future water demands.

South Santiam River

Water is delivered to Albany's Vine Street WTP via the Santiam-Albany Canal (Canal). Water is screened and diverted into the Canal near South Santiam river mile 29 and travels approximately 18 miles through the City of Lebanon, unincorporated portions of Linn County, and the City of Albany before reaching the Vine Street WTP. A low-height dam, owned and operated by the City of Albany, located on the South Santiam River approximately 325 feet downstream of the Canal diversion, generates the head required to make the gravity diversion of water into the Canal system. The Canal provides municipal water for the City of Lebanon and the City of Albany and also provides water for hydroelectric power generation, irrigation, and agricultural activities.

A headgate structure is located on the Canal approximately 400 feet downstream of the point of diversion (POD #1). The headgate regulates flows diverted from the South Santiam River through four Programmable Logic Control (PLC) operated sluice gates. The sluice gates are located in parallel

SECTION 1. EXISTING SYSTEM DESCRIPTION

across the upstream side of the structure. The structure is cast-in-place concrete and spans 20-feet across the Canal channel. Instrumentation includes staff gauges located on the upstream and downstream sides of the structure, and a USGS stream gauge and remote level sensor (pressure transducer) located on the downstream side of the structure. This sensor continuously records Canal flows and transmits the data via high-speed fiber link with a point-to-point radio backup.

The South Santiam River is home to nine streamflow-dependent species that are listed by state or federal agencies as sensitive, threatened, or endangered. *Table 2* lists these species.

Table 2: South Santiam Stream Flow Dependent Species Listed as Sensitive, Threatened, or Endangered

<i>SPECIES</i>
<i>Fish</i>
Oregon Chub
Pacific Lamprey
Bull Trout
Upper Willamette Basin Chinook Salmon
Upper Willamette Basin Steelhead
<i>Amphibians</i>
Foothill Yellow-Legged Frog
Northern Red-Legged Frog
<i>Reptiles</i>
Western Painted Turtle
Western Pond Turtle

Fish ladder improvements to the diversion dam and construction of a fish screen at the Canal entrance to prevent fish from entering the Canal were completed in 2005. The fish ladder improvements and intake screening were designed using construction guidelines developed by the National Oceanic and Atmospheric Administration, Fisheries Service (NOAA, Fisheries). The City also worked closely with the Oregon Department of Fish and Wildlife to minimize the impact the diversion would have on fish and wildlife.

Temperature and biological criteria are the parameters for which the South Santiam River is listed as water quality limited. *Table 3* lists the river mile and parameters that are in the Oregon Department of Environmental Quality’s (DEQ) 2012 Integrated Report (303d list).

Table 3: South Santiam Listings as Water Quality Limited

<i>River Mile</i>	<i>Parameter</i>	<i>Season</i>
0 to 4.6	Temperature (Spawning)	Oct 15 – May 15
0 to 19.5	Temperature (Non-spawning)	Year Round
4.6 to 14.8	Temperature (Spawning)	Oct 15 – May 15
19.5 to 35.7	Temperature (Non-spawning)	Year Round
22.8 to 35.7	Temperature (Spawning)	Sept 1 – June 15
38.5 to 63.4	Temperature (Non-spawning)	Year Round
39.8 to 60.4	Temperature (Spawning)	Sept 1 – June 15
0 to 63.4	Biological Criteria	Year Round

Santiam River

The raw water intake for the A-M WTP (POD #2) is located on the Santiam River approximately one quarter mile downstream of the confluence of the North and South Santiam Rivers at river mile 11.8. The intake uses eight half-round screens, equipped with an air burst system for periodic cleaning, connected to four 24-inch gravity conveyance pipelines to deliver water to the raw water pump station. Raw water is pumped from the pump station approximately 8,600 feet through a 36-inch transmission line to the water treatment plant located on Scrael Hill. The raw water flow rate to the plant is measured by magnetic flow meters and continuously recorded by the City's Systems Control and Data Acquisition (SCADA) system.

The Santiam River is home to nine stream-flow dependent species that are listed by state or federal agencies as sensitive, threatened, or endangered. These are the same nine species, shown in **Table 2**, that are listed for the South Santiam River. The intake screening was designed using construction guidelines developed by the National Oceanic and Atmospheric Administration, Fisheries Service (NOAA, Fisheries). The City also worked closely with the Oregon Department of Fish and Wildlife to minimize the impact the intake would have on fish and wildlife.

Temperature, dissolved oxygen, and mercury are the parameters for which the Santiam River is listed as water quality limited. **Table 4** lists the river mile and parameters that are in the Oregon Department of Environmental Quality's (DEQ) 2012 Integrated Report (303d list).

Table 4: Santiam River Listings as Water Quality Limited

<i>River Mile</i>	<i>Parameter</i>	<i>Season</i>
0 to 12	Temperature (Spawning)	Oct 15 - May 15
0 to 12	Temperature (Non-spawning)	Year Round
0 to 12	Dissolved Oxygen (Spawning)	Oct 15 - May 15
0 to 12	Mercury	Year Round

Municipal Water Rights

For drinking water purposes, the City holds two water right certificates and a water right permit totaling 50 cfs. **Table 5** summarizes the City's certificates and permit and **Appendix B** provides a copy of each document.

The City's 1878 municipal right for 21 cfs has been perfected. The 1979 water right permit for 29 cfs was partially perfected on June 22, 2016, resulting in a small amount of water (0.43 cfs) remaining to be developed. The extension of time for Permit S-44388 was approved by Final Order on January 26, 2005.

As shown in **Figure 9** on page 47, Albany's projected demand at buildout exceeds the amount of water provided under Certificate 83976 (21 cfs), Certificate 93318 (28.57 cfs), and Permit S-44388 (0.43 cfs).

Albany and Millersburg have signed an intergovernmental agreement, included as **Appendix E**, which includes provisions for each City to utilize each other's water rights. Combined, the two Cities have a total of 72 cfs in water right permits and water right certificates which is equivalent to the projected buildout demands of both communities.

Table 5: City of Albany's Municipal Use Water Rights

<i>Type of Use</i>	<i>Application Number</i>	<i>Permit Number</i>	<i>Certificate Number</i>	<i>Priority Date</i>	<i>Source Water</i>	<i>Quantity</i>
Municipal			83976	1878	S. Santiam River, Santiam River	21 cfs
Municipal			93318	July 12, 1979	S. Santiam River, Santiam River	28.57 cfs
Municipal ¹	58906	S-44388		July 12, 1979	S. Santiam River, Santiam River	0.43 cfs

¹ The authorized extension for the City's water right permit is October 1, 2063.

Daily diversions to Albany's water treatment plants from 2007 to 2016 are shown in **Figure 1**.

Average monthly diversions from 2007 through 2016 are shown in **Figure 2**.

All flow measurement devices comply with the standards in OAR Chapter 690, Division 85 and water use reports are submitted annually to the Oregon Water Resources Department. Refer to Required Conservation Measures section (page 22) for more information about metering devices.

Figure 1: Average Daily Raw Water Intake 2007-2016

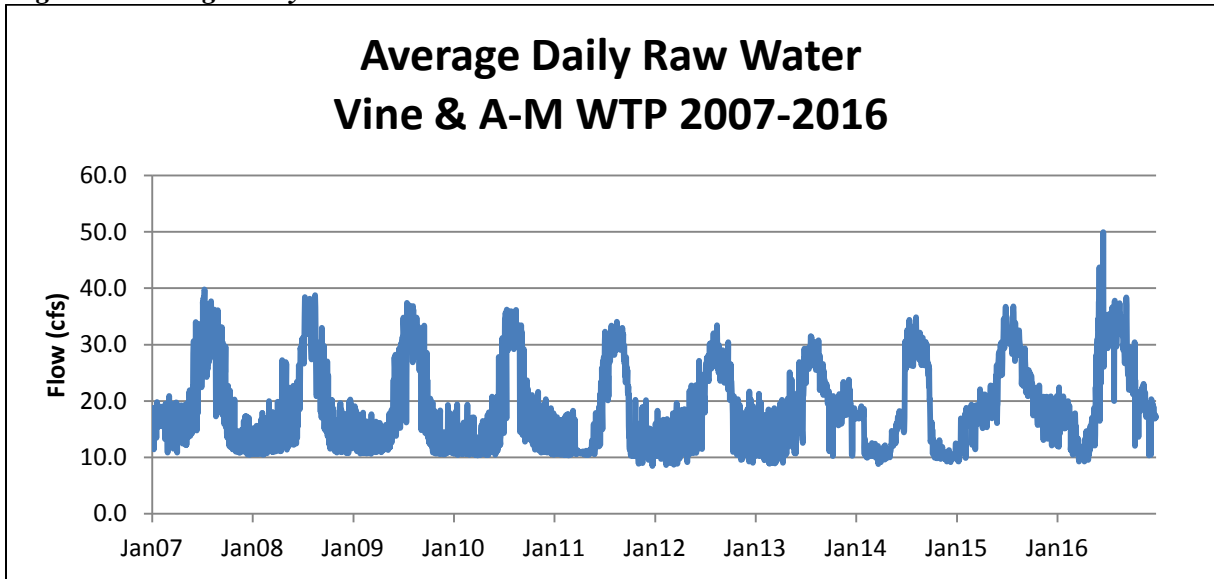
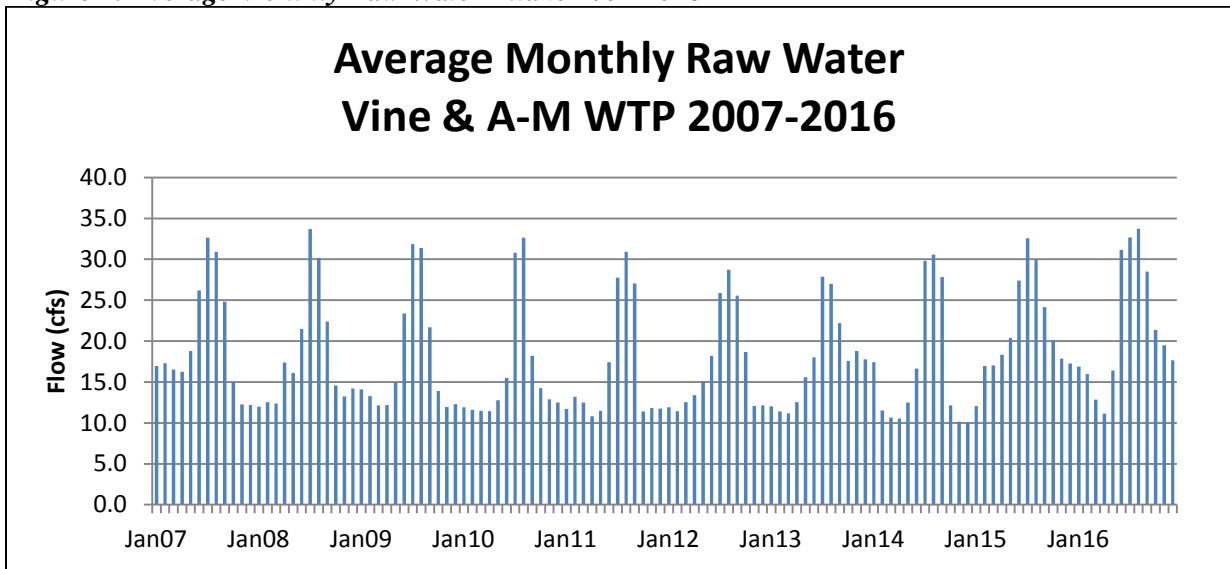


Figure 2: Average Monthly Raw Water Intake 2007-2016



Service Area

The City of Albany's water service area includes approximately 18 square miles within the city limits, and some areas outside city limits but within the Urban Growth Boundary (UGB). Individual service is also provided outside the UGB to 396 customers that were previously served by the North Albany County Service District (NACSD) and wholesale service is provided to 132 customers served by the Dumbeck Lane Domestic Water Supply District (Dumbeck). See *Appendix C* for the Dumbeck Agreement and *Appendix D* for the NACSD Agreement. In the past, Albany also provided water to customers in the City of Millersburg. However, with the completion of the A-M WTP, wholesale treated water is provided to Millersburg who then serves its own customers through its distribution system. See *Appendix E* for the Albany and Millersburg Intergovernmental Agreement for Jointly-Owned Water Facilities. Albany's water service area is shown in *Figure 3*.

Estimate of Population Served

The City of Albany's current population (2016) is 52,540⁵ based on data provided by Portland State University. The City's 1998 Wastewater Facility Plan estimated that approximately 97% of the City's population received City sewer services in 1995. This analysis has not been recently updated and the assumption is that this ratio remains reasonably representative of the population receiving water service. Thus, an estimated 50,964 people received water service inside the City of Albany in 2016.

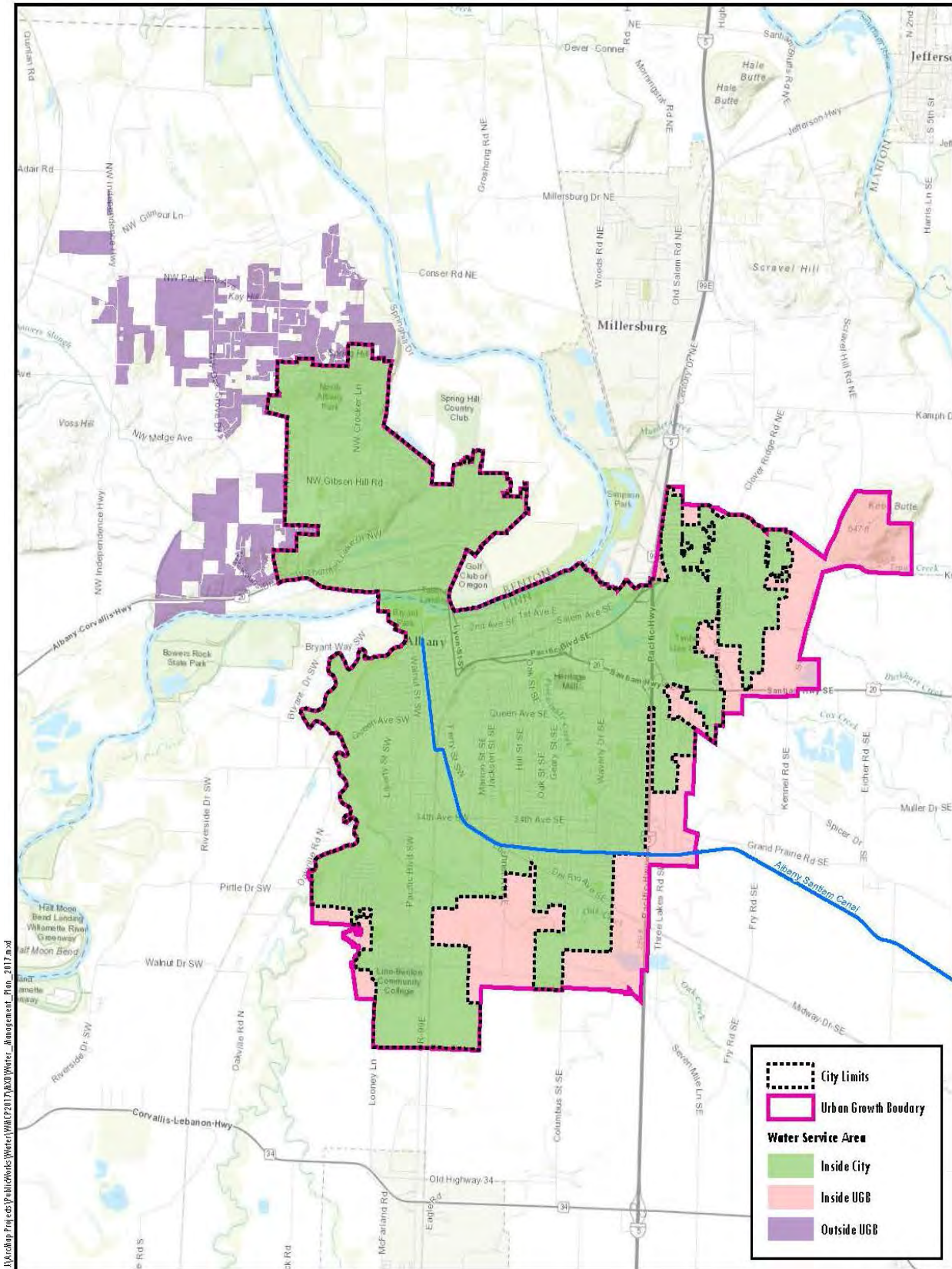
There are 528 customers located outside the UGB in North Albany (Dumbeck and NACSD) that also receive water service from the City. Assuming an average household density of 2.46 people (according to the 2000 U.S. Census) results in an additional 1,331 people served and a total population of 52,295 receiving water service from the City of Albany as shown in *Table 6*. The original Water Management Plan estimated a total population of 43,693 received water service in 2004.

Table 6: Estimate of Population Served

	2004 PSU	2016 PSU
Albany's Estimated Population	44,030	52,540
Percent Receiving City Water	97%	97%
<i>City of Albany Total</i>	42,709	50,964
Customers Outside UGB (NACSD and Dumbeck)	400 est	528
Estimated Household Density	2.46	2.46
<i>Outside UGB in NA Total</i>	984	1,299
<i>Total Estimated Population Served</i>	43,693	52,245

⁵ Portland State University, Population Research Center, July 2016

Figure 3: Existing Service Area



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Water Demands

Water production records are available from Vine Street WTP and A-M WTP and water consumption records are available through metered usage records available from the City's utility billing database.

The seven-year period from 1994 through 2000 was used as a basis to establish historic water demands and characteristics in the 2006 Water Management Plan. Water production data and fluctuations in reservoir levels were used to characterize system demands as part of the water facility planning process⁶.

Prior to mid-2009 when Albany's System Control and Data Acquisition (SCADA) totalizers started tracking WTP data, it was necessary to combine reservoir contributions with treatment plant production to portray system demands. For the period from 2010 through 2016, the treatment plant water production data from the SCADA system was used to characterize the system demands.

A record of demands for each year during the period from 1994 to 2000 is presented in **Table 7A** and from 2010 to 2016 in **Table 7B**.

When comparing the two periods, the annual average demand has decreased by approximately 10 percent. All other water production characteristics summarized in this table have also decreased. The reasons why the demand has declined may include lower demand due to 2008-2009 recession, continued effort to identify and repair leaks from steel lines, lower system pressures, increasing customer water costs, and increased water conservation efforts.

The maximum day demand can be used to represent a system wide peaking factor. For Albany's system, that primarily corresponds with higher residential demands during the summer months due to irrigation. From this data, it appears that the maximum day demand to average day demand multiplier or peaking factor has also decreased slightly. However, the long-term water demand shown in the Water Supply Element section of this report will not be changed until the water demand data is confirmed in an updated Water Facility Plan.

⁶ *City of Albany Water Facility Plan*, December 2003, Montgomery Watson Harza

Table 7A: Summary of Demands from 1994 through 2000

<i>Historic Demand (MGD)</i>							
<i>Year</i>	<i>Annual Average</i>	<i>Peak Season Average (June-Sept)</i>	<i>Off-Season Average (Oct-May)</i>	<i>Maximum Monthly Average</i>		<i>Maximum Daily Average</i>	
				<i>Dates</i>	<i>Value</i>	<i>Date</i>	<i>Value</i>
1994	7.5	10.1	6.2	July	12.1	20-Jul	15.5
1995	7.4	9.9	6.2	July	11.2	17-Jul	14.8
1996	7.8	10.3	6.6	July	8.8	12-Jul	14.3
1997	7.6	9.6	6.5	July	10.8	20-Aug	17.4
1998	8.2	11.0	6.8	July	12.1	27-Jul	16.1
1999	8.2	10.7	7.0	July	11.7	27-Jul	15.0
2000	8.2	11.0	6.8	July	12.5	1-Aug	15.0
7 YR AVG	7.8	10.4	6.6		11.3		15.4

Table 7B: Summary of Demands from 2010 through 2016

<i>Historic Demand (MGD)</i>							
<i>Year</i>	<i>Annual Average</i>	<i>Peak Season Average (June-Sept)</i>	<i>Off-Season Average (Oct-May)</i>	<i>Maximum Monthly Average</i>		<i>Maximum Daily Average</i>	
				<i>Dates</i>	<i>Value</i>	<i>Date</i>	<i>Value</i>
2010	7.1	9.6	5.9	August	11.5	26-Jul	13.0
2011	6.8	9.2	5.6	August	10.9	25-Aug	12.3
2012	6.7	9.0	5.6	August	10.6	15-Aug	12.2
2013	6.7	9.2	5.5	July	10.9	24-Jul	12.1
2014	7.0	10.0	5.5	July	11.0	16-Jul	12.8
2015	7.2	10.2	5.6	July	11.8	3-Jul	13.2
2016	7.2	10.1	5.7	August	11.5	19-Aug	13.2
7 YR AVG	7.0	9.6	5.6		11.2		12.7

Calculated Water Loss Due to Leaks

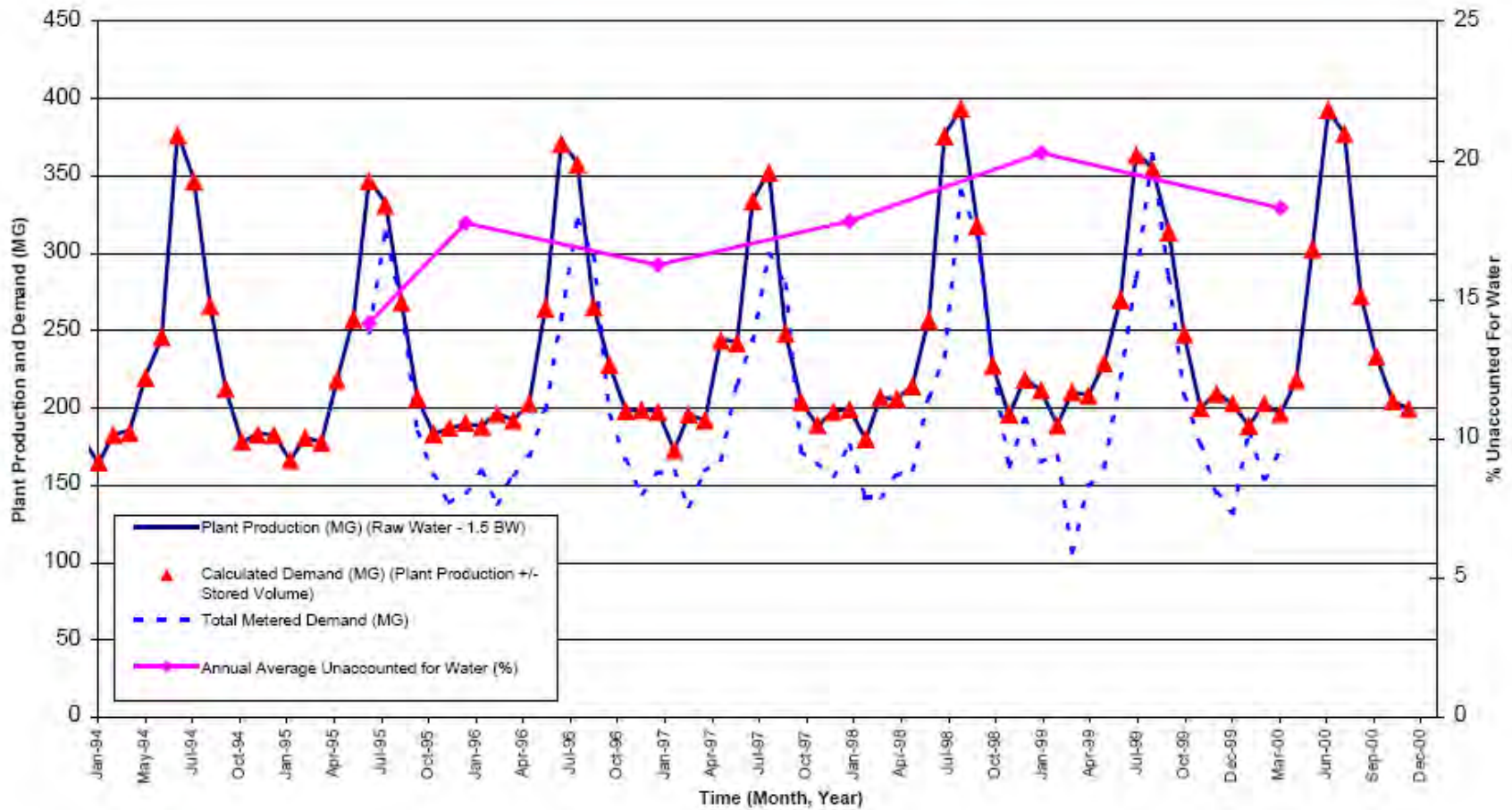
In an effort to calculate system-wide losses to leakage, production and consumption data were analyzed. In 2006, the American Water Works Association (AWWA) released free water audit software that Albany began using to calculate system-wide water loss due to leakage. To estimate water loss due to leaks, the AWWA water audit method provides allowances to estimate water loss due to meter and data handling errors (0.5% of consumption), and unauthorized uses such as stolen water and illegal connections (0.25% of total production). In this method, water loss due to leakage is calculated by subtracting authorized consumption and the allowances for other losses from total water production.

During the development of the original Water Management Plan, the AWWA water audit method was not available. *Figure 4A* summarizes production, consumption, and losses for the period from 1994 to 2000. For that period, water loss due to leaks was calculated by subtracting the metered sales (and other quantified uses) from the estimate of water production at the Vine Street WTP. This calculation resulted in approximately 20% of the water produced being classified as water lost due to leaks. This estimate was likely conservative because of the relative inaccuracy of the underlying data. Since the development of the original Water Management Plan, the City invested in improved metering and data management systems.

For the updated 2017 Water Management and Conservation Plan, the period from 2007 to 2016 was analyzed using the AWWA water audit method. *Figure 4B* depicts the total water production, authorized consumption, allowances for unauthorized uses resulting in an estimated water loss due to leakage of approximately 9% over the last five years. The reduction in water loss due to leakage can be attributed to the steel line replacement program, lower system pressures, and improved standards for water system design and construction.

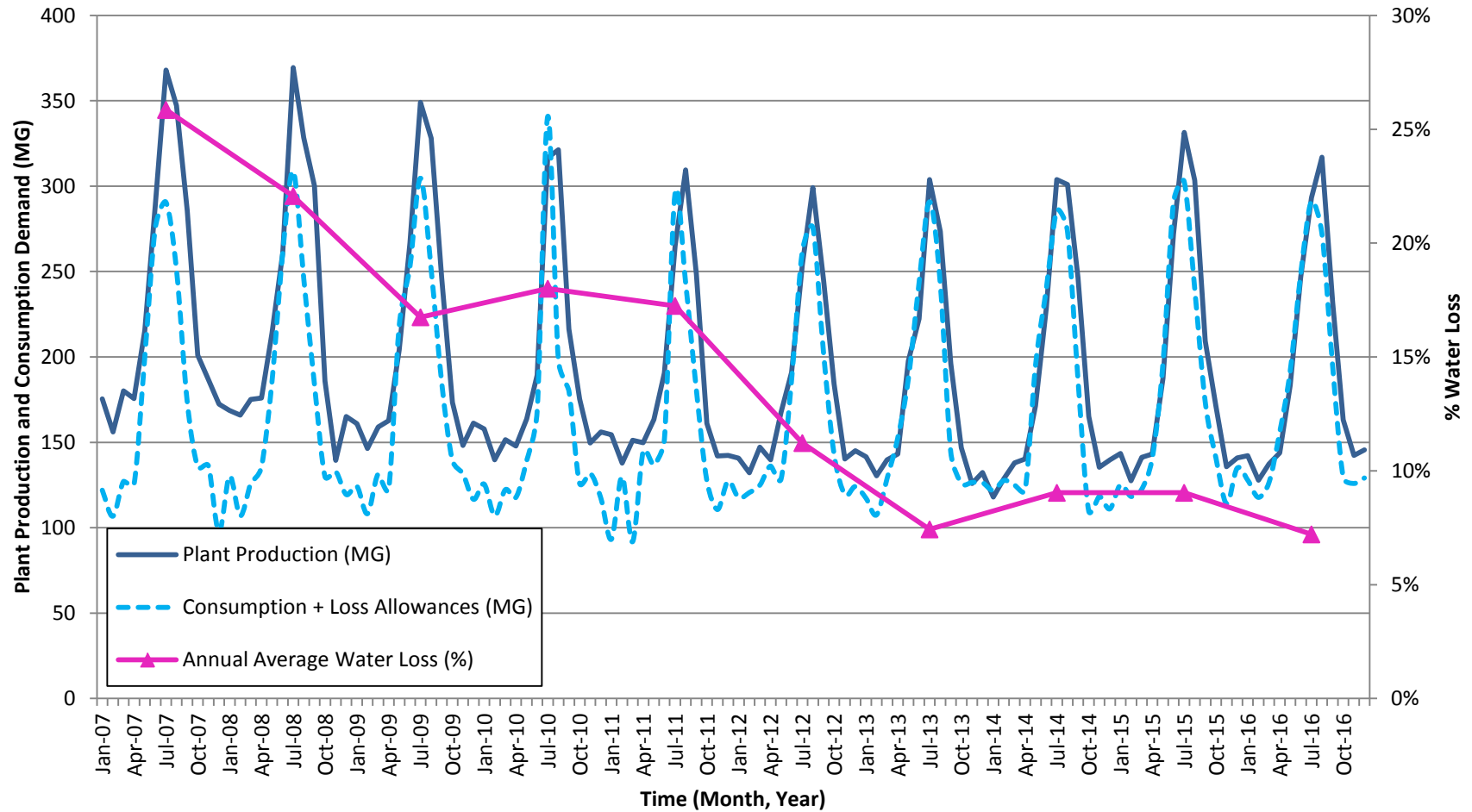
SECTION 1. EXISTING SYSTEM DESCRIPTION

Figure 4A: Production, Demand, and Unaccounted for Water from 1994 to 2000



SECTION 1. EXISTING SYSTEM DESCRIPTION

Figure 4B: Production, Consumption, Allowances for Unauthorized Use, and Water Loss Due to Leaks from 2007 to 2016



Water Demands and Beneficial Use of Permit No. S-44388

Based on a Final Order (see **Appendix B**) issued on January 26, 2005, the deadline for applying water under Permit Number S-44388 to full beneficial use is October 1, 2063. Based on a maximum flow rate of 49.57 cfs recorded at both the Vine Street WTP and the A-M WTP on June 22, 2016, Albany submitted a Claim of Beneficial Use for Permit Number S-44388 per ORS 537.230(3) and requested partial perfection of the Permit allowable per ORS 537.260 and OAR 690-320-0040. The City applied water to beneficial use for 28.57 cfs of the 29 cfs available under Permit Number S-44388 and was issued Certificate 93318 by Order on August 8, 2017 (see **Appendix B**). With the issuance of Certificate 93318, the remaining amount of water to be applied to beneficial use under Permit S-44388 is 0.43 cfs, and the deadline for full beneficial use remains October 1, 2063.

Albany's municipal use water rights are summarized in **Table 8**.

Table 8: City of Albany's Municipal Use Water Rights

<i>Type of Use</i>	<i>Application Number</i>	<i>Permit Number</i>	<i>Certificate Number</i>	<i>Priority Date</i>	<i>Source Water</i>	<i>Quantity</i>
Municipal			83976	1878	S. Santiam River, Santiam River	21 cfs
Municipal			93318	July 12, 1979	S. Santiam River, Santiam River	28.57 cfs
Municipal ¹	58906	S-44388		July 12, 1979	S. Santiam River, Santiam River	0.43 cfs

¹ The authorized extension for the City's water right permit is October 1, 2063.

Customer Class Characteristics

Table 9A shows historical consumption and account data by customer type. The data for fiscal year 2002-03 was gathered during a financial planning effort completed in 2004⁷ and is based on utility billing records. The data presented for calendar year 2016 (**Table 9B**) is from a report generated from utility billing records. As expected, Albany’s largest user group is the residential class.

For 2016 (**Table 9B**), the residential class consumption and number of accounts include those customers located outside the UGB in North Albany (Dumbeck and NACSD) that also receive water service from the City. The customer type classified as “other” is metered water consumption from uses such as: hydrants meters, distribution system flushing stations, and irrigation-only accounts.

Table 9A: Customer Data for Fiscal Year 2002-2003

<i>Customer Type</i>	<i>Consumption (MG)</i>	<i>Percent of Total</i>	<i>Number of Active Accounts</i>	<i>Percent of Total</i>
<i>Residential</i>	1393.4	66%	12641	92%
<i>Commercial</i>	535.5	25%	1148	~8%
<i>Industrial</i>	198.6	9%	7	<1%
Total	2127.5	100%	13796	100%

Table 9B: Customer Data for Calendar Year 2016

<i>Customer Type</i>	<i>Consumption (MG)</i>	<i>Percent of Total</i>	<i>Number of Active Accounts</i>	<i>Percent of Total</i>
<i>Residential</i>	1423.1	69%	16548	92%
<i>Commercial</i>	350.6	17%	1138	6%
<i>Industrial</i>	185.6	9%	7	<1%
<i>Other</i>	103.1	5%	230	~1%
Total	2062.5	100%	17923	100%

The following discussion regarding residential and non-residential demands comes from the 2006 Water Management Plan and has not been updated in this revised WMCP. The unit demand data was extracted from utility billing records during the 2004 Water Facility Plan development effort. For the purpose of long-range water demand projections, the numbers below are assumed to be valid until the next update of the Water Facility Plan.

Residential Demands

During the 2004 facility planning effort, utility billing data for single-family residential customers was used to estimate average annual residential water demands. Residential billing data for four years (July 1995 to July 1999) was analyzed and a residential average per capita demand of approximately 95

⁷ 2004 Water System Financial Plan, October 2004, City of Albany

gallons per capita per day (gpcd) was determined. The average residential per capita demand based on the 2016 consumption data confirms the 95 gpcd value. For planning purposes a residential average per capita demand of approximately 100 gpcd has been used. Residentially-zoned properties make up approximately 60% of Albany's water service area.

Non-Residential Demands

Table 10 summarizes the results of a survey⁸ conducted during the 2004 Water Facility Plan effort to determine unit demands by customer class in gallons per acre per day (gpac) for non-residential customers. Commercial uses were considered in aggregate; no distinction was made between office and retail commercial businesses. As a result, the largest variations in demands were found in the commercial class. Additionally, small sample sizes likely contributed to these variations. Commercially zoned properties make up about 15% of the City's water service area, industrial zoned properties approximately 20%, and parks and open spaces approximately 5%. Albany meters are read once a month and daily consumption information is not available.

Table 10: Unit Demands for Non-Residential Customers *

<i>Land Use Type</i>	<i>Unit Demand (gpac)</i>
Commercial	1350
Light Industrial	1830
Heavy Industrial	4830
Schools	620
Parks	730

* *Revised Water Demand Allocations*, February 2004, City of Albany

Water Distribution System

The City of Albany maintains a pipe network inside the UGB of approximately 240 miles ranging from 2 inches to 42 inches in diameter. Albany also delivers water to customers outside the UGB and wholesale water to Millersburg. Pipe materials include ductile iron (DI), asbestos cement (AC), cast iron (CI), high-density polyethylene (HDPE), polyvinyl chloride (PVC), steel (STL), galvanized iron (GI), and outside diameter steel (ODS).

Of the 240 miles of pipe, there are approximately 32 miles of transmission pipelines greater than or equal to 16-inch diameter. Transmission pipelines are typically designed to convey large volumes of water from one point to another without numerous service connections. However, most water utilities serving distribution systems, including Albany, do not have fully dedicated finished water transmission lines and integrate the transmission pipelines into the distribution system. Transmission pipelines account for approximately 13 percent of all water pipelines inside the Albany UGB.

⁸ *Revised Water Demand Allocations*, February 2004, City of Albany

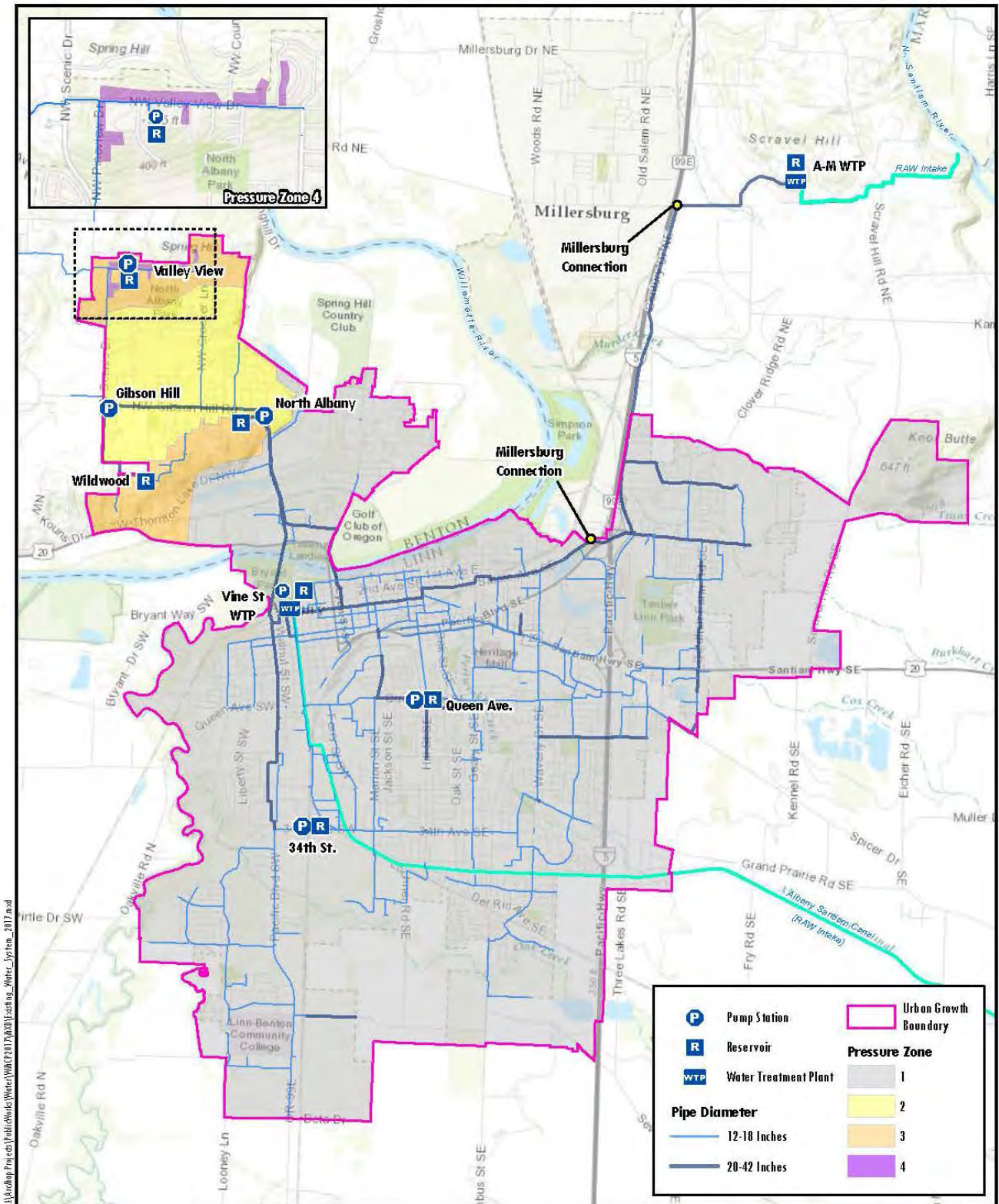
SECTION 1. EXISTING SYSTEM DESCRIPTION

Of the 32 miles of transmission pipeline, approximately 12 miles (38%) are greater than or equal to 24 inches in diameter.

Water is distributed to the water system from the Vine Street WTP located on 4th Avenue SW and Vine Street SW and the A-M Water Treatment Plant near the intersection of Century Drive NE and Berry Drive NE. Water is treated and then fed into the distribution system to seven storage sites and five pump stations that help serve the four pressure zones that are within Albany's water service area. **Figure 5** shows the existing service area (as previously described), water transmission and distribution lines greater than 12-inch diameter, the Vine Street WTP, the A-M WTP, the location of reservoirs and pump stations, and pressure zone boundaries. In addition to the customers already served by the Albany water system, the future water service area will include those areas outside the city limits but within the Albany urban growth boundary.

As previously mentioned, the City of Albany now provides wholesale water to the City of Millersburg by intergovernmental agreement. (**Appendix E**) There are two connections between Millersburg and Albany as identified in **Figure 5** and **Appendix E**. The primary connection is located at the intersection of Berry Drive NE and Century Drive NE where a 28-inch pipe provides service into Millersburg. In case of service interruption, there is a 20-inch diameter water line located at 3246 Salem Avenue NE that can be used as an emergency connection.

Figure 5: Existing Service Area



SECTION 1. EXISTING SYSTEM DESCRIPTION

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2. Required Conservation Measures

The State requires municipalities to implement six basic water conservation measures (OAR 690-086-0150). In addition, if the municipality serves a population greater than 7,500, they are required to implement five additional conservation measures. The eleven conservation measures are listed in *Table 11* and described on the next few pages.

The City's 2006 Water Management Plan identified seven of the eleven water conservation measures the City was fully implementing. In 2012, the City's Progress Report identified that over the previous five years, the City continued to build on its existing conservation activities and to implement new conservation actions and was at that time, fully implementing all of the conservation measures. Since 2012, the City continued to implement and maintain the eleven conservation measures.

Table 11: Required Conservation Measures

<i>Conservation Measure</i>
Annual Water Audit
Installation of Water Meters
Meter Testing & Maintenance
Rate Structure Based on Consumption
Leak Detection Program
Public Education
System Wide Leak Repair Program
Technical and Financial Assistance Program
Supplier Financed Replacement Fixtures
Rate Structure that Encourages Water Conservation
Water Reuse, Recycling, and Non-Potable Water Opportunities

Annual Water Audit

Albany produced over 2.2 billion gallons of treated drinking water in calendar year (CY) 2016 with most of the water delivered to paying customers. The original Water Management Plan identified the City's difficulty in extracting information from the City's water billing system as a primary reason for not having a comprehensive water audit program in place.

In 2006, the American Water Works Association (AWWA) released free water audit software that Albany began using to calculate system-wide water loss due to leakage. In this method, water loss due to leakage is calculated by subtracting authorized consumption and the allowances for other losses from total water production. With better data retrieval processes in place, the City's 2012 Progress

SECTION 2. REQUIRED CONSERVATION MEASURES

Report provided a five-year water audit summary in *Figure 12A* for the period from 2007 to 2011. For that time period the annual average water loss due to leaks was approximately 20%.

For the time period from 2012 to 2016 using the AWWA water audit method, *Figure 12B* depicts an estimated water loss due to leakage of approximately 9% over the last five years. The reduction in water loss due to leakage can be attributed to the steel line replacement program, lower system pressures, and improved standards for water system design and construction.

Table 12A: Water Audit CY 2007 through CY 2011

<i>*all units are MG</i>	<i>CY 2007</i>	<i>CY 2008</i>	<i>CY 2009</i>	<i>CY 2010</i>	<i>CY 2011</i>
Water Produced	2751.9	2648.8	2505.9	2285.0	2215.8
Metered Consumption	1989.3	2014.4	2038.5	1830.3	1791.5
Allowances for Other Losses ¹	51.2	49.8	47.8	43.5	42.2
Total Water Used	2040.5	2064.2	2086.3	1873.8	1833.7
Water Loss Due to Leakage	711.4	584.6	419.6	411.3	382.1
Percent Loss Due to Leakage	25.9%	22.1%	16.7%	18.0%	17.2%

¹ AWWA standard allowances to estimate water loss due to meter and data handling errors is 0.5% of consumption and for unauthorized uses such as stolen water and illegal connections is 0.25% of production.

Table 12B: Water Audit CY 2012 through CY 2016

<i>*all units are MG</i>	<i>CY 2012</i>	<i>CY 2013</i>	<i>CY 2014</i>	<i>CY 2015</i>	<i>CY 2016</i>
Water Produced	2186.1	2153.3	2216.3	2306.9	2274.0
Metered Consumption	1898.5	1951.3	1973.0	2051.8	2062.5
Allowances for Other Losses ¹	42.3	42.1	43.1	48.5	50.6
Total Water Used	1940.8	1993.4	2016.1	2100.3	2113.1
Water Loss Due to Leakage	245.3	160.0	200.3	208.5	164.0
Percent Loss Due to Leakage	11.2%	7.4%	9.0%	9.0%	7.2%

¹ AWWA Standard allowances to estimate water loss due to meter and data handling errors is 0.5% of consumption and for unauthorized uses such as stolen water and illegal connections is 0.25% of production.

The City’s goal is to continue the water audit program. The year-to-year influence of weather and the economy should lessen over a longer analysis period. Data retrieval and automated reports will continue to be refined and future audit data may be used to help determine the effectiveness of conservation program activities and to identify trends towards reducing water loss due to leakage.

GOAL: Annual Water Audit

- Continue the annual water audit program

Metered Accounts, Meter Testing and Meter Maintenance

All customer accounts are metered and customers are billed each month based on water usage. Consumption history for the previous 12 months is included with each billing statement so customers can see the direct correlation between consumption and cost and the effects of their conservation efforts. A sample billing statement is shown in *Figure 6*, and a meter inventory is shown in *Table 13*.

Table 13: Meter Inventory

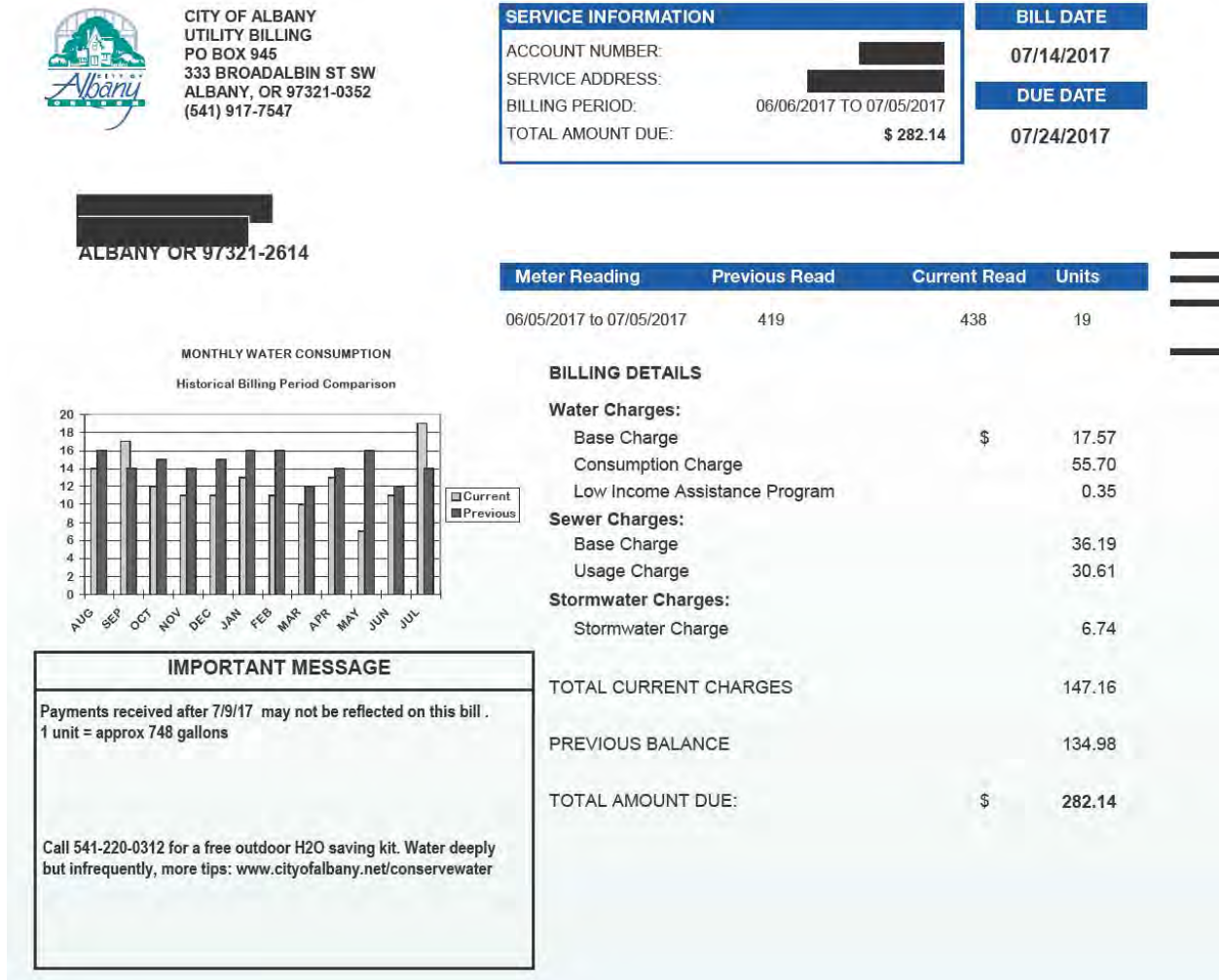
	<i>Meter Size</i>	<i>Number Active¹</i>
Small Meters	5/8" X 3/4" or 3/4" X 3/4"	16,386
	1"	843
	1 1/2"	241
	2"	249
	Sub-Total =	
Large Meters	3"	45
	4"	41
	6"	9
	8"	3
	10"	1
	Sub-Total =	
Total =		17,818

¹ As of August 2017

The City conducts a meter testing and maintenance program for all meters throughout the water system. Large meters, 3-inch and larger, are tested annually and small meters, 2-inch and smaller, are tested upon customer request or if metering problems are identified by City staff or the meter reader. Meters that are found to be inaccurately reporting flows, based on AWWA accuracy standards, are repaired or replaced. The City has developed a 30-year perpetual life replacement schedule for 3-inch and larger meters and a 20-year replacement program for all small meters. All 1-inch and smaller meters are scheduled to be changed to digital Sensus iPerls in part because they have no moving parts and have a 20-year life cycle.

SECTION 2. REQUIRED CONSERVATION MEASURES

Figure 6: Sample Billing Statement



Magnetic flow meters at each of the City’s water treatment plants are used for data recording and controlling plant operations including raw water and finished water lines. Magnetic flow meters are also used to measure the flow delivered to Albany and to Millersburg from the A-M WTP. Magnetic flow meters are factory calibrated and due to the lack of mechanical parts, accuracy does not degrade over time like mechanical meters. SCADA monitors and alarms the electronic health of each meter to ensure consistent data capture. Readings from each of these meters are tracked in the data historian server and any that are out of range activate an alarm generating a work order to investigate the situation.

GOAL: Metered Accounts, Meter Testing and Meter Maintenance

- Continue installing meters at all new service connections
- Continue the meter testing and maintenance program

Water Rate Structure

Albany's existing rate structure allows water users to be billed monthly based on the amount of water used. Customers receive two charges on their water bill, a base charge that is determined by meter size, independent of consumption, and a declining block commodity charge that is based on the amount of water used.

The City completed a Water Financial Plan in 2004 developed from work completed by a financial planning consultant and input from the Mayor's Water Task Force (representing a cross-section of Albany's residential, public, commercial, and industrial water users). The main purpose of the Task Force was to help guide policy decisions that affect the community's water users. The Task Force considered pursuing cost of service (COS) rates and moving to a uniform or inclining block rate structure, in addition to several other rate structure changes.

The Task Force determined that shifts in revenue responsibility between classes were too large if COS, inclining block, or uniform rates were pursued. The Task Force did, however, determine that the minimum charge (which previously included a quantity allowance) for non-residential customers should be eliminated. Elimination of the minimum charge provides an opportunity for customer conservation efforts to be rewarded with a lower water bill. Although the City's existing rate structure meets current conservation requirements, the Task Force recognized the growing importance of water conservation and hoped that future transitions to a uniform or inclining block rate structure might be possible.

GOAL: Water Rate Structure

- Continue to bill customers based on the quantity of water metered
- Continue to collect and analyze water use data by customer class
- Continue to work with City Council to decide on whether/how to modify the rate structure

Leak Detection and Line Replacement

Previous leak detection studies identified steel water lines as the major source of leakage in Albany's water system prompting the City to dedicate resources to repairing and replacing known failing steel water lines. A 2001 steel pipe inventory identified 29 miles of steel-type lines (WI, GI, S, ODS, & unknown types) inside the Albany urban growth boundary (see *Figure 7A*).

In 2009, to identify hidden waterline leaks and to prioritize steel and other line replacements, the City purchased the FCS Xmic Leak Detection System from Fluid Conservation Systems (FCS). City staff

SECTION 2. REQUIRED CONSERVATION MEASURES

began using the Xmic in 2010. Each time a leak was discovered, the area was resurveyed to pin-point the location of the leak and complete a spot repair.

Since the initial inventory, over 22 miles of steel pipe has been replaced. According to the City’s 2012 Water Management Plan progress report, there was 8.3 miles of steel pipe remaining inside the UGB (See **Figure 7B**). In 2017, the steel pipe inventory identified 6.7 miles of steel pipe remaining inside the UGB (See **Figure 7C**). Currently, 1.8 miles of steel pipe replacement projects are either under construction or scheduled for completion in the next couple years.

The initial goal in the 2006 Water Management Plan was to survey the entire water system every 18 months. During the initial two years of the program, less than a third of the system had been surveyed and 60 leaks were found. About half the leaks were in steel pipe typically resulting in a line replacement project instead of a spot repair. In the past 5 years, fewer leaks have been detected and the ratio of leaks in steel pipe has decreased. With fewer lines to repair or replace, the miles surveyed each year increased. The City’s new goal is to survey the entire water system every three years and steel lines every year. See **Table 14** for a summary of these programs.

Table 14: Leak Detection and Steel Line Replacement Programs

<i>Time Period</i>	<i>Steel Line Replaced</i>	<i>Miles Surveyed</i>	<i>Leaks Found and Repaired</i>	<i>Leaks in Steel Pipe</i>
2006-2011	Nearly 21 miles	~ 60	60	~ 30
2012-2016	1.6 miles	~ 480	89	23

In addition to the steel line replacement and the leak detection programs, the City has developed a perpetual life pipeline replacement program. The program considers the estimated remaining service life of water lines in Albany’s water system and schedules their replacement. The City is exploring a risk-based planning approach to prioritize infrastructure replacement and resiliency projects, and is also considering an asbestos cement (AC) pipe replacement program because of the potential for these pipes to fail catastrophically.

Leak Detection and Line Replacement

- Continue to conduct leak detection surveys to monitor changes in pipe integrity over time
- Complete a leak detection survey of the entire water system every three years and all the steel lines every year
- Continue to pressure test new waterlines before being accepted into a warranty period
- Continue replacing steel lines and to upgrade pipeline replacement programs and priorities

Figure 7A: Steel Pipeline Replacement Program – 29.0 miles steel inside the UGB in 2001



SECTION 2. REQUIRED CONSERVATION MEASURES

Figure 7B: Steel Pipeline Replacement Program – 8.3 miles steel inside the UGB in 2011

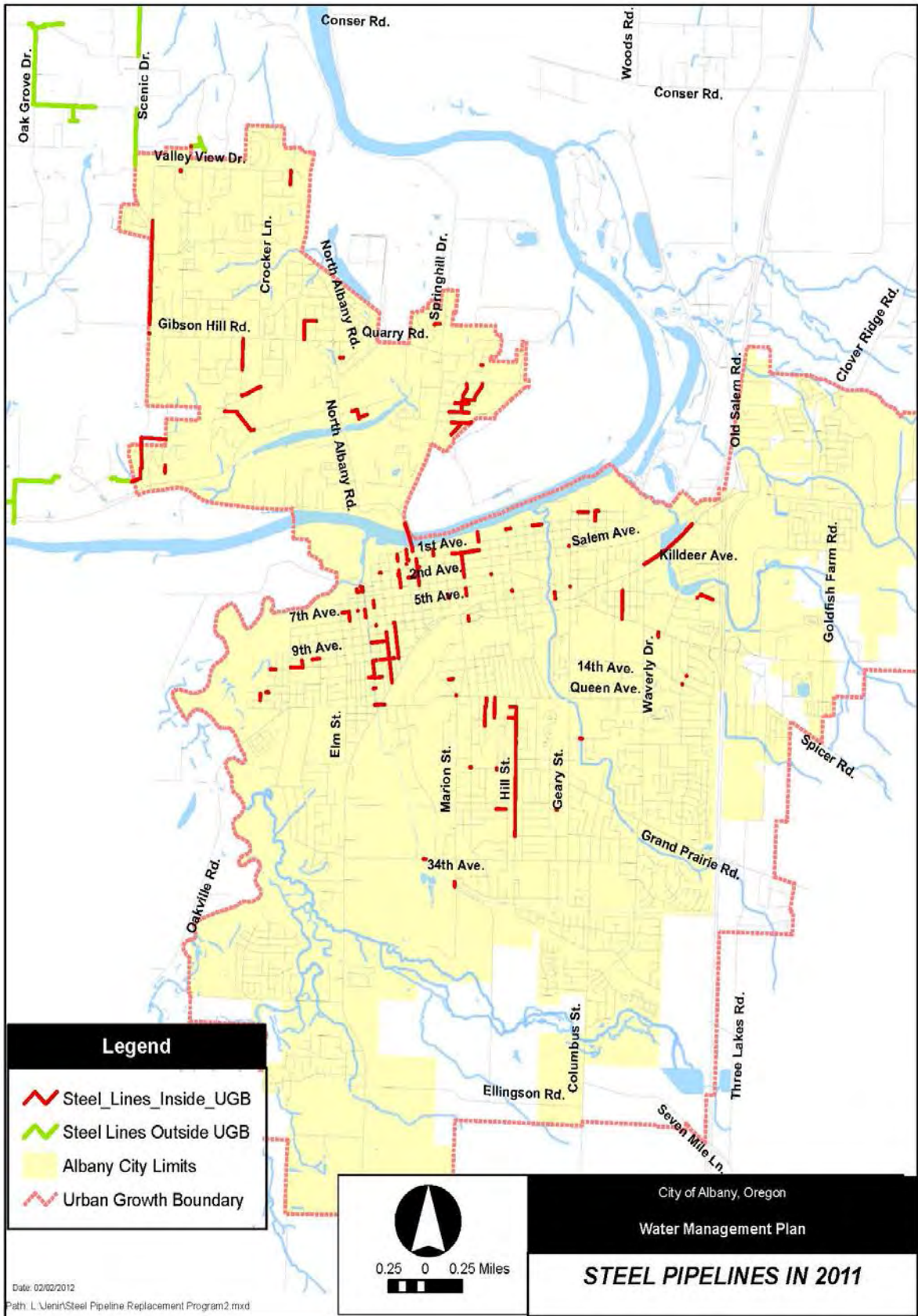
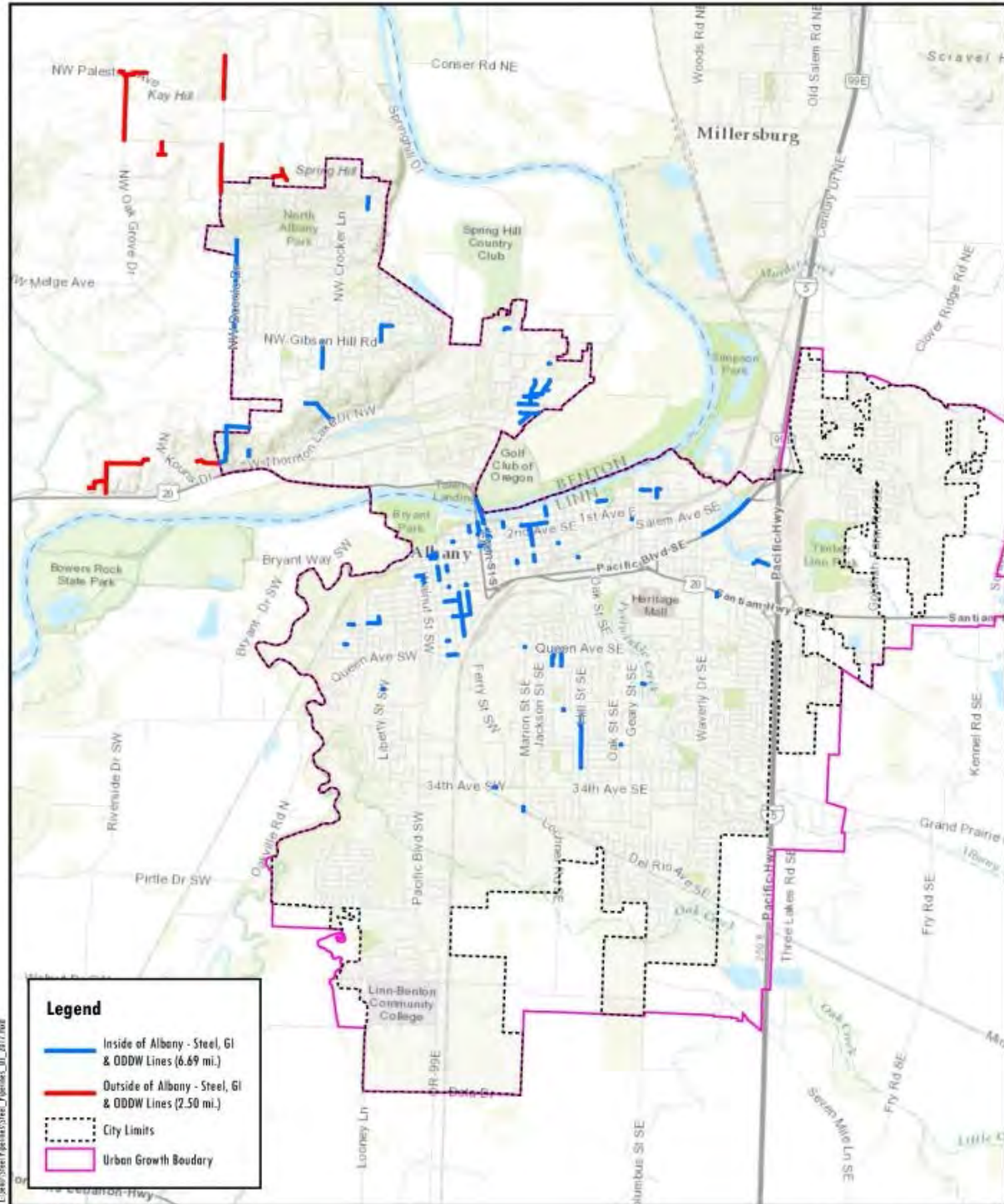


Figure 7C: Steel Pipeline Replacement Program - 6.7 miles steel inside the UGB in 2017



0 0.25 0.5 1 Miles
 Date: 5/1/2017 Map Source: City of Albany

2017 Steel Pipelines
Water Management Plan

Public Education and Outreach

Albany's Public Works Department conducts outreach activities to provide water conservation information to the public and to encourage efficient water use. City staff makes presentations on efficient water use and water conservation measures to community groups and schools in addition to conducting individualized water audits. Individual water audits involve City staff meeting the water user on site to evaluate their water use practices and aid them in developing site specific conservation measures.

Conservation brochures and water conservation kits (rain gauges, water miser hose nozzles, toilet leak detectors, low flow showerheads, etc.) are distributed at outreach programs and are free to Albany residents. Kits are also made available to the public outside of these presentations at the City's Public Works counter at City Hall and their availability is advertised in the City's quarterly newsletter and other local media outlets.

Albany's website, the City's quarterly newsletter, and public ads provide suggestions for reducing or managing indoor and outdoor water use, including tips on low water use landscaping and irrigation, outdoor cleaning activities, eliminating indoor water leaks, and use of efficient appliances. The advertisements also provide contact information for the water conservation program.

As shown in *Figure 6* on page 22, the City also provides consumption history for the previous 12 months with each billing statement so customers can see the direct correlation between water consumption and cost and the effects of their conservation efforts.

Goal: Public Education and Outreach

- Continue to provide water efficiency and conservation outreach information to the public using print materials, local media outlets, and social media platforms
- Continue to update the City Web site and outreach materials as needed

Water Re-use, Recycling and Non-Potable Water Opportunities

The City works with new and existing commercial and industrial customers to promote water conservation opportunities. Many industrial customers recycle and reuse water onsite for cooling processes that re-circulate water in closed loop systems and for boiler-feed make-up water. Similarly, some commercial and industrial customers with car or truck washing facilities have installed filters and pumps that recycle water for reuse. The City works with new commercial and industrial customers on a case-by-case basis to encourage water conservation opportunities.

SECTION 2. REQUIRED CONSERVATION MEASURES

The City promotes water conservation at City facilities, buildings, and parks by installing low-flow fixtures and faucets and fountains that automatically shut off. At the water reclamation facility, a portion of the treated wastewater effluent flow is pumped from the chlorine contact basins to different process units throughout the plant. Typical uses include spray water for scum and grease control in the secondary clarifiers, foam control in the vertical loop reactors, and feed water for screen and filter wash sprays.

The City looks for other ways to conserve potable water when irrigating City parks. For ball fields and other large park areas used primarily for sports, the City has stopped or greatly reduced all irrigation. For smaller parks where potable water is used for irrigation, the City invested in a Rain Bird Maxicom central control system in 2005 that monitors local rainfall and wind velocity to determine exactly how much water should be applied. Irrigation events are timed to occur during the evening or early morning to minimize evaporation and avoid contributing to peak usage. If abnormal flows are detected from problems such as a broken irrigation line or a valve stuck open, Maxicom sends an alarm for an immediate service call.

As part of the pre-design effort for the 2009 water reclamation facility, urban and agricultural reuse options were briefly evaluated. To be cost-effective, the potential major users of reclaimed water ideally need to be located near the water reclamation facility. In our review, the lack of suitable available land in the vicinity of the reclamation facility and the costs associated with additional piping, pumping and maintenance eliminated a major water reuse program as a viable option for water conservation.

A complex of wetland ponds near the Willamette River in east Albany (Talking Water Gardens) was built in 2010 to provide cooling and additional purification to the treated wastewater from Albany, Millersburg and ATI Wah-Chang before it is discharged to the Willamette River. During initial startup, a network of purple irrigation pipes deliver treated wastewater to support the establishment of plants in the 39 acres of ponds and 11 acres of landscaping. This pipe network has now been removed.

Goal: Water Re-use, Recycling and Non-Potable Water Opportunities

- Continue to encourage customers to utilize water reuse, recycling, and non-potable water opportunities where it is safe and feasible

Technical and Financial Assistance

When the 2006 Water Management Plan was developed, the City had a technical and financial assistance program developed primarily for residential customers. During the past ten years, the City

SECTION 2. REQUIRED CONSERVATION MEASURES

continued to encourage and aid residential, commercial, and industrial customers in implementation of conservation measures. The City's assistance program providing free water audits and free water saver kits to residential customers continued to expand. From 2012 to 2016, 33 outdoor residential audits were completed. Over 1,000 indoor and outdoor water saver kits were distributed free to customers.

The City continues to explore new advertising and outreach opportunities that encouraged efficient water use including low water use landscaping. Advertisements and information were placed in the City Bridges newsletter, utility bills, the City's website, City Hall display cases, onscreen at the local theater, and a local radio station interview. Outreach was expanded to events such as the Big Pickup, America's Night Out, Farmers' Market, Linn-Benton Community College Sustainability Fair, Festival Latino, Procession of the Species Environmental Celebration, and Willamette River Relay, among others. Presentations were also given to groups such as the local Master Gardeners, church groups, and the Albany Senior Center. Following each event, City staff responded to inquiries by many non-residential customers. Albany continues to maintain a water efficient garden at the Albany library. Water saver kits were also distributed during Police Department landlord training events to residents in mobile home parks and to property management companies for their tenants.

The City also partners with the Greater Albany Public School system and the Calapooia Watershed Council to provide both in-class and outdoor education programs and presentations that include information on water conservation, reaching over 1,000 Albany students each year. Additionally, the City provides small grants to local schools for water conservation and other environmental projects such as installing water efficient drip irrigation or an outdoor sink for water reuse for school gardens. From 2012 to 2016 the City provided over \$2,000 in funding for such projects.

Technical and Financial Assistance

- Continue to educate local students and encourage and aid residential, commercial and industrial customers in implementation of conservation measures

Other Measures

In addition to the above-described conservation measures, the City has implemented the following conservation measures:

- The City enforces the requirements of the Oregon Plumbing Specialty Code and the Oregon Residential Specialty Code for water conserving plumbing fixtures.
- When practical, the City requires looping of the water distribution system. This provides a higher level of service and avoids having to flush dead-end water lines.

Summary of Conservation Measure Goals

The City plans to continue to promote water conservation through the existing conservation measures listed above and summarized in *Table 15*.

Table 15: Summary of Conservation Measure Goals

<p>Annual Water Audit</p> <ul style="list-style-type: none"> • Continue the annual water audit program
<p>Metered Accounts, Meter Testing and Meter Maintenance</p> <ul style="list-style-type: none"> • Continue installing meters at all new service connections • Continue the meter testing and maintenance program
<p>Water Rate Structure</p> <ul style="list-style-type: none"> • Continue to bill customers based on the quantity of water metered • Continue to collect and analyze water use data by customer class • Continue to work with Council to decide on whether/how to modify the rate structure
<p>Leak Detection and Line Replacement</p> <ul style="list-style-type: none"> • Continue to conduct leak detection surveys to monitor changes in pipe integrity over time • Complete a leak detection survey of the entire water system every three years and all the steel lines every year. • Continue to pressure test new waterlines before being accepted into a warranty period • Continue replacing steel lines and to upgrade pipeline replacement programs and priorities
<p>Public Education and Outreach</p> <ul style="list-style-type: none"> • Continue to provide water efficiency and conservation outreach information to the public using print materials, local media outlets, and social media platforms • Continue to update the City Web site and outreach materials as needed
<p>Water Re-use, Recycling and Non-Potable Water Opportunities</p> <ul style="list-style-type: none"> • Continue to encourage customers to utilize water reuse, recycling, and non-potable water opportunities where it is safe and feasible
<p>Technical and Financial Assistance</p> <ul style="list-style-type: none"> • Continue to educate local students and encourage and aid residential, commercial and industrial customers in implementation of conservation measures

SECTION 2. REQUIRED CONSERVATION MEASURES

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3. Water Curtailment Plan

Background

The purpose of a water curtailment plan is to provide a general strategy for managing water resources in response to potential or actual water shortages. In anticipation of such a shortage, the City Council previously adopted water curtailment authority and water curtailment measures (Albany Municipal Code Chapter 11.01) that form the basis of the Water Curtailment Plan in accordance with OAR 690-086-0160.

Overview

The City of Albany has a rated treatment capacity of 28 million gallons per day (MGD), 16 MGD from the Vine Street Water Treatment Plant (Vine Street WTP) and 12 MGD from the Albany-Millersburg Water Treatment Plant (A-M WTP). The Vine Street WTP can produce up to 18 MGD for short duration events and the A-M WTP can produce up to 15 MGD during clear and warm source water periods that coincide with periods of high system demand. This results in a combined maximum treatment capacity of 33 MGD (51 cfs) slightly greater than total water available under Albany's right certificates and water right permit. Albany also has up to several days of average daily water demand available in storage reservoirs. Historically, the maximum day water demands have been easily met by a combination of maximum production from both treatment facilities and finished water storage in the City's reservoirs.

Based on the source water, types of use, priority dates, and location of diversions, extremely low water conditions for an extended period of time would need to exist before the City would be forced to limit water use based on source water river flows. Consequently, the triggers outlined in this curtailment plan are tied to a loss of capacity in the water treatment system or some local or regional event and are not tied to South Santiam or Santiam River flows. This curtailment plan consists of four tiered stages of curtailment measures that can be applied to the City as a whole or only to specific service areas. Each stage is associated with an increasing degree of severity of the water supply shortage.

Although these curtailment measures are partially tied to treatment capacity, there are other situations that may occur that could create the potential for a supply shortage. It is important that the curtailment plan have the flexibility to respond to such situations and give the Public Works Director (Director) the ability to activate curtailment measures as necessary to respond to a given event. In other words, the Director may:

1. Implement curtailment measures as necessary, regardless of the percent of treatment capacity being used.
2. Impose additional restrictions at any stage if they are deemed necessary.

SECTION 3. WATER CURTAILMENT PLAN

3. Implement curtailment measures to the entire water system or to smaller more localized portions of the water system.
4. In some cases, skip entire stages.

Some examples of local or regional events that may cause supply shortages include, but are not limited to, the following:

- An extended period of dry, hot weather
- Contamination of source water supplies
- Interruption of power supply to a critical part of the City water system
- Major water transmission line break
- Reservoir or pump station failure
- Other major catastrophic event

If one or more of these scenarios creates the need for water curtailment, the action taken will vary depending on the time of year and the expected duration of the situation. In general, the response to a water shortage will be to develop strategies that create an appropriate reduction in demand for water.

Curtailment Measures

As mentioned above, this plan consists of four curtailment stages that can be applied to the City as a whole or only to specific service areas. Each stage is associated with an increasing degree of severity of the water supply shortage. Implementation of any stage of the plan is initiated by the Public Works Director (Director), or his or her authorized representatives.

At each stage, restrictions imposed in the previous stage(s) stay in force unless superseded by more stringent requirements. As previously mentioned, additional restrictions can be imposed at any stage if they are deemed necessary and, in some cases, stages can be skipped entirely. Should the plan have to be implemented, notification to the general public will be through the local news media and social media platforms. Direct contact will be made with large water customers and institutions as the need requires.

Examples of local news media and social media outreach and education efforts include:

- a. Posts on City of Albany Facebook and Twitter accounts.
- b. Text messages and email notice on the City's Nixle and FlashAlert accounts and Linn-Benton Emergency Notification System.
- c. Newspaper and movie theater advertisements.
- d. News releases and public service announcements.

- e. Water conservation brochures and handouts.
- f. Water conservation tips in city newsletter, website, utility bills, and by phone.
- g. Water conservation programs for schools and other groups.
- h. Incentive programs to encourage water conservation.

STAGE ONE: Alert for a Potential or Minor Water Supply Shortage

The Stage One alert is activated when the Director, or his or her authorized representative, determines that there is a potential for a water shortage, or an actual minor water shortage exists. Under Stage One, an initial outreach and education effort will be conducted as well as implementation of a voluntary odd/even watering schedule. The Director shall provide notification of the Stage One alert and curtailment measures to all service districts and municipalities providing City water to customers located outside of the urban growth boundary.

STAGE TWO: Water Supply Shortage

Stage Two is activated when the Director, or his or her authorized representative, determines that a general water supply shortage exists or when the daily water demand reaches 90 percent of treatment capacity. Under Stage Two, the Director has the authority to activate some or all of the measures listed below until the capacity to deliver adequate supplies of water is restored. Customers shall be notified through major media sources of the request to voluntarily curtail all non-essential water use. In the event a problem affects only a small portion of the water system, the City will distribute information to affected customers. The Director shall provide notification of the Stage Two alert and curtailment measures to all service districts and municipalities providing City water to customers located outside of the urban growth boundary. Updates on the status of the water situation shall be provided to the media regularly until Stage Two is canceled.

Customers will be asked to voluntarily implement the curtailment measures listed below to reduce all non-essential uses of water.

1. No watering or irrigating of lawns, grass, or turf unless it is:
 - a. New lawn, grass, or turf that has been seeded or sodded after March 1 of the current calendar year;
 - b. Athletic fields frequently and currently used for organized play;
 - c. Golf course tees and greens; and
 - d. Park and recreation areas of a particular significance and value to the community as approved by the Director in consultation with Parks and Recreation Director.
2. City-supplied water shall not be used to clean, fill, or maintain levels in decorative fountains in commercial or institutional settings, except for fountains that recycle their water.

SECTION 3. WATER CURTAILMENT PLAN

3. City-supplied water shall not be used to wash sidewalks, walkways, streets, driveways, parking lots, or other hard-surfaced areas except where necessary for public health or safety.
4. City-supplied water shall not be used to wash vehicles, except for commercial carwash facilities that are using water-recycling equipment.
5. For City parks supplied by City water, the Parks & Recreation Department shall limit non-essential water use and/or irrigate only during off-peak hours as specified by the Director in consultation with the Parks & Recreation Director.
6. Hydrant and water main flushing shall be done for emergencies only.

STAGE THREE: Severe Water Supply Shortage

Stage Three is activated when the Director, or his or her authorized representative, determines that the daily water demand has reached 95 percent of treatment capacity or that there is a severe water supply shortage that threatens the ability of the City to deliver water to customers and/or the ability to meet established fire flow demands. Under Stage Three, the Director has the authority to make any of the voluntary curtailment measures under Stage Two mandatory. In addition, the Director or his/her designee will work with local businesses to limit water use to essential uses only. In the event that a problem affects only a small portion of the water system, the City will distribute information to affected customers.

The Director shall notify the City Manager and the City Council of the situation as soon as practical and submit a report at the first available meeting of the City Council. The public and the media shall be notified of the situation and updated regularly on the water supply status. The Director shall provide notification of the Stage Three alert to all service districts and municipalities providing City water to customers located outside of the urban growth and require them to comply with the Stage Three restrictions.

STAGE FOUR: Critical Water Supply Shortage

Stage Four is activated when the Director, or his or her authorized representative, determines that the daily water demand has reached 100 percent of treatment capacity or that there is a critical water supply shortage that threatens the ability of the City to deliver water to customers and/or the ability to meet established fire flow demands. Because a water shortage of this severity threatens the ability of the City to deliver essential water supplies to its customers, Stage 4 restrictions are mandatory. In the event that a problem affects only a small portion of the water system, the City will distribute information to affected customers.

The Director shall notify the City Manager and the City Council of the situation as soon as practical and submit a report at the first available meeting of the City Council. The public and the media shall

be notified of the situation and updated regularly on the water supply status. The Director shall provide notification of the Stage Four alert to all service districts and municipalities providing City water to customers located outside of the urban growth boundary and require them to comply with the Stage Four restrictions.

Under Stage Four, the Director has the authority to implement the curtailment measures listed below to minimize all non-essential uses of water.

1. All outdoor non-essential water use shall be prohibited except where necessary for public health and safety.
2. All large industrial and institutional accounts shall restrict water use to only fire protection and other critical functions as approved by the Director.
3. During a catastrophic loss of supply or when a drought declared preference for human consumption is implemented in accordance with OAR 690-019-0070, uses other than for human consumption and emergency services will not be allowed.

Summary

Albany's water curtailment plan is fully compliant with OAR 690-086-0160. Therefore, there are no benchmark goals for the municipal water curtailment element of the Water Management and Conservation Plan.

SECTION 3. WATER CURTAILMENT PLAN

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4. Water Supply Element

This section of the Water Management and Conservation Plan is largely unmodified from the original Water Management Plan completed in 2006. Upon completion of the 2004 Water Facility Plan, the City of Albany invested millions of dollars to upgrade the Vine Street WTP and to construct the new A-M WTP adding substantially to its water supply capacity and improving treatment system reliability. In addition, millions of dollars have been invested into the water transmission and distribution system to improve reliability and service level for customers, and to reduce water loss due to leaks.

Development of a new, long-range Water Facility Plan has not been completed since 2004. The fundamental elements of the facility planning effort including land uses, urban growth boundary (UGB), unit water demand, and population projections to buildout of the UGB remain unchanged or only slightly modified. As a result, for the purposes of this Plan, no changes have been made to those elements in an attempt to further refine long-term water supply requirements.

Service Area and Population Projections

Albany's service area at buildout of the State-approved Urban Growth Boundary (UGB) will include properties located within the UGB (approximately 22 square miles) and limited service to properties outside the UGB that were previously served by the North Albany County Service District (NACSD) and the Dumbeck Lane Domestic Water Supply District (Dumbeck), as shown in *Figure 3* on page 7. In addition, consistent with the City's Comprehensive Land Use Plan, the Albany City Council may authorize the extension of water service outside the urban growth boundary through Albany City Council Policy or Resolution, or specific contracts in order to respond to special conditions such as health hazards. However, because of the unknown nature and limited water use related to these special conditions, no attempt has been made in this plan to quantify such extensions.

Buildout of the UGB is projected to occur in 2074, based on a defined growth rate and available land uses. In determining the annual growth rate in 2006, the City coordinated with Linn County and Benton County to develop a population projection of 53,200 for 2020. This population was used to establish the growth rate from the 2000 census population. The projected 2020 population of 53,200 represents an average annual growth rate of approximately 1.34 percent. This growth rate was assumed to continue after 2020 until the UGB is fully developed and is the basis for the data provided in *Table 16*.

Table 16: Population Projections

DATA	2002	2010	2020	2030	2040	2050	2074
Population	41,900	46,600	53,200	60,800	69,500	79,300	109,000
Growth Rate	1.34%	1.34%	1.34%	1.34%	1.34%	1.34%	1.34%

Although 1.34% has been used in this Plan for consistency with other planning documents, actual annual population growth from 1992 through 2000 averaged approximately 2.1%. Therefore, the growth rate used in **Table 16** is likely a conservative estimate.

Projected Water Demands

The information and calculations presented in this section of the Plan have not been updated as part of the development of this Plan to reflect any revised population projections, land use, or unit water demands. The most recent Water Facility Plan was completed in 2004, and that represents the best available information.

The first step in determining future water demands is to develop population projections. The projected population at buildout (full development) of the UGB is based on 2000 census data and an estimate of additional population as undeveloped residential areas are fully developed. Estimates of additional population are based on an inventory of residentially-zoned land within the UGB.

Residentially-zoned areas outside Albany's city limits but within the UGB are identified as "Rural Residential" in the City's Comprehensive Plan. City Planning and Engineering staff projected urban residential, commercial, and public land uses for these areas to estimate the buildout population and non-residential demands at full development of the UGB.

The inventory of residential land uses was screened to determine the net acreage available for future residential development. This screening was done on a parcel-by-parcel basis using the City's geographic information system (GIS) database. A ratio of assessed improvement value to parcel area was used to classify a parcel as fully developed, partially developed, or vacant.

Developed areas were not used to project additional population. Partially developed and vacant areas were further screened to remove uses that are permitted in residential zones, but that will not develop residentially. Examples of these areas include cemeteries, schools, wetlands, and flood plains. These areas were not included in the net area available for residential development.

Population projections typically rely on the projected number of homes or dwelling units per acre for residential land uses and on estimated household densities or persons per household. An average household density of 2.46 persons per household was used to project the buildout population. This is consistent with the average household density developed with the City's 1998 Wastewater Facility Plan⁹ and was confirmed with data from the 2000 Census¹⁰. Dwelling unit densities were developed for vacant and partially developed residential land uses based on the City's Development Code¹¹. The resulting population densities per acre (ppa) are summarized in *Table 17*.

Table 17: Projected Population Densities Per Acre

<i>Residential Land Use</i>	<i>DU/ Acre</i>		<i>Partially Developed</i>		
	<i>LU Code</i>	<i>Vacant</i>	<i>Partially Developed</i>	<i>Vacant</i>	<i>ppa</i>
Low density SFD ¹	RS 10	4	3	10	7
Low density urban SFD	RS 6.5	6	4	15	10
Low-Medium density SFD	RS 5	6	5	15	12
Low-medium density MFD ²	RM 5	12	10	30	25
Medium-high density MFD	RM 3	20	16	49	39

¹ Single Family District

² Multiple Family District

The projected population increase was determined by multiplying the total area available for each residential land use by the population per acre densities shown in *Table 17*. The population increase was added to the 2000 census population to determine the total projected service population at buildout. *Table 18* summarizes these population projection calculations.

Table 18: Projected Population at Buildout

<i>Residential Land Use</i>		<i>Vacant</i>		<i>Partially Developed</i>		<i>Total</i>
<i>Description</i>	<i>LU Code</i>	<i>Acres</i>	<i>Population</i>	<i>Acres</i>	<i>Population</i>	<i>Population</i>
Low density SFD	RS 10	806	7,931	947	6,989	14,920
Low density urban SFD	RS 6.5	1,706	25,181	1,157	11,385	36,565
Low-medium density SFD	RS 5	55	812	7	86	898
Low-medium density MFD	RM 5	268	7,911	115	2,829	10,740
Medium-high density MFD	RM 3	95	4,674	10	394	5,068
Total		2,930	46,509	2,236	21,682	68,191
2000 Population						40,852
Total						109,043
Total Buildout Population (rounded)						109,000

⁹ City of Albany Wastewater Facility Plan, June 1998, CH2MHill

¹⁰ Profiles & General Demographic Characteristics, 2000, US Census Bureau

¹¹ The Albany Development Code, Adopted September 1981, City of Albany

SECTION 4. WATER SUPPLY ELEMENT

Available land uses and population projections were used to develop water demand projections as described in the following paragraphs.

Residential Demand

Residential demands are based on projected population estimates and unit demands per capita. Based on the data presented in the Existing System Description section of this Plan (page 14), a per capita demand factor of 100 gpcd has been used to project future residential water demands.

Non-Residential Demand

Non-residential demands include all commercial, heavy and light industrial, school and park demands. Demand estimates for these uses are estimated based on land use and corresponding unit demands per acre. A summary of non-residential land uses is shown in **Table 19**. **Figure 8** shows the location of these land uses. Unit water demands per acre are shown in **Table 20**.

Table 19: Non Residential Land Uses in the UGB

Land Use	Area (ac)
Commercial	1,100
Heavy Industrial	300
Light Industrial	1,200
Schools	300
Parks	300
Total Area	3,200

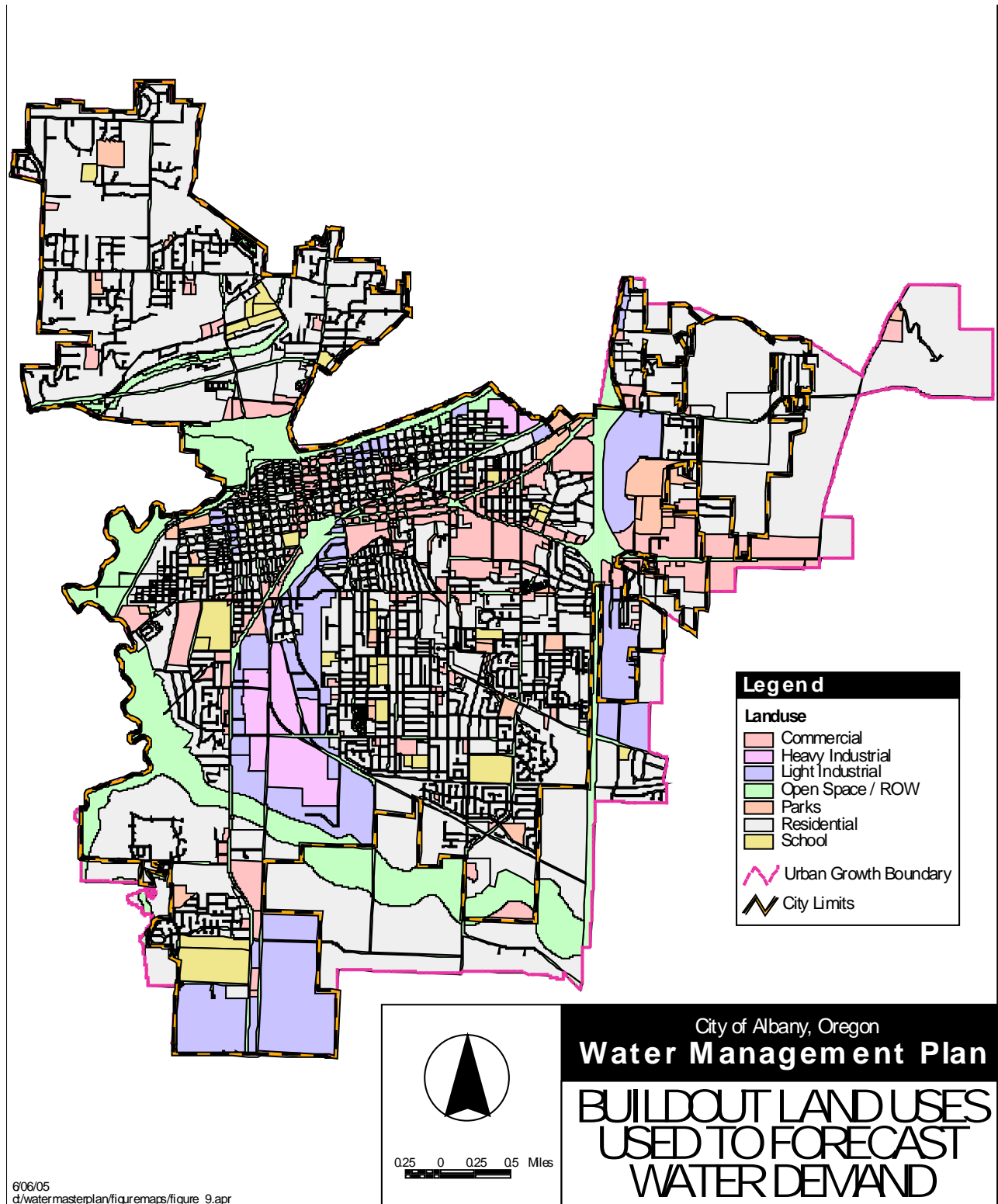
The American Water Works Association (AWWA) has published a range of typical water demands based on land uses. This range was contrasted with the survey of Albany demands for non-residential customers shown in **Table 10** on page 15. Unit demands for each land use were then selected. Sample non-residential demand data for year 2000 usage was divided by each customer’s developed acreage to determine an average demand per acre per day. This comparison and the average daily unit water demands used to forecast non-residential demands for this Plan are summarized in **Table 20**.

Table 20: Unit Demands for Non-Residential Uses

Land Use	AWWA (gpad)			Albany Survey (gpad)	Albany Water Facility Plan (gpad)
	Low	High	Average		
Office Commercial	1100	5100	2030	-	-
Retail Commercial	1100	5100	2040	-	-
Commercial (Albany)	-	-	-	1350	2000
Light Industrial	200	4700	1620	1830	1600
Heavy Industrial	200	4800	2270	4830	4800
Schools	400	2500	1700	620	600
Parks	400	3100	2020	730	700

As can be noted from the table above, AWWA average water demands for commercial uses were greater than Albany's average commercial demand. The survey of Albany's commercial demands found the largest demand variation between sites and was based on a small sample size. AWWA average values were, therefore, selected for commercial customers because of this variation and small sample size. Rounded AWWA water demands were used for light industrial land use based on the close correlation between these unit demands and Albany's demand data. The high range of AWWA's unit demands for a heavy industrial use was selected because it reflects Albany's relatively water intensive industrial uses such as metals casting and food processing. Unit demands for schools and parks are based on Albany's survey data and are near the lower range of the AWWA typical demands for these uses.

Figure 8: Buildout Land Uses Used to Forecast Water Demand



Water Loss Due To Leaks

Water loss is defined as the difference between water that is produced and water that is sold or otherwise measured or estimated. For a detailed discussion of water loss due to leakage in the Albany system, see page 10 of this Plan. For Albany's system it is assumed that the majority of water loss is attributable to leaks in old steel water lines. Since the preparation of the initial Water Management Plan, significant investments have been made to replace steel water lines, to conduct water leak surveys, and to promptly repair identified leaks in an effort to reduce water loss in the system. An acceptable water loss rate due to leakage is considered to be no greater than 15 percent. Albany's current loss ratio is estimated to be slightly below 10%. For planning purposes, the demand projections at buildout of the UGB assume that system improvements and conservation measures will maintain the water loss ratio at or below 10%.

Summary of Projected Demands

Projected unit demands per capita and per acre have been multiplied by the projected buildout population and inventory of land uses to develop a total water demand at buildout. A 10% allowance for water loss has also been included. These calculations are summarized in **Table 21** and result in a projected maximum day demand (MDD) of 36 MGD at buildout. This is slightly lower than the projections presented in the 2006 Water Management Plan. By focusing on system maintenance and repair, and by implementing the conservation measures detailed in this Plan, the City can help to mitigate the effects of growth on water resources.

Table 21: Projected Water Demand at Buildout

CUSTOMER TYPE	DEMAND RATE	UNITS	POPULATION / ACRES	BUILDOUT LANDUSE (acres)	AVERAGE DAY DEMAND (MGD)	MAXIMUM DAY DEMAND (MGD)
Residential	100	gal/capita/day	109,000		10.9	
Commercial	2,000	gal/day/acre	1,100	1,100	2.2	
Light Industrial	1,600	gal/day/acre	1,200	1,200	1.9	
Heavy Industrial	4,800	gal/day/acre	300	300	1.4	
Parks	700	gal/day/acre	300	300	0.2	
School District & LBCC	600	gal/day/acre	300	300	0.2	
SUBTOTAL (rounded)					16.8	34
Water Loss (10% of ADD)					1.7	2
TOTAL, w/o Reserve (rounded)					18.5	36

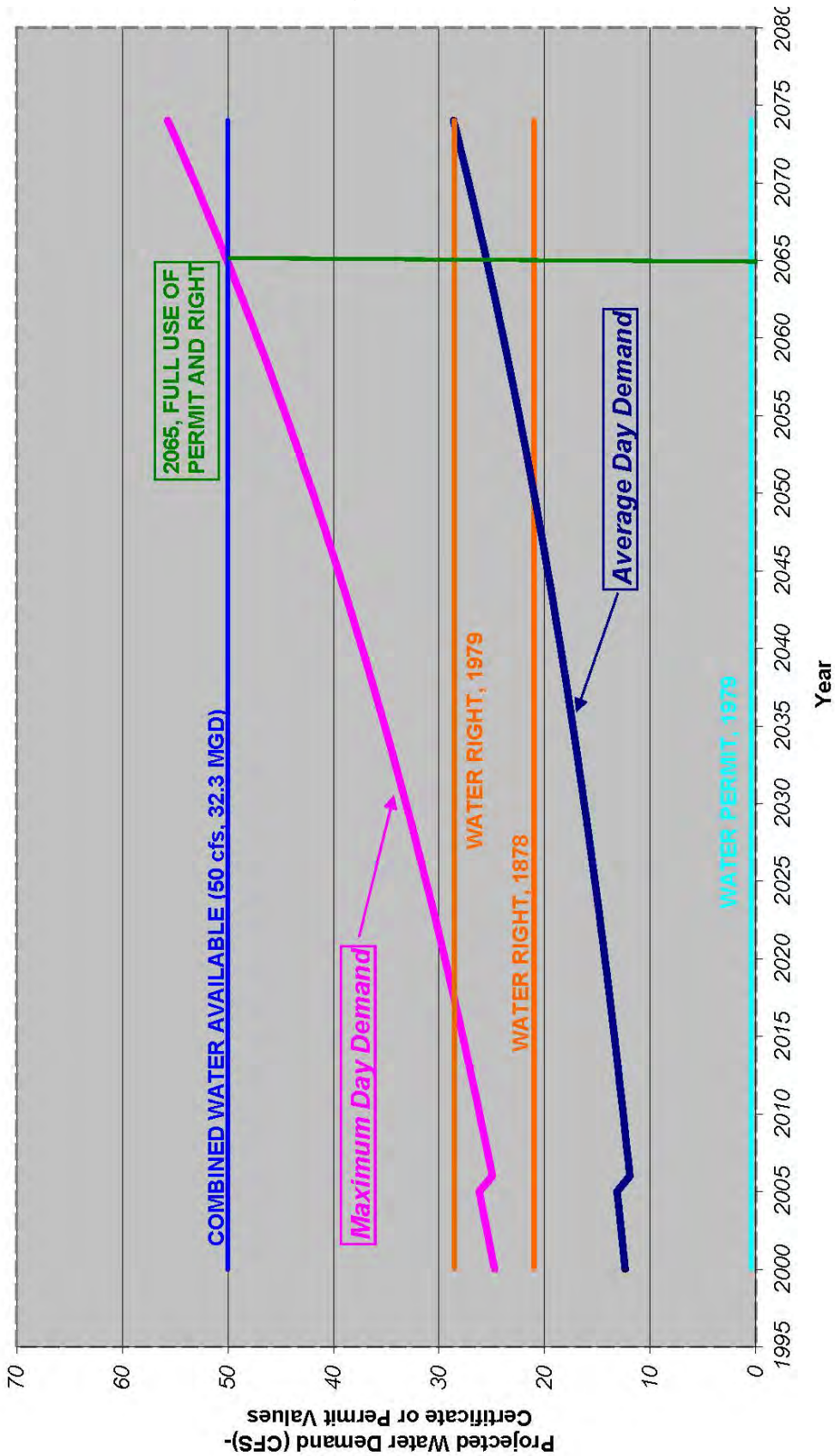
A demand curve representing the incremental growth rate and additional non-residential demands is shown as **Figure 9**. **Figure 9** shows average and maximum day water demands and water available through permits and rights for municipal use. **Figure 9** also reflects a 1-MGD maximum day demand

SECTION 4. WATER SUPPLY ELEMENT

decrease in 2005-06, to reflect the City of Millersburg's provision of water to their customers following completion of the A-M WTP.

The revised projected maximum day demand is slightly lower at buildout due to the reduction of the water loss allowance from 15% to 10%. As a result, there is a slight extension of the projected year, from 2063 to 2065, for full beneficial use of water right Permit S-44388. However, the City of Albany is not requesting any modification to the Final Extension of Time Order dated January 26, 2005 that establishes the October 1, 2063 deadline for completing construction.

Figure 9: Water Demand Projections



Meeting Projected Demands

Source Alternatives

The completion of the A-M WTP project with the City of Millersburg, which added a second source of supply to Albany's water system, has both communities well positioned for meeting future water demands. The need for a second water source was first identified by the engineering firm of Brown and Caldwell during development of the 1988 Albany and Millersburg Water Facility Plan¹². The 1988 plan considered alternate supplies and recommended development of a second supply on the east side of the urban growth boundary (UGB).

The A-M WTP project included an intake structure on the Santiam River, raw water transmission lines, a new water treatment plant located on Scrael Hill, and finished water lines connecting to each City's distribution system. Although the intake, raw water, treatment, and storage facilities are shared, each City has an independent distribution system. The former connection (20-inch line) at 3246 Salem Avenue NE between the two cities has been converted to an emergency intertie. Under maximum day demand conditions at buildout, half of Albany's water demands will be met by the A-M WTP with the other half being met by the Vine Street WTP.

The raw water intake for the A-M WTP is located approximately one-quarter mile downstream of the confluence of the North and South Santiam Rivers. The intake was sized to meet existing and buildout conditions in order to minimize in-stream disruptions from construction. Raw water intake facilities are required by law to be screened so that fish will not be drawn into or held against the water intake inlet screen. The inlet screen design followed construction guidelines developed by the National Oceanic and Atmospheric Administration, Fisheries Service (NOAA, Fisheries). An air burst system has been provided to periodically clean the screens.

Water Rights to Support Future Water Demands

As shown in **Figure 9**, Water Demand Projections, Albany will need additional water rights to meet projected demands at buildout of the UGB, even after water savings through conservation and leak reduction have been realized. Based on the projections, an additional 6 cfs will be needed to serve the Albany community through 2074. As part of the A-M WTP project, Albany and Millersburg have signed an intergovernmental agreement, included as **Appendix E** that includes provisions for each City to utilize each other's water rights. Combined, the two cities have a total of 72 cfs in water right permits and water right certificates that is equivalent to the projected buildout demands of both communities. The City of Albany will benefit from the added supply to meet future demands and the

¹² *Albany and Millersburg Water System Facility Plan*, February 1988, Brown and Caldwell

City of Millersburg will gain reliability through Albany's earlier water right priority dates. Therefore, the need for future development of additional sources of supply is not anticipated at this time.

Full Beneficial Use of Permit S-44388

Following the partial perfection of water right Permit S-44388 in 2016, the remaining authorized appropriation under this Permit is 0.43 cfs (see **Appendix B**). Expansion of water appropriated under this Permit will be needed to meet future water demands and operational requirements. The authorized date of completion for final perfection of this water right is October 1, 2063. As shown in **Figure 10**, this date corresponds fairly well to the revised projected maximum day demands (MDD).

The combined capacity of the Vine Street WTP and the A-M WTP exceeds the anticipated municipal water required for the next 20 years, through 2037. Therefore, it is more cost effective to utilize the existing capacity of these plants than investing in additional conservation measures not outlined in this Plan or searching for other potential sources of water.

Mitigation Issues

The Water Resources Department requires that the water supplier provide a description of mitigation actions being taken to comply with legal requirements, such as the Federal Endangered Species Act, Clean Water Act, and Safe Drinking Water Act. At the present time, the City uses treatment technology and practices to meet Safe Drinking Water Requirements and holds NPDES permits for discharge of backwash water from the treatment plants.

Fish ladder improvements to the diversion dam on the South Santiam River and construction of a fish screen at the Canal entrance to prevent fish from entering the Canal were completed in 2005. The fish ladder improvements and intake screening were designed using construction guidelines developed by the National Oceanic and Atmospheric Administration, Fisheries Service (NOAA, Fisheries). The City also worked closely with the Oregon Department of Fish and Wildlife to minimize the impact the diversion would have on fish and wildlife. In addition, design and installation of the new intake structure for the A-M WTP was completed in a manner to protect listed species, unlisted species, and riparian habitat on the Santiam River. No additional mitigation issues will be required in order to expand use under the existing permit.

Distribution System Improvement Projects

In order to meet future demands, several improvements to the water distribution system are required. The 2004 Water Facility Plan identified approximately \$134 million in distribution system improvements that will be required to correct existing deficiencies, meet regulatory requirements, and meet future water demands through 2074. Since the completion of the 2004 Facility Plan, Albany has

SECTION 4: WATER SUPPLY ELEMENT

made major improvements to the water distribution system completing many of projects identified in the Facility Plan. *Appendix F* includes the City's 2018-2022 water capital improvement program, which shows the current list of improvements scheduled for the water system.

Water Management Plan Update Schedule

The development of the initial Water Management Plan (2006) paralleled that of the City's 2004 Water Facility Plan. A progress report was submitted to the Water Resources Department in 2011, and this Plan provides a complete update based on the best available information in 2017. Unless actual growth occurs at a rate substantially greater than projected, the City proposes to provide the next update to this Water Management and Conservation Plan as required per OAR 690-086-125(6).

APPENDIX A

COMMUNITY COMMENTS

From: [Richardson, Jeni](#)
To: [Richardson, Jeni](#)
Bcc: ["shasson@cityofmillersburg.ora"](#); ["rwhitlatch@ci.lebanon.or.us"](#); ["pat.bare@adairvillage.ora"](#);
["joseph.kerby@co.benton.or.us"](#); ["teresa.farley@co.benton.or.us"](#); ["rod_l@comcast.net"](#); ["rwyatt@co.linn.or.us"](#)
Subject: Water Management and Conservation Plan Review
Date: Tuesday, August 15, 2017 1:50:00 PM
Attachments: [WMCP August 15.pdf](#)

The City of Albany has recently completed a draft Water Management and Conservation Plan (WMCP) as required by the Oregon Water Resources Department. The requirement to complete a WMCP is tied to the approval of an extension of time for perfecting the City's 29 cfs municipal water right permit. A copy of the Plan has been attached for your review and comment. To keep the size manageable, the appendices are not included with this transmittal. If you would like a copy of a particular appendix, please let us know.

Per OAR 690-086-0120 (8) municipalities are required to make the Plan available for review by affected local governments along with a request for comments relating to consistency with the local government's comprehensive land use plan. Although not all of the communities receiving this Plan are directly affected, Albany believes it is important to provide each of the surrounding communities the opportunity to comment on the plan prior to submitting it to the state.

Please provide your comments to me (Jeni) via email or in letter format at your earliest convenience however all comments must be received no later than noon on September 18, 2017. All comments will be considered and included in Appendix A of the Plan. If you determine you do not have any comments, we would still appreciate a letter or email for documentation purposes.

If you have any questions during your review, please don't hesitate to contact me at:

Jeni Richardson, PE
Civil Engineer III
City of Albany, Oregon
jeni.richardson@cityofalbany.net
541-917-7637

From: [Rod Laverdure](#)
To: [Richardson, Jeni](#)
Cc: ["Jay Simpkins"](#)
Subject: RE: Water Management and Conservation Plan Review
Date: Thursday, September 14, 2017 7:55:52 PM

Hi Jeni,

Dumbeck has no comments on the plan.

Thanks for giving us the opportunity to review it.

Rod

From: Bailey, Chris
Sent: Thursday, September 21, 2017 9:01 AM
To: 'Steve Hasson'
Cc: Richardson, Jeni
Subject: RE: Albany WMCP comments

Steve – I'm passing along the response to your comments from Jeni Richardson.

Thank you and Janelle for your review of and comments on the city of Albany's Water Management and Conservation Plan. Our responses to your questions follow:

1. Page 5, Figure 1 – why is there a spike in late spring/early summer 2016 in average daily raw water intake? Just curious if something took place at that time.

Albany's Response:

Figure 1 shows the daily diversions to Albany's water treatment plants from 2007 to 2016. The spike that occurred on June 22, 2016 was the result of a claim of beneficial use flow exercise for partial perfection of Albany's 29 cfs water right permit.

2. Page 34, Curtailment Measures – how are Millersburg residents alerted of a curtailment? Does Albany notify Millersburg City Hall and then Millersburg is responsible for getting the word out to Millersburg residents?

Albany's Response:

Should the curtailment plan have to be implemented, Albany will not contact individual residents in either city but will notify the public using local news and social media outlets listed in the curtailment plan including text messages and email notice on the City's Nixle and FlashAlert accounts and the Linn-Benton Emergency Notification System. In addition, if this is an event that impacts Millersburg, direct contact will be made with Millersburg City Hall.

Thanks again for your questions. Jeni

If you have any further comments or questions, please let me know. Chris

From: Steve Hasson [<mailto:shasson@cityofmillersburg.org>]
Sent: Tuesday, September 19, 2017 8:13 AM
To: Bailey, Chris
Subject: FW: Albany WMCP comments

Chris – Janelle asked me to pass along her water management conservation plan comments – Steven

From: Booth, Janelle/CVO [<mailto:Janelle.Booth@CH2M.com>]
Sent: Tuesday, September 19, 2017 6:41 AM
To: Steve Hasson
Cc: Baldwin, Matthew/CVO
Subject: Albany WMCP comments

Hi Steven,

Here are our comments on Albany's Water Management Conservation Plan. Please add any comments you have and pass them along to Chris Bailey.

1. Page 5, Figure 1 – why is there a spike in late spring/early summer 2016 in average daily raw water intake? Just curious if something took place at that time.

2. Page 34, Curtailment Measures – how are Millersburg residents alerted of a curtailment? Does Albany notify Millersburg City Hall and then Millersburg is responsible for getting the word out to Millersburg residents?

*Janelle Booth, PE CH2M *Civil Engineer Water Business Group*

APPENDIX B

MUNICIPAL WATER RIGHTS

Certificate 49386 – 21 cfs Municipal Water Right

COURT-308-11-13

STATE OF OREGON

COUNTY OF LINN

CERTIFICATE OF WATER RIGHT

This Is to Certify, That PACIFIC POWER AND LIGHT COMPANY,
a Maine Corporation

of Public Service Building, Portland, State of Oregon 97204, has
a right to the use of the waters of South Santiam River

a tributary of Santiam River for the purpose of
municipal use in and around the City of Albany

and that said right has been confirmed by decree of the Circuit Court of the State of Oregon for
Linn County, and the said decree entered of record at Salem, in the Order Record of
the WATER RESOURCES DIRECTOR, in Volume 18, at page 15; that the priority of the
right thereby confirmed dates from 1878

that the amount of water to which such right is entitled, for the purposes aforesaid, is limited to an
amount actually beneficially used for said purposes, and shall not exceed 21.0 cubic feet per
second.

The point of diversion is located in the NW $\frac{1}{4}$ NW $\frac{1}{4}$ as projected within Cheadle DLC 55,
Section 19, Township 12 South, Range 1 West, Willamette Meridian, being 1430
feet north and 1050 feet east from the W $\frac{1}{4}$ corner Section 19.

A description of the place of use under the right, and to which such right is appurtenant, is as
follows:

SEE NEXT PAGE

SW $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ E $\frac{1}{2}$ SW $\frac{1}{4}$ W $\frac{1}{2}$ SE $\frac{1}{4}$ Section 28	All Section 17
W $\frac{1}{2}$ NE $\frac{1}{4}$ E $\frac{1}{2}$ NW $\frac{1}{4}$ E $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 35	NE $\frac{1}{4}$ W $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 18
T. 10 S., R. 3 W., W. M.	N $\frac{1}{2}$ NE $\frac{1}{4}$ Section 19
W $\frac{1}{2}$ Section 4	N $\frac{1}{2}$ NW $\frac{1}{4}$ Section 20
	T. 11 S., R. 3 W., W. M.
SW $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ S $\frac{1}{2}$ Section 5	SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 1
S $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 6	NE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 12
All Section 7	NE $\frac{1}{4}$ E $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 13
NE $\frac{1}{4}$ N $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ E $\frac{1}{2}$ SE $\frac{1}{4}$ Section 8	E $\frac{1}{2}$ NE $\frac{1}{4}$ E $\frac{1}{2}$ SE $\frac{1}{4}$ Section 24
S $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ N $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 9	E $\frac{1}{2}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 25
T. 11 S., R. 3 W., W. M.	T. 11 S., R. 4 W., W. M.

And said right shall be subject to all other conditions and limitations contained in said decree. The right to the use of the water for the purposes aforesaid is restricted to the lands or place of use herein described.

WITNESS the signature of the Water Resources Director, affixed

this date 22nd August, 1980


Water Resources Director

Recorded in State Record of Water Right Certificates, Volume 43, page 49386

Final Order issued on January 26, 2005 that established the 2063 date

Oregon Water Resources Department
Water Rights Division

Water Rights Application
Number S-58906

Final Order
Extension of Time for Permit Number S-44388

Appeal Rights

This is a final order in other than contested case. This order is subject to judicial review under ORS 183.484. Any petition for judicial review must be filed within the 60 day time period specified by ORS 183.484(2). Pursuant to ORS 536.075 and OAR 137-004-0080 you may either petition for judicial review or petition the Director for reconsideration of this order. A petition for reconsideration may be granted or denied by the Director, and if no action is taken within 60 days following the date the petition was filed, the petition shall be deemed denied.

Application History

On March 21, 2003, City of Albany submitted an application to the Department for an extension of time for permit number S-44388. The Department issued permit number S-44388 on September 27, 1979. The permit called for completion of construction of the water development project by October 1, 1981, and complete application of water to the full beneficial use by October 1, 1982. In accordance with OAR 690-315-0050(2), on December 7, 2004, the Department issued a Proposed Final Order proposing to extend the time to complete construction of the water development project and the time to fully apply water to beneficial use to October 1, 2063. The protest period closed January 21, 2005, in accordance with OAR 690-315-0060(1). No protest was filed.

The applicant has demonstrated good cause for the permit extension pursuant to ORS 537.230, 537.248, 537.630, 539.010(5) and/or OAR 690-315-0080(2).

At time of issuance of the Proposed Final Order the Department concluded that, based on the factors demonstrated by the applicant, the permit may be extended subject to the following conditions:

CONDITIONS

1. Development Limitations

Appropriation of water beyond 6.0 cfs under Permit #S-44388 shall only be authorized upon issuance of a final order approving a new/revised Water Management and Conservation Plan consistent with OAR Chapter 690, Division 86. The required Water Management and Conservation Plan shall be submitted to the Department within 3 years from the date this extension is final.

Final Order: Permit #S-44388

Page 1

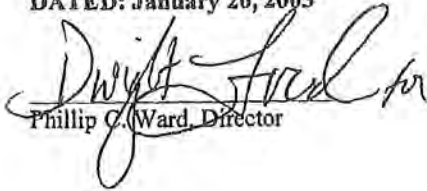
Special Order Volume 99, Page 17

The deadline established in this Final Order for submittal of a Water Management and Conservation Plan shall not relieve a permittee of any existing or future requirements for submittal of a Plan at an earlier date as established through other orders of the Department. A Plan submitted to meet the requirements of this Final Order may also meet the Plan submittal requirements of other Department orders.

Order

The extension of time for Application Number S-58906, Permit Number S-44388, therefore, is approved. The deadline for completing construction is extended to October 1, 2063. The deadline for applying water to full beneficial use is extended to October 1, 2063.

DATED: January 26, 2005


Phillip C. Ward, Director

If you have any questions about statements contained in this document, please contact Lisa Juul at (503) 986-0808.

If you have other questions about the Department or any of its programs, please contact our Water Resources Customer Service Group at (503) 986-0900.

Final Order issued on February 27, 2007 that approved the 2006 WMP and authorized diversion up to 29 cfs under Permit S-44388

BEFORE THE WATER RESOURCES DEPARTMENT
OF THE
STATE OF OREGON

In the Matter of the Proposed Water)
Management and Conservation Plan for) FINAL ORDER APPROVING WATER
City of Albany, Linn County, Oregon) MANAGEMENT AND
) CONSERVATION PLAN
)

Authority

OAR Chapter 690, Division 086, establishes the process and criteria for approving water management and conservation plans required under the conditions of permits, permit extensions and other orders of the Department. An approved water management plan may authorize the diversion and use of water under a permit extended pursuant to OAR Chapter 690, Division 315.

Background

On March 9, 2006, the City of Albany submitted a draft Water Management and Conservation Plan for review under OAR Chapter 690, Division 086 (November 2002). Submittal of the plan was required under permit extension for permit S 44388.

The Department published notice of receipt of the plan on March 14, 2006. No public comments were received.

The Department provided comments on the plan to the City on August 3, 2006 and, in response, the City submitted a revised plan on October 23, 2006.

Findings of Fact

1. The City of Albany Water Management and Conservation Plan contains all of the plan elements required under OAR 690-086-0125.
2. The projections of future water needs in the plan demonstrate a need for over 29 cfs of water available under permit S 44388 to meet demands for the population anticipated in 20 years. These projections are reasonable and consistent with the City's land use plan.
3. The plan includes 5-year benchmarks for implementation of use of new treatment plant, line replacement, public education and other required conservation elements. The system is fully

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metered and the rate structure includes a base rate and volumetric charge. System leakage is estimated at 15 percent or greater.

4. The plan includes 5-year benchmarks for evaluation, development, and implementation of programs to annually audit all water use, reduce unaccounted water below 15% and evaluate the feasibility to below 10%, develop a water efficiency award program for business and increase water re-use.
5. The plan identifies the South Santiam River as the source of the City's water rights and accurately and completely describes Pacific Lamprey, Cut throat Trout, Steelhead, Chinook Salmon, Bull Trout and Oregon Trout as listed species.
6. The water curtailment element included in the plan satisfactorily promotes water curtailment practices and includes a list of four stages of alert with concurrent curtailment actions.
7. The diversion of water under permit S 44388 will be initiated during the next 20 years and consistent with OAR 690-086-0130(7):
 - a. The plan meets OAR 690-086-0130(7) (a) by implementation of conservation measures as listed above.
 - b. The plan meets OAR 690-086-0130(7)(b), interconnect to or share water with the City of Millersburg and possibly with the Dumbeck Lane Water User Association.
 - c. The plan meets OAR 690-086-0130(7)(c), by implementation of coordinated water conservation outreach with the Cities of Corvallis, Salem and other local communities.

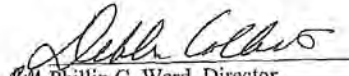
Conclusion of Law

The water management and conservation plan submitted by the City of Albany is consistent with the criteria in OAR Chapter 690, Division 086.

Now, therefore, it is ORDERED:

1. The City of Albany Water Management and Conservation Plan is approved and shall remain in effect until December 31, 2016 unless this approval is rescinded pursuant to OAR 690-086-0920.
2. The limitation of the diversion of water under S 44388 established by the extension of time approved on January 26, 2005 is removed and, subject to other limitations or conditions of the permit, the City of Albany is authorized to divert up to 29 cfs under Permit S 44388.
3. The City of Albany shall submit an updated plan within ten years and no later than December 31, 2016 and shall submit a progress report containing the information required under OAR 690-086-0120(4) by December 31, 2016.

Dated at Salem, Oregon this 27th day of February 2007


For Phillip C. Ward, Director

Mailing date: MAR 07 2007

Final Order (issued in August 8, 2017)

BEFORE THE WATER RESOURCES DIRECTOR OF OREGON

LINN COUNTY

IN THE MATTER OF PARTIAL PERFECTION OF)
WATER RIGHT PERMIT S-44388 IN THE NAME) **ORDER**
OF THE CITY OF ALBANY)

STATEMENT

On August 19, 2016, the Water Resources Department received a request from the City of Albany to partially perfect the use of water under water right permit S-44388.

FINDINGS OF FACT

Permit S-44388 allows for the use of 29.0 cubic feet per second (cfs) from South Santiam River a tributary of the Santiam River for municipal use.

The City has requested partial perfection of permit S-44388 and issuance of a water right certificate. The request was accompanied by the survey required under ORS 537.230(3). The survey shows, to the satisfaction of the Director, that the appropriation has been partially perfected in accordance with the provision of the Water Rights Act.

ORS 537.260 allows, without loss of priority or cancellation to the permit, the incremental perfection of the water right permit in an amount of not less than 25 percent, pursuant to ORS 537.260 and OAR 690-320-0040, without loss of priority or cancellation of the permit.

The Department finds that the City has perfected 28.57 cfs. The quantity of water is equal or greater than the 25 percent of the original quantity of water allowed under permit S-44388.

OAR 690-320-0040(5) allows municipal suppliers that incrementally perfect less than the full quantity of water to request further extension of time to complete construction and apply water to beneficial use for the remaining, unperfected quantity of water.

NOTICE OF RIGHT TO PETITION FOR JUDICIAL REVIEW OR RECONSIDERATION

This is a final order in other than contested case. This order is subject to judicial review under ORS 183.484. Any petition for judicial review must be filed within the 60 day time period specified by ORS 183.484(2). Pursuant to ORS 536.075 and OAR 137-004-0080, you may either petition for judicial review or petition the Director for reconsideration of this order. A petition for reconsideration may be granted or denied by the Director, and if no action is taken within 60 days following the date the petition was filed, the petition shall be deemed denied.

ULTIMATE FINDING OF FACT

As of the date of this order, the City has filed for an extension of time for permit S-44388.

The City is now entitled to a certificate in the amount of 28.57 cfs. The Director has determined the permittee has complied with the requirements to partially perfect permit S-44388 pursuant to ORS 537.250 and 537.260.


ORDER

The Department finds that there is 0.43 cfs remaining to be perfected and that a certificate in the amount of 28.57 cfs be issued to the City of Albany.

It is further ordered that upon perfecting a subsequent portion of Permit S-44388, the certificate shall be cancelled and superseded with a certificate that authorizes a maximum rate of diversion at each point of diversion that is lesser of:

- a) The full amount of water authorized under Permit S-44388, being 29.0 cfs;
- b) The maximum rate at which water can be diverted for beneficial use; or
- c) The amount of actual beneficial use.

Issued AUG 8 2017



Dwight French
Water Right Services Division Administrator, for
Thomas M. Byler, Director
Oregon Water Resources Department

Certificate 93318 (issued August 8, 2017)

STATE OF OREGON

COUNTY OF LINN

CERTIFICATE OF WATER RIGHT

THIS CERTIFICATE ISSUED TO

CITY OF ALBANY
333 BROADALBIN ST SW
ALBANY OR 97321

confirms the right to the use of water partially perfected under the terms of Permit S-44388. The amount of water used to which this right is entitled is limited to the amount used beneficially, and shall not exceed the amount specified, or its equivalent in the case of rotation, measured at the point of diversion from the source. The specific limits and conditions of the use are listed below.

APPLICATION FILE NUMBER: S-58906

SOURCE OF WATER: SOUTH SANTIAM RIVER, A TRIBUTARY OF SANTIAM RIVER

PURPOSE or USE: MUNICIPAL

MAXIMUM RATE: 28.57 CUBIC FEET PER SECOND (CFS); FURTHER LIMITED TO 23.59 CFS FROM POD 1 AND 25.98 CFS FROM POD 2, IN ANY COMBINATION.

Water use under this Certificate, in combination with Certificates 83323 (2 cfs), 83325 (5 cfs), and 83976 (21 cfs) shall not exceed a total diversion of 56.57 cfs. POD 1 is limited to a combined maximum rate of diversion of 30.59 cfs; being 23.59 cfs from this Certificate, 2 cfs from Certificates 83323, 5 cfs from Certificate 83325, and 21 cfs from Certificate 83976, in any combination. POD 2 is limited to a combined maximum rate of diversion of 25.98 cfs; being 25.98 cfs from this Certificate, and 21cfs from Certificates 83976, in any combination.

CERTIFICATE NUMBER	TOTAL RATE	POD 1 RATE	POD 2 RATE
83323	2.0 CFS	2.0 CFS	NA
83325	5.0 CFS	5.0 CFS	NA
83976 ¹	21.0 CFS	21.0 CFS	21.0 CFS
93318	28.57 CFS	23.59 CFS	25.98 CFS
TOTAL RATE	56.57 CFS		
MAXIMUM RATE BY POD		30.59 CFS ²	25.98 CFS ³

¹ Certificate 83976 authorizes a maximum rate of diversion of 21.0 cfs from either POD 1 or POD 2, in any combination.

² This number reflects maximum rate that can be diverted from POD 1 under the certificates in this table until final perfection of Permit S-44388.

³ This number reflects the maximum rate that can be diverted from POD 2 under the certificates in this table until final perfection of Permit S-44388.

DATE OF PRIORITY: JULY 12, 1979

NOTICE OF RIGHT TO PETITION FOR RECONSIDERATION OR JUDICIAL REVIEW

This is an order in other than a contested case. This order is subject to judicial review under ORS 183.484 and ORS 536.075. Any petition for judicial review must be filed within the 60-day time period specified by ORS 183.484(2). Pursuant to ORS 183.484, ORS 536.075 and OAR 137-004-0080, you may petition for judicial review and petition the Director for reconsideration of this order. A petition for reconsideration may be granted or denied by the Director, and if no action is taken within 60 days following the date the petition was filed, the petition shall be deemed denied. In addition, under ORS 537.260 any person with an application, permit or water right certificate subsequent in priority may jointly or severally contest the issuance of the certificate within three months after issuance of the certificate.

Application S-58906.jls

Page 1 of 5

Certificate 93318

The points of diversion are located as follows:

Twp	Rng	Mer	Sec	Q-Q	Measured Distances
10 S	3 W	WM	24	SW NW	POD 2 - (ADDITIONAL) 2096 FEET SOUTH AND 693 FEET EAST FROM NW CORNER, SECTION 24
12 S	1 W	WM	19	NW NW	POD 1 (ORIGINAL) - 1430 FEET NORTH AND 1050 FEET EAST FROM W 1/4 CORNER, SECTION 19

A description of the place of use is as follows:

Twp	Rng	Mer	Sec	Q-Q
10 S	3 W	WM	28	SW NE
10 S	3 W	WM	28	SE NW
10 S	3 W	WM	28	NE SW
10 S	3 W	WM	28	SE SW
10 S	3 W	WM	28	NW SE
10 S	3 W	WM	28	SW SE
10 S	3 W	WM	31	NE NE
10 S	3 W	WM	31	NW NE
10 S	3 W	WM	31	SW NE
10 S	3 W	WM	31	SE NE
10 S	3 W	WM	31	NE NW
10 S	3 W	WM	31	NW NW
10 S	3 W	WM	31	SW NW
10 S	3 W	WM	31	SE NW
10 S	3 W	WM	31	NE SW
10 S	3 W	WM	31	NW SW
10 S	3 W	WM	31	SW SW
10 S	3 W	WM	31	SE SW
10 S	3 W	WM	31	NE SE
10 S	3 W	WM	31	NW SE
10 S	3 W	WM	31	SW SE
10 S	3 W	WM	31	SE SE
10 S	3 W	WM	32	NW NE
10 S	3 W	WM	32	SW NE
10 S	3 W	WM	32	SE NE
10 S	3 W	WM	32	NE NW
10 S	3 W	WM	32	NW NW
10 S	3 W	WM	32	SW NW
10 S	3 W	WM	32	SE NW
10 S	3 W	WM	32	NE SW
10 S	3 W	WM	32	NW SW
10 S	3 W	WM	32	SW SW
10 S	3 W	WM	32	SE SW
10 S	3 W	WM	32	NE SE
10 S	3 W	WM	32	NW SE
10 S	3 W	WM	32	SW SE
10 S	3 W	WM	32	SE SE
10 S	3 W	WM	33	NW NE
10 S	3 W	WM	33	SW NE
10 S	3 W	WM	33	NE NW
10 S	3 W	WM	33	SE NW
10 S	3 W	WM	33	NE SW
10 S	3 W	WM	33	SE SW

Twp	Rng	Mer	Sec	Q-Q
10 S	3 W	WM	33	NW SE
10 S	4 W	WM	25	NW NE
10 S	4 W	WM	25	SW NE
10 S	4 W	WM	25	SE NE
10 S	4 W	WM	25	NE NW
10 S	4 W	WM	25	NW NW
10 S	4 W	WM	25	SW NW
10 S	4 W	WM	25	SE NW
10 S	4 W	WM	25	NE SW
10 S	4 W	WM	25	NW SW
10 S	4 W	WM	25	SW SW
10 S	4 W	WM	25	SE SW
10 S	4 W	WM	25	NE SE
10 S	4 W	WM	25	NW SE
10 S	4 W	WM	25	SW SE
10 S	4 W	WM	25	SE SE
10 S	4 W	WM	26	NE NE
10 S	4 W	WM	26	NW NE
10 S	4 W	WM	26	SW NE
10 S	4 W	WM	26	SE NE
10 S	4 W	WM	26	NE NW
10 S	4 W	WM	26	NW NW
10 S	4 W	WM	26	SW NW
10 S	4 W	WM	26	SE NW
10 S	4 W	WM	26	NE SW
10 S	4 W	WM	26	NW SW
10 S	4 W	WM	26	SW SW
10 S	4 W	WM	26	SE SW
10 S	4 W	WM	26	NE SE
10 S	4 W	WM	26	NW SE
10 S	4 W	WM	26	SW SE
10 S	4 W	WM	26	SE SE
10 S	4 W	WM	35	NE NE
10 S	4 W	WM	35	NW NE
10 S	4 W	WM	35	SW NE
10 S	4 W	WM	35	SE NE
10 S	4 W	WM	35	NE NW
10 S	4 W	WM	35	NW NW
10 S	4 W	WM	35	SW NW
10 S	4 W	WM	35	SE NW
10 S	4 W	WM	35	NE SW
10 S	4 W	WM	35	NW SW
10 S	4 W	WM	35	SW SW

Twp	Rng	Mer	Sec	Q-Q
10 S	4 W	WM	35	SE SW
10 S	4 W	WM	35	NE SE
10 S	4 W	WM	35	NW SE
10 S	4 W	WM	35	SW SE
10 S	4 W	WM	35	SE SE
10 S	4 W	WM	36	NE NE
10 S	4 W	WM	36	NW NE
10 S	4 W	WM	36	SW NE
10 S	4 W	WM	36	SE NE
10 S	4 W	WM	36	NE NW
10 S	4 W	WM	36	NW NW
10 S	4 W	WM	36	SW NW
10 S	4 W	WM	36	SE NW
10 S	4 W	WM	36	NE SW
10 S	4 W	WM	36	NW SW
10 S	4 W	WM	36	SW SW
10 S	4 W	WM	36	SE SW
10 S	4 W	WM	36	NE SE
10 S	4 W	WM	36	NW SE
10 S	4 W	WM	36	SW SE
10 S	4 W	WM	36	SE SE
11 S	3 W	WM	3	SW NW
11 S	3 W	WM	3	NW SW
11 S	3 W	WM	3	SW SW
11 S	3 W	WM	4	SW NE
11 S	3 W	WM	4	SE NE
11 S	3 W	WM	4	NE NW
11 S	3 W	WM	4	NW NW
11 S	3 W	WM	4	SW NW
11 S	3 W	WM	4	SE NW
11 S	3 W	WM	4	NE SW
11 S	3 W	WM	4	NW SW
11 S	3 W	WM	4	SW SW
11 S	3 W	WM	4	SE SW
11 S	3 W	WM	4	NE SE
11 S	3 W	WM	4	NW SE
11 S	3 W	WM	4	SW SE
11 S	3 W	WM	4	SE SE
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11 S	3 W	WM	5	SE NW
11 S	3 W	WM	5	NE SW
11 S	3 W	WM	5	NW SW
11 S	3 W	WM	5	SW SW
11 S	3 W	WM	5	SE SW
11 S	3 W	WM	5	NE SE
11 S	3 W	WM	5	NW SE
11 S	3 W	WM	5	SW SE
11 S	3 W	WM	5	SE SE
11 S	3 W	WM	6	NE NE
11 S	3 W	WM	6	NW NE
11 S	3 W	WM	6	SW NE
11 S	3 W	WM	6	SE NE

Twp	Rng	Mer	Sec	Q-Q
11 S	3 W	WM	6	NE NW
11 S	3 W	WM	6	NW NW
11 S	3 W	WM	6	SW NW
11 S	3 W	WM	6	SE NW
11 S	3 W	WM	6	NE SW
11 S	3 W	WM	6	NW SW
11 S	3 W	WM	6	SW SW
11 S	3 W	WM	6	SE SW
11 S	3 W	WM	6	NE SE
11 S	3 W	WM	6	NW SE
11 S	3 W	WM	6	SW SE
11 S	3 W	WM	6	SE SE
11 S	3 W	WM	7	NE NE
11 S	3 W	WM	7	NW NE
11 S	3 W	WM	7	SW NE
11 S	3 W	WM	7	SE NE
11 S	3 W	WM	7	NE NW
11 S	3 W	WM	7	NW NW
11 S	3 W	WM	7	SW NW
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11 S	3 W	WM	8	SE NW
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11 S	3 W	WM	8	SE SW
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11 S	3 W	WM	8	NW SE
11 S	3 W	WM	8	SW SE
11 S	3 W	WM	8	SE SE
11 S	3 W	WM	9	NE NE
11 S	3 W	WM	9	NW NE
11 S	3 W	WM	9	SW NE
11 S	3 W	WM	9	SE NE
11 S	3 W	WM	9	NE NW
11 S	3 W	WM	9	NW NW
11 S	3 W	WM	9	SW NW
11 S	3 W	WM	9	SE NW

Twp	Rng	Mer	Sec	Q-Q
11 S	3 W	WM	9	NE SW
11 S	3 W	WM	9	NW SW
11 S	3 W	WM	9	SW SW
11 S	3 W	WM	9	SE SW
11 S	3 W	WM	9	NW SE
11 S	3 W	WM	9	SW SE
11 S	3 W	WM	10	NW NW
11 S	3 W	WM	10	SW NW
11 S	3 W	WM	16	NW NW
11 S	3 W	WM	16	SW NW
11 S	3 W	WM	16	NW SW
11 S	3 W	WM	16	SW SW
11 S	3 W	WM	17	NE NE
11 S	3 W	WM	17	NW NE
11 S	3 W	WM	17	SW NE
11 S	3 W	WM	17	SE NE
11 S	3 W	WM	17	NE NW
11 S	3 W	WM	17	NW NW
11 S	3 W	WM	17	SW NW
11 S	3 W	WM	17	SE NW
11 S	3 W	WM	17	NE SW
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11 S	3 W	WM	17	SE SW
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11 S	3 W	WM	18	SE SW
11 S	3 W	WM	18	NE SE
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11 S	3 W	WM	19	NE NE
11 S	3 W	WM	19	NW NE
11 S	3 W	WM	19	NW SW
11 S	3 W	WM	20	NE NE
11 S	3 W	WM	20	NW NE
11 S	3 W	WM	20	SW NE
11 S	3 W	WM	20	SE NE
11 S	3 W	WM	20	NE NW

Twp	Rng	Mer	Sec	Q-Q
11 S	3 W	WM	20	NW NW
11 S	3 W	WM	20	NE SE
11 S	3 W	WM	20	NW SE
11 S	3 W	WM	21	NW NW
11 S	3 W	WM	21	SW NW
11 S	3 W	WM	21	NW SW
11 S	4 W	WM	1	NE NE
11 S	4 W	WM	1	NW NE
11 S	4 W	WM	1	SW NE
11 S	4 W	WM	1	SE NE
11 S	4 W	WM	1	NE NW
11 S	4 W	WM	1	NW NW
11 S	4 W	WM	1	SW NW
11 S	4 W	WM	1	SE NW
11 S	4 W	WM	1	NE SW
11 S	4 W	WM	1	NW SW
11 S	4 W	WM	1	NE SE
11 S	4 W	WM	1	NW SE
11 S	4 W	WM	1	SE SE
11 S	4 W	WM	2	NE NE
11 S	4 W	WM	2	NW NE
11 S	4 W	WM	2	SW NE
11 S	4 W	WM	2	SE NE
11 S	4 W	WM	2	NE NW
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11 S	4 W	WM	2	SW NW
11 S	4 W	WM	2	SE NW
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11 S	4 W	WM	2	NW SW
11 S	4 W	WM	2	NE SE
11 S	4 W	WM	2	NW SE
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11 S	4 W	WM	12	NW NE
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11 S	4 W	WM	12	NW SW
11 S	4 W	WM	12	SW SW
11 S	4 W	WM	12	SE SW
11 S	4 W	WM	12	NE SE
11 S	4 W	WM	12	NW SE
11 S	4 W	WM	12	SW SE
11 S	4 W	WM	12	SE SE
11 S	4 W	WM	13	NE NE
11 S	4 W	WM	13	NW NE
11 S	4 W	WM	13	SW NE
11 S	4 W	WM	13	SE NE
11 S	4 W	WM	13	NE NW
11 S	4 W	WM	13	SE NW
11 S	4 W	WM	13	NE SW
11 S	4 W	WM	13	NE SE

Twp	Rng	Mer	Sec	Q-Q
11 S	4 W	WM	13	NW SE
11 S	4W	WM	13	SW SE
11 S	4 W	WM	13	SE SE
11 S	4 W	WM	24	NE NE
11 S	4 W	WM	24	NW NE
11 S	4 W	WM	24	SW NE
11 S	4 W	WM	24	SE NE
11 S	4 W	WM	24	NE SW
11 S	4 W	WM	24	SE SW
11 S	4 W	WM	24	NE SE

Twp	Rng	Mer	Sec	Q-Q
11 S	4 W	WM	24	NW SE
11 S	4 W	WM	24	SW SE
11 S	4 W	WM	24	SE SE
11 S	4 W	WM	25	NE NE
11 S	4 W	WM	25	NW NE
11 S	4 W	WM	25	SW NE
11 S	4 W	WM	25	SE NE
11 S	4 W	WM	25	NE NW
11 S	4 W	WM	25	NE SE
11 S	4 W	WM	25	NW SE

The combined quantity of water diverted at the new point of diversion, together with that diverted at the old point of diversion, shall not exceed the quantity of water lawfully available at the original point of diversion.

When required by the department, the water user shall install and maintain a headgate, an in-line flow meter, weir or other suitable device for measuring and recording the quantity of water diverted. The type and plans of the headgate and measuring device must be approved by the Department prior to beginning of construction and shall be installed under the general supervision of the Department.

Water shall be acquired from the same surface water source as the original point of diversion.

The right to the use of the water for the above purpose is restricted to beneficial use on the lands or place of use described; however, water may be applied to lands which are not specifically described above, provided the holder of this right complies with ORS 540.510(3).

This certificate is issued for a partial perfection of Permit S-44388 as described in OAR-690-320-0040 and by an order of the Water Resources Director entered August 8, 2017, at Volume 105, Page 304.

This certificate is issued to correct a scrivener's error in the table on page one, and supersedes Certificate 93313.

Issued AUG 31 2017


Dwight French
Water Right Services Division Administrator, for
Thomas M. Byler, Director
Oregon Water Resources Department

4. The amount of water which the applicant intends to apply to beneficial use is 29 cfs
cubic feet per second.....
(If water is to be used from more than one source, give quantity from each)

5. The use to which the water is to be applied is for municipal use

6. *DESCRIPTION OF WORKS*

Include dimensions and type of construction of diversion dam and headgate, length and dimensions of supply ditch or pipeline, size and type of pump and motor, type of irrigation system to adequately describe the proposed distribution system.

Albany-Santiam Canal - Top width 35 feet; bottom width 25 feet; depth 5 feet;
Grade or fall per 1000 feet is 1.4 feet

If for domestic use state number of families to be supplied

7. Construction work will begin on or before has begun

8. Construction work will be completed on or before 2000

9. The water will be completely applied to the proposed use on or before 2000

Application No. 58906

Permit No. 44388

Remarks:.....This is project use of water to meet growth of the
.....City of Albany to the year 2000 A.D.

PACIFIC POWER & LIGHT COMPANY

[Signature]
Signature of Applicant
Vice President

This is to certify that I have examined the foregoing application, together with the accompanying maps
and data, and return the same for.....

In order to retain its priority, this application must be returned to the Water Resources Director with
corrections on or before, 19.....

WITNESS my hand this day of, 19.....
..... Water Resources Director

By

This instrument was first received in the office of the Water Resources Director at Salem, Oregon, on the
.....*12th* day of*July*....., 19.....*79*....., at *11:02* o'clock
.....*A.*.....M.

Application No.*58900*..... Permit No.*44388*.....

Application No. 58906

Permit No. 44388

Permit to Appropriate the Public Waters of the State of Oregon

This is to certify that I have examined the foregoing application and do hereby grant the same SUBJECT TO EXISTING RIGHTS INCLUDING THE EXISTING FLOW POLICIES ESTABLISHED BY THE WATER POLICY REVIEW BOARD and the following limitations and conditions:

The right herein granted is limited to the amount of water which can be applied to beneficial use and shall not exceed 29.0 cubic feet per second measured at the point of diversion from the stream, or its equivalent in case of rotation with other water users, from South Santiam River

The use to which this water is to be applied is municipal

If for irrigation, this appropriation shall be limited to of one cubic foot per second or its equivalent for each acre irrigated.

and shall be subject to such reasonable rotation system as may be ordered by the proper state officer.

The priority date of this permit is July 12, 1979

Actual construction work shall begin on or before September 27, 1980 and shall thereafter be prosecuted with reasonable diligence and be completed on or before October 1, 1981

Complete application of the water to the proposed use shall be made on or before October 1, 1982

WITNESS my hand this 27th day of September, 1979

James E. Seim Water Resources Director

ATTACHMENT TO APPLICATION FOR PERMIT TO
 APPROPRIATE SURFACE WATER
 NO. 3

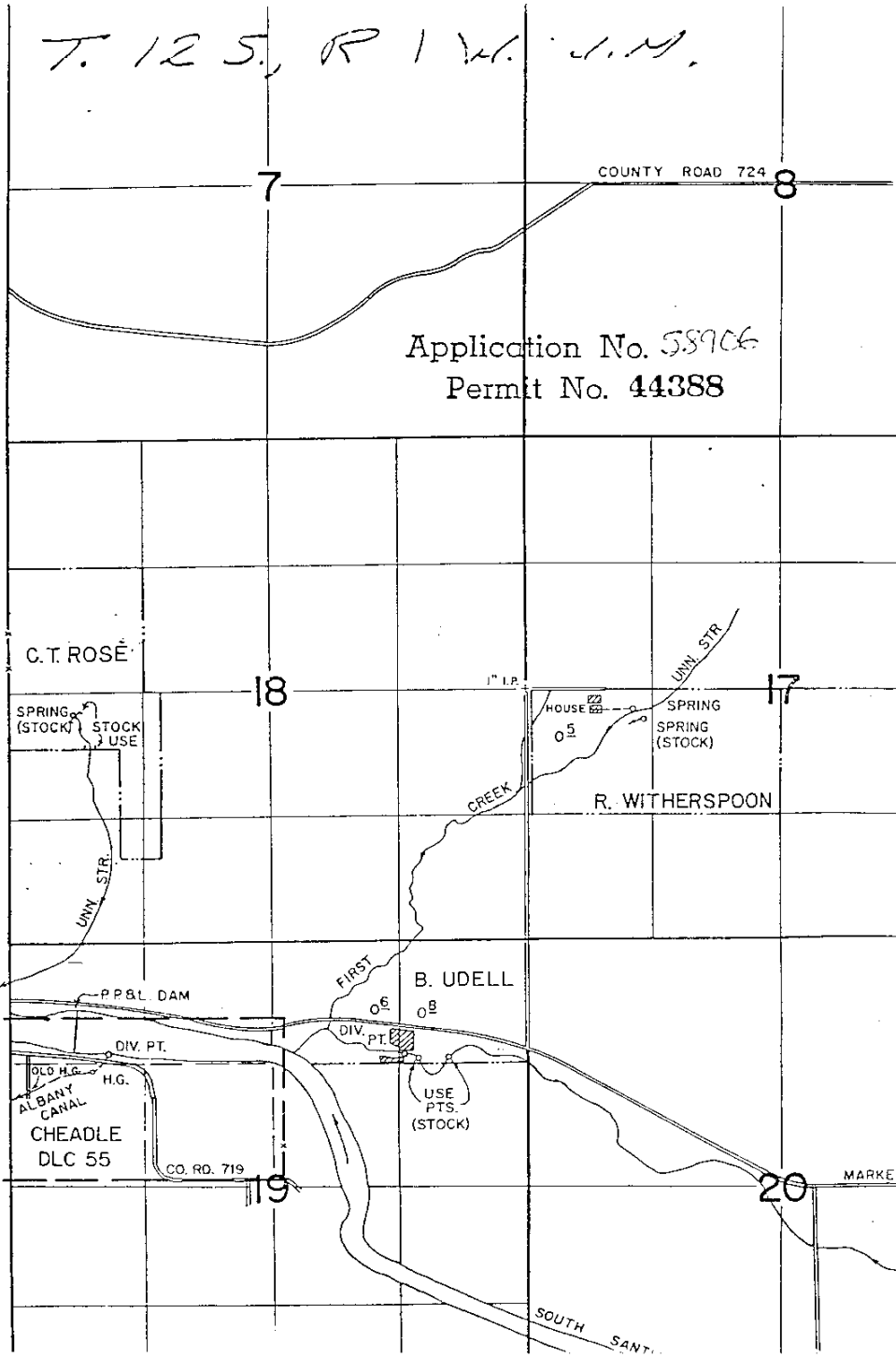
Application No. 58906
 Permit No. 44388

WATER

TWP	RANGE	SEC.	NE $\frac{1}{4}$				NW $\frac{1}{4}$				SW $\frac{1}{4}$				SE $\frac{1}{4}$				
			NE $\frac{1}{4}$	NW $\frac{1}{4}$	SW $\frac{1}{4}$	SE $\frac{1}{4}$	NE $\frac{1}{4}$	NW $\frac{1}{4}$	SW $\frac{1}{4}$	SE $\frac{1}{4}$	NE $\frac{1}{4}$	NW $\frac{1}{4}$	SW $\frac{1}{4}$	SE $\frac{1}{4}$	NE $\frac{1}{4}$	NW $\frac{1}{4}$	SW $\frac{1}{4}$	SE $\frac{1}{4}$	
10S	3W	28			X					X	X			X		X	X		
		31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
		32		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		33		X	X		X			X	X			X		X			
10S	4W	25		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
		26	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
		35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
		36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
11S	4W	1	X	X	X	X	X	X	X	X	X	X			X	X		X	
		2	X	X	X	X	X	X	X	X	X	X			X	X			
		12	X	X	X	X				X	X	X	X	X	X	X	X	X	X
		13	X	X	X	X	X				X	X				X	X	X	X
		24	X	X	X	X					X				X	X	X	X	X
		25	X	X	X	X	X									X	X		
11S	3W	3							X			X	X						
		4			X	X	X	X	X	X	X	X	X	X	X	X	X	X	
		5			X					X	X	X	X	X	X	X	X	X	
		6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
		7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
		8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
		9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
		10						X	X							X	X		
		16						X	X			X	X						
		17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
		18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
19	X	X								X									
20	X	X	X	X	X	X								X	X				
21						X	X			X									

PD-23-OR-11 (Albany)

T. 12 S., R. 1 W., S. 1. N.



Application No. 58906
Permit No. 44388

C.T. ROSE

SPRING (STOCK)
STOCK USE

UNNY STR.

1st L.P.

HOUSE 05

UNNY STR.

SPRING (STOCK)

R. WITHERSPOON

FIRST

B. UDELL

P.P. & L. DAM

DIV. PT.

DIV. PT.

OLD H.G.
ALBANY CANAL

H.G.
CHEADLE
DLC 55

USE PTS. (STOCK)

CO. RD. 719

MARKET

SOUTH SANT...

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APPENDIX C

**DUMBECK LANE DOMESTIC
WATER SUPPLY DISTRICT
AGREEMENT**

WHOLESALE DOMESTIC WATER SALES AGREEMENT

THIS AGREEMENT is made and entered in this 10 day of Dec 2014, by and between the CITY of ALBANY, a Municipal Corporation, hereinafter referred to as "Albany," and the Dumbeck Lane Domestic Water Supply District, a Special District, hereinafter referred to as "Dumbeck."

The purpose of this agreement is to terminate the previous agreement titled "WHOLESALE DOMESTIC WATER SALES AGREEMENT" executed on September 1, 2006, and "Amendment No.1" executed on December 18, 2009, between the City of Albany and the Dumbeck Water District whereby the City of Albany contracted to sell domestic water to Dumbeck. This agreement redefines the provisions for Albany to sell domestic water to Dumbeck, as specifically provided in this agreement.

WITNESSETH:

WHEREAS, Dumbeck owns a water distribution system and performs certain operational and maintenance activities on their own water distribution system; and

WHEREAS, Dumbeck has a separate contract with Albany for specific maintenance functions to be routinely performed by Albany personnel on Dumbeck's water distribution system; and

WHEREAS, Albany provides potable water to the 8-inch meter near Scenic Drive and Valley View Drive that serves the Dumbeck water distribution system; and

WHEREAS, Dumbeck constructed a 12-inch water distribution main (an inter-tie from the Albany main on Scenic Drive and the existing Dumbeck main on Independence Highway) in 2007 and Albany participated in the upsizing of the line that provides for a potential emergency inter-tie to the City of Adair Village, Oregon, water system; and

WHEREAS, Dumbeck began water service from Albany in August 2007 and desires to continue to purchase water service from Albany; and

WHEREAS, Albany charges its customers a base charge and a consumption rate, but agrees to only charge Dumbeck a consumption charge for water delivered to the 8-inch water meter.

NOW, THEREFORE, it is agreed between the parties as follows:

1. Water Distribution System Maintenance and Operational Standards: Dumbeck and Albany agree to comply with the terms of the most recent WATER DISTRIBUTION SYSTEM MAINTENANCE SERVICES AGREEMENT.
2. Limitation on Dumbeck's Right to Utilize Albany Water: Dumbeck may utilize Albany water pursuant to the terms of this agreement only to serve a maximum of 132 residential connections. A "residential connection" is defined as a meter not exceeding one-inch that serves only one single-family dwelling unit and is located within Dumbeck's geographic boundaries as shown on Exhibit A and Exhibit A-1.
3. Water Quality: Albany agrees to provide potable water that is of like pressure and quality as that generally provided to Albany customers adjacent to Dumbeck. In the event of a temporary non-compliance, Albany will comply with all regulatory direction to restore its system to compliance. Albany makes no representations concerning the suitability of Albany's potable water for the Dumbeck system or any customer thereof.
4. Indemnification: Dumbeck agrees to indemnify and hold Albany harmless from any governmental or third party claims resulting in any manner from the provision of Albany water to

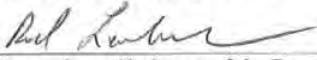
Dumbeck customers consistent with the terms of this agreement. This indemnification clause does not preclude Dumbeck from pursuing breach of contract claims against Albany concerning the provision of Albany water to Dumbeck.

5. Albany's Right to Interrupt Water Service: Notwithstanding any other provision in this agreement, Albany shall have the right to interrupt, terminate, or reduce water deliveries to Dumbeck in the event of any of the following contingencies, as determined by Albany in the exercise of reasonable discretion:
 - A. In keeping with a general water service reduction adopted by Albany to address general or localized water shortages.
 - B. If Dumbeck, through improper system design, construction, operation, or maintenance is using so large an amount of water or creates a water quality problem as to negatively impact Albany's other water customers.
 - C. As necessary to meet any curtailment or conservation measure imposed upon Albany by any other unit of government or as adopted for general application by Albany.
6. Water Rates
 - A. Dumbeck will pay quarterly for water delivered to Dumbeck's 8-inch water meter that Albany owns, installed, and maintains for billing purposes.
 - B. The water rate charged will be the wholesale rate specified for Dumbeck in Albany's current RESOLUTION SETTING RATES FOR WATER USE and will be adjusted up or down by the percentage specified by Albany City Council.
 - C. It is presently intended that Albany will not require a fixed monthly charge component in the rate similar to what is charged to Albany customers. This statement of intention, however, does not limit the discretion of Albany and its elected officials to charge such rates as they deem appropriate and as may be agreed to between the parties.
 - D. Dumbeck agrees to pay all quarterly billing within 30 business days of receipt. Any late payment shall bear interest at nine (9) percent per annum.
 - E. Adjustments for Fire Flow Water: Dumbeck will not be charged for water used to fight fires by the Albany Fire Department in execution of their contract duties with the North Albany Rural Fire District or the Palestine Rural Fire District or in their duties to protect the citizens of Albany. The adjustment will be based upon the best meter information available to estimate the usage from the Dumbeck system without the fire flow.
7. Additional Charge for Connection: Dumbeck will also pay a total of \$120,141.60 over a course of ten (10) years in equal monthly payments of \$1,001.18 for 120 months beginning in August 2007. The purpose of this payment is for the System Development Charge of \$105,367 for an 8-inch meter and \$14,775 towards Albany's remaining debt for the purchase of the water system. There is no penalty for prepayment.
8. Term: This agreement begins upon execution and will be in force for a ten (10) year period unless amended or cancelled by either party. Either party may cancel this agreement upon 24 months written notice to the other.

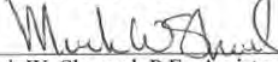
IN WITNESS WHEREOF, the parties have caused this document to be executed pursuant to the authority of the Albany City Council by the Public Works Director of Albany and the Board of Directors of the Dumbeck Lane Water District.

DATED this 10 day of Dec 2014.

DUMBECK LANE WATER DISTRICT:


Rod Laverdure, Chairman of the Board


CITY OF ALBANY:


Mark W. Shepard, P.E., Assistant City Manager,
Public Works and Community Development
Director



ATTEST:


John Simpkins, III, Vice-Chairman of the Board

ATTEST:


Mary Dibble, Albany City Clerk

APPROVED AS TO FORM:


Alexandra Sosnkowski, Attorney

Ruben Cleveland

APPROVED AS TO FORM:

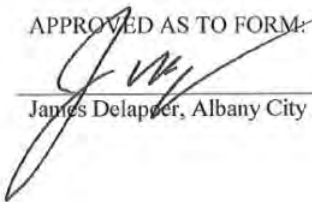
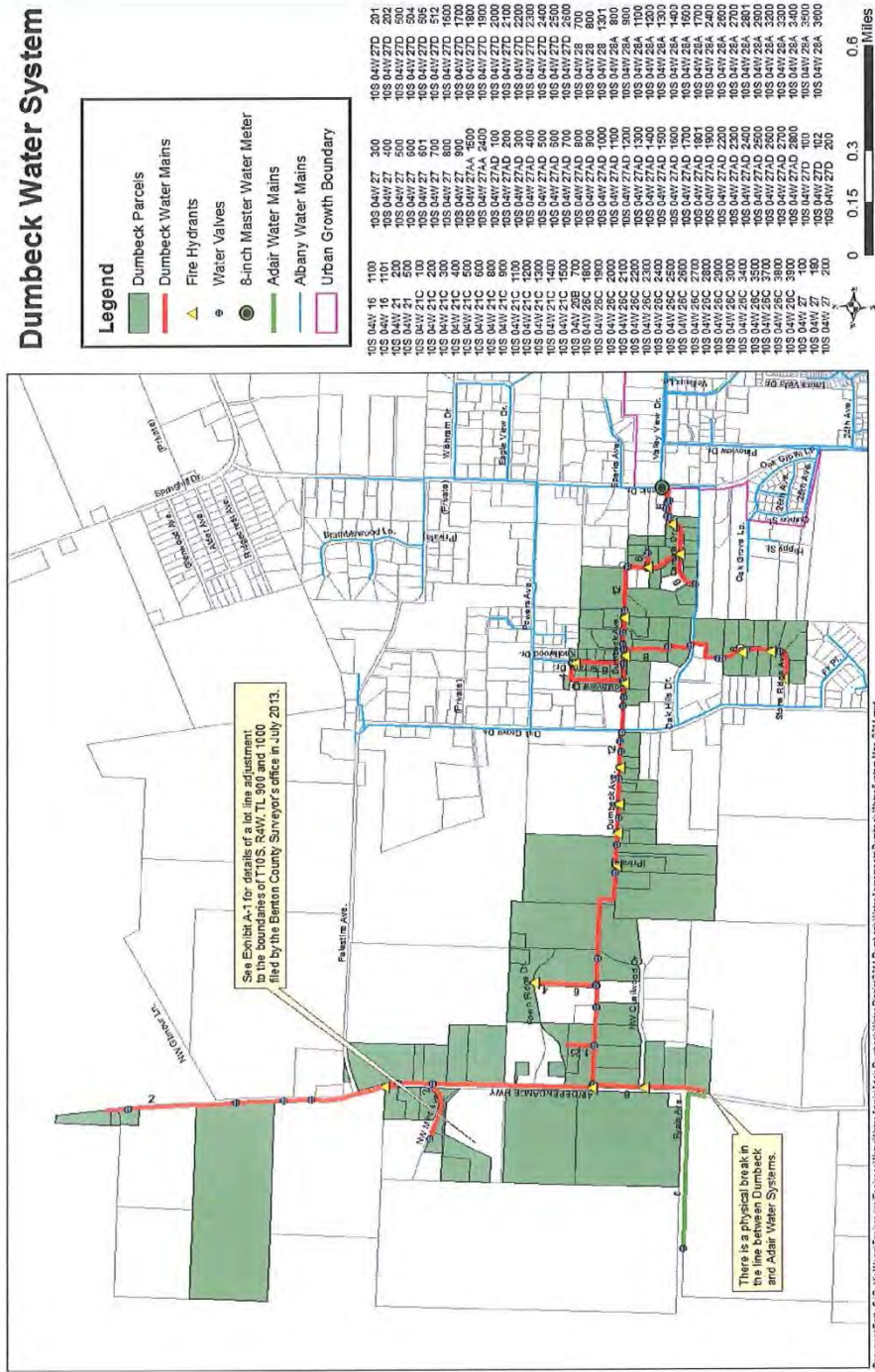

James Delapoe, Albany City Attorney

Exhibit A



APPENDIX D

NORTH ALBANY COUNTY

SERVICE DISTRICT SERVICE

AGREEMENT



OFFICE OF COUNTY COUNSEL

180 NW 5th Street
Corvallis, OR 97330-4777

(503) 757-6890

MEMORANDUM

DATE: June 19, 1990

TO: North Albany County Service District (NACSD) Advisory Committee
FROM: Jeffrey G. Condit, County Counsel *JGC*
RE: Advisory Committee role following transfer of operations to the City of Albany

On May 23, 1990, the Board of Commissioners, acting as the Governing Body of the North Albany County Service District, and the City of Albany adopted the intergovernmental agreement to transfer operation and maintenance of the District to the City (copy attached) effective July 1, 1990. By this agreement, adopted pursuant to ORS Chapter 190, the District is essentially "hiring" the City of Albany to operate and maintain the District's facilities. The District will continue to exist, however, and the Governing Body will continue to be responsible for legislative matters and levying taxes. The Board asked me to outline the NACSD Advisory Committee's role following the transition.

As you recommended, the Advisory Committee will remain in place to advise both the City and the District as needed [Clause II(5)]. The contract specifically provides that the capital improvement plan (CIP) and proposed budget will be submitted annually for your review and recommendation. The only part of the budget that the Advisory Committee and the District Budget Committee will review, however, is that portion of the operation retained by the District: Levy of taxes for debt service on the water bond and such incidental administrative expenses as the District continues to incur.

The reason for this limitation is that ORS Chapter 294 (the Local Budget Law) dictates the budget process for local governments, and requires budget decisions for the City of Albany to be made by the City Budget Committee, which consists of the City Council and an equal number of City citizens. The City could not contract this requirement away. The City has agreed, however, to provide the District Advisory Committee with its proposed North Albany budget until the new sewer system is in the ground and District assets have been transferred to the City. When this

happens, the City intends to fold the North Albany budget into the general City public works budget [except for the capital improvement fund, which will remain a separate fund dedicated to North Albany - see Clause 1 (a)(C)]. Nothing prevents the Advisory Committee from participating in the City Budget process, however.

Because the Board of Commissioners retains legislative authority as the Governing Body, the current District ordinances continue in effect. Any proposed amendments will continue to be sent to the Advisory Committee for your review and recommendation.

In general, most of rest of the Advisory Committee recommendations contained in your Memorandum of March 19, 1990, which we discussed at your March 27, 1990, meeting, have been incorporated into the agreement. We did not incorporate the current CIP into the agreement as you recommended because we did not want cast it in stone in case other needs arise. However, we did provide that a portion of the rate and all of the connection fee be placed into a CIP fund dedicated to projects in North Albany (See Clause III). As noted above, the agreement also requires that any changes to the CIP be reviewed by the Advisory Committee.

The Governing Body will continue to set water rates pursuant to the District Water Operations ordinance. We have, however, agreed to link future rates to rates within the City of Albany: Rates will now rise or drop at the same percentage as rates within the City [Clause III(1)(b)]. This actually gives the District more control over North Albany rates, because the City currently has the unilateral authority to raise wholesale water rates under the agreement assumed from PP&L.

We did not provide in the agreement that individual pressure regulators must be installed and repaired, because such is required by the Service District Ordinance.

Finally, the agreement requires that the City must provide, at a minimum, the same level of service after City takeover (subject, of course, to events beyond its control). See Clause II(3).

If you have any further questions, please feel free to call.

JGC:lm

cc - Board of Commissioners
City of Albany

**ALBANY/NACSD SEWER AND WATER MAINTENANCE
TRANSITION PLAN AND MANAGEMENT AGREEMENT**

THIS AGREEMENT is entered into this 23rd day of May, 1990 pursuant to ORS Chapter 190. The Agreement is between the CITY OF ALBANY, an Oregon Municipal Corporation ("City"), and the NORTH ALBANY COUNTY SERVICE DISTRICT ("District"), a county service district created pursuant to ORS Chapter 451 to provide sewer and water service to the North Albany area.

RECITALS

WHEREAS, on May 16, 1989, the Oregon State Health Division adopted Findings of Fact pursuant ORS 222.840 to 222.915 declaring a health hazard to exist in certain portions of North Albany; and

WHEREAS, on November 13, 1989, the District Governing Body, with the support of the City Council, submitted an alternative plan to health hazard annexation pursuant to ORS 222.885; and

WHEREAS, on January 19, 1990, the Oregon State Environmental Quality Commission (EQC) granted preliminary approval to the alternative plan; and

WHEREAS, the alternative plan requires transfer of water and sewer facilities to the City and provision of such services by the City; and

WHEREAS, Comprehensive Plan Policies have been adopted requiring that Albany be the provider of water and sewer services within the Urban Growth Boundary, and requiring eventual annexation of the area to the City of Albany,

THEREFORE, THE CITY AND THE DISTRICT AGREE:

I. PURPOSE.

It is the policy of the parties that the City is the logical and appropriate provider of sewer and water services within the North Albany area, and that assumption by the City of such service will provide superior long term service and will encourage the eventual annexation of the Urban Growth Boundary to the City pursuant to the requirements of the City and Benton County Comprehensive Plans. To further this purpose, it is agreed that the City shall be the sole supplier of water and sewer services for the North Albany Urban Growth Boundary, and to areas outside the boundary currently receiving water service from the district. It is the further intent of the parties to transfer sewer and water facilities and operations currently owned and provided by the District to the City in order to implement the Alternative Plan to Health Hazard Annexation. The District shall remain as the taxing and legislative authority for the area within the current boundaries until such time as the parties agree that

dissolution of the District is in the best interest of the citizens or the City chooses to withdraw annexed territory pursuant to state law.

II. TRANSFER OF OPERATIONS.

1. On July 1, 1990, the City shall assume administration, operation and maintenance of the water and sewer systems in North Albany from the District. The City shall assume all rights and responsibilities save those expressly reserved to the District by this agreement. This transfer includes delegation of authority to form local improvement districts and levy special assessments for the purpose of constructing sewer and water facilities.
2. On July 1, 1990, the District shall transfer to the City all funds currently contained in North Albany County Service District accounts, excluding the water bond debt service fund which will continue to be maintained and serviced by the District. The City may expend revenues from time to time to cover the costs of providing the services under this agreement. The District may bill the City and the City shall reimburse the District for the reasonable cost of its remaining administrative duties including insurance, legal costs, changes of District organization, audit costs, etc. Both the City and the District shall be allowed to inspect the records and accounts of the other for the purposes of compiling and completing the Comprehensive Annual Financial Report required by state law.
3. The City shall provide, at a minimum, the water services provided by the District on June 30, 1990. The City agrees to provide water service to all of the current water services customers of the District, including to current customers located outside of the District and outside of the Urban Growth Boundary. However, nothing in this agreement shall be construed to prevent the City from limiting water service when necessary or prudent to manage the water system or water resource (e.g. where rationing is required, where repairs require interruption of service, where a natural disaster affects service, etc.).
4. The District employes providing operation, maintenance, and billing service on June 30, 1990, shall be transferred to the City on July 1, 1990, pursuant to ORS 236.610 to 236.650. Because of the economies of scale, the City and the District recognize that the City will not require the same number or types of employes as the District. The District shall furnish the employment records of the transferred employes to the City at the time of transfer.
5. The North Albany County Service District Advisory Committee (NACSD AC) shall be retained to advise the City and the District. The District Capital Improvement Plan (CIP) and the proposed budget shall be submitted to the NACSD AC each

year for its review and recommendation. In addition, three members from the NACSD AC shall be selected by the District Governing Body to serve on the District Budget Committee appointed pursuant to local budget law.

III. WATER AND SEWER RATES

1. Water Rates: (a) The District agrees to raise its water rates prior to transfer to reflect reasonable costs of operations and systems development. The rates shall be increased as follows:

(A) The base rate for all customers shall be increased by \$2.50 per month, effective July 1, 1990.

(B) The rate for water usage over the minimum 12,000 gallons per month shall be increased to \$.95 per thousand gallons, effective October 1, 1990.

(C) A capital improvement fee of \$5.00 per month shall be charged to each District customer, effective July 1, 1990. Revenue raised by this fee shall be placed by the City into a North Albany Capital Improvement Fund, dedicated to use for capital improvements to the District water system. The base connection fee assessed pursuant to the District Water Operations Ordinance shall also be placed in the North Albany Capital improvement fund.

(b) The City shall continue to charge these rates at time of transfer. Thereafter, changes of the rates provided in subsections (a)(A) and (a)(B) shall be linked to water rate changes enacted by the City for customers within the City limits: The District shall increase or decrease the water rates in subsections (a)(A) and (a)(B) of this section so that annual District revenue from these rates will be increased or decreased by the same percentage as annual City water rate revenue is increased or decreased by water rate changes within the City limits. The City shall provide the District with twenty days notice and opportunity to comment before changing water rates.

(c) Upon annexation to the City of territory currently served by the District, customers in the annexed territory will be charged the same water rates paid by customers located within the City limits.

(d) Pursuant to the District Water Operations Ordinance, customers located outside of the boundaries of the District are charged an additional monthly fee and an additional connection fee assessment in lieu of bond tax payments. The City shall remit revenues raised from these fees to the District, which shall credit such funds to the water bond debt service fund.

2. Sewer rates: Sewer rates will remain the same as they exist on July 1, 1990, until such time as the new North Albany sewer system is constructed pursuant to the alternative plan and begins service. At such time, new sewer rates will be established by mutual agreement.

IV. TRANSFER OF DISTRICT PROPERTY

1. Personal property owned by the District used for the operation and maintenance of the District water and sewer facilities shall be transferred to the City on July 1, 1990.
2. The District shall convey its real property, including all easements and improvements, to the City within six months of the date assessments are levied against benefitted property in North Albany for the construction of the sewer system to alleviate the health hazard. The City and the District recognize that transfer of the water facilities is subject to review and approval by the Farmers Home Administration (FmHA), which issued the installment water bond by which the District acquired the water facilities. The City and the District further recognized that transfer of sewer facilities may also be subject to conditions in the bonding agreement.

V. TERM; AMENDMENT

1. This agreement shall continue until terminated pursuant to subsection (2) of this section, and may only be amended in writing by mutual consent of the parties.
2. As stated above, this agreement is intended to implement the alternative plan to health hazard annexation submitted by the District and the City of Albany on November 13, 1989. If the EQC certifies approval of the alternative plan pursuant to ORS 222.898 (2), then this agreement may only be terminated upon mutual consent of the parties. If the EQC disapproves the alternative plan and terminates proceedings pursuant to ORS 222.898 (4), or if the EQC's approval is reversed or remanded by a court of competent jurisdiction, then this agreement may be terminated by either party with six months written notice to the other. If the agreement is terminated, any and all District assets transferred to the City pursuant to Section IV(2) shall be transferred back to the District, and any and all District Assets transferred to the City pursuant to Section IV(1) that have not been expended or which retain value shall be transferred back to the District.
3. Termination for Breach: (a) In the event that the District fails to discharge any obligation of this agreement, the City may terminate this agreement and discontinue all water service and other obligations incurred herein. Exercise of this remedy by the City shall not require the return of any real or personal property transferred to the City by the District pursuant to Section IV of this agreement. This

remedy is cumulative and in addition to all other remedies available at law or equity.

(b) In the event that the City fails to discharge any obligation of this agreement, the District may terminate this agreement, and any and all District assets transferred to the City pursuant to Section IV(2) shall be transferred back to the District, and any and all District Assets transferred to the City pursuant to Section IV(1) that have not been expended or which retain value shall be transferred back to the District.

VI. MEDIATION

It is the intent of the parties that this agreement will be carried out in good faith and with mutual cooperation. To accomplish this purpose, the parties agree to submit any dispute under this agreement which the parties are unable to resolve to mediation before seeking termination for breach pursuant to Section V(3) or pursuing other legal action to enforce the terms and conditions of this agreement. The mediator shall be selected and shall conduct the mediation pursuant to the rules and regulations of the Oregon State Mediation and Conciliation Service.

VII. NON-SEVERABILITY


Should it be determined by any court of competent jurisdiction that any portion of this agreement is void as a matter of law, and if such determination prevents any party from discharging its obligations under this agreement, this agreement may be terminated for breach at the option of the party not in breach.

THIS AGREEMENT SHALL BE EFFECTIVE ON JULY 1, 1990.

CITY OF ALBANY



Mayor



City Manager

NORTH ALBANY
COUNTY SERVICE DISTRICT



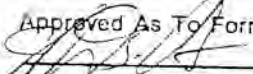
Chairman



Commissioner



Commissioner

Approved As To Form:


Office of County Counsel

CC 1023/HD

Page 5 of 5

RESOLUTION NO. 3363

WHEREAS, the City of Albany has assumed responsibility for the operation of the water system in North Albany formerly operated by the North Albany County Service District; and

WHEREAS, the water system in North Albany includes water mains outside the Albany city limits; and

WHEREAS, a connection policy is required to address requests for water service outside the city limits.

NOW, THEREFORE, BE IT RESOLVED that the connection policy outside the Albany city limits in the North Albany area shall be as follows:

1. No waterline extensions shall be allowed outside the Albany city limits.
2. Service shall be provided only to parcels immediately adjacent to existing waterlines, as the parcel existed on July 1, 1991.
3. One 3/4-inch water meter connection may be allowed for each unserved property adjacent to an existing waterline, as the parcel existed on July 1, 1991.
4. In the event of the partitioning of land, additional 3/4-inch meter connections may be allowed provided the applicant is able to present multiple unused water shares that were not extinguished, invalidated, or acquired by the North Albany County Service District, from one of the non-profit corporate entities that predated the North Albany County Service District. The water shares must be for property that is owned or was formerly owned by the original grantee of the share and which was owned by the applicant on November 17, 1993. Multiple shares are required for connections in excess of that allowed without water shares. For example, two shares are required for one additional connection, and three shares are required for two additional connections. No new parcel, for which a water connection is granted pursuant to this policy, shall be eligible for additional connections upon subsequent partitioning or subdividing.
5. A connection may be made only if the City is satisfied the requested connection, by itself or cumulatively with others, will not degrade water service to any existing water customer, either inside or outside the city limits, or to any future water customer inside the city limits, below minimum standards necessary for domestic and fire safety purposes.

DATED this 25th day of May 1994.



Attest:


Mayor


Deputy City Recorder

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APPENDIX E

**JOINTLY-OWNED
WATER FACILITIES
INTERGOVERNMENTAL
AGREEMENT**

**ALBANY AND MILLERSBURG INTERGOVERNMENTAL AGREEMENT
FOR JOINTLY-OWNED WATER FACILITIES**

THIS AGREEMENT is made and entered into this 16 day of MAY 2016 by and between the City of Albany, a municipal corporation of the State of Oregon (Albany) and the City of Millersburg, a municipal corporation of the State of Oregon (Millersburg). The respective Council or designated representative of each City is referred to as “party” or “parties” in this Agreement. This Agreement defines the operation, maintenance, and cost sharing of the jointly-owned Water Facilities.

WITNESSETH:

WHEREAS, Albany and Millersburg jointly-own water facilities, including the raw water intake, pump station and pressure main, the Albany-Millersburg Water Treatment Plant (A-M Plant), the finished water reservoir, and the finished water pipeline up to but not including the Millersburg water meter. These jointly-owned water facilities are shown in Exhibit A and collectively referred to in this document as the A-M Water Facilities; and

WHEREAS, Albany employs the operator designated as the “Direct Responsible Charge” (DRC), in conformance with OAR 333-061-0225, to supervise the A-M Water Facilities up to the point of delivery to the Millersburg public water system; and

WHEREAS, Millersburg’s public water system begins downstream of a 12-inch water meter near the intersection of Century Drive NE and Berry Drive NE that Albany owns, installed, and maintains; and

WHEREAS, Albany and Millersburg’s combined water rights and permits equal their projected combined maximum day demands at build-out and the communities’ net water requirement at build-out from the A-M Water Facilities is 26 million gallons per day (mgd); and

WHEREAS, in an emergency or during water curtailment, when the A-M Water Facilities are not fully functional, the Vine Street Water Treatment Plant (Vine WTP) can deliver potable water to Millersburg’s public distribution system through the emergency intertie located at 3246 Salem Avenue NE and shown in Exhibit B.

NOW, THEREFORE, BE IT RESOLVED that the “Intergovernmental Agreement” to operate and maintain the A-M Water Facilities that was executed on July 25, 2002, between Albany and Millersburg is hereby repealed; and

BE IT FURTHER RESOLVED by Albany and Millersburg that the parties agree to cooperate in the operation, maintenance, and cost sharing of the production and delivery of potable water to both communities as follows:

1. **Current Rights and Buildout Demands.** Albany and Millersburg’s combined water rights and water use permits are equal to their projected combined maximum day demand at build-out as shown in Table 1.

TABLE 1: WATER RIGHTS AND DEMANDS

	cfs	mgd
Albany 1878 Water Right	21	
Albany 1979 Water Use Permit	29	
Millersburg 1989 Water Use Permit	22	
TOTAL	72	46
Albany MDD at Build-out		40
Millersburg MDD at Build-out		6
TOTAL	72	46

2. **Treatment Plant Capacities.** The A-M Plant and Vine WTP are assumed to meet Albany and Millersburg's combined maximum day demand at build-out as shown in Table 2:

TABLE 2: TREATMENT PLANT CAPACITIES (mgd)

	Current	Build-out
Vine Street Water Treatment Plant	16	20
A-M Water Treatment Plant	12	26
TOTAL	28	46

3. **A-M Water Facility Current Capacity and Ownership.** The current capacity and ownership share of the jointly owned A-M Water Facilities are shown in Table 3:

TABLE 3: CURRENT CAPACITY AND OWNERSHIP SHARE OF A-M WATER FACILITIES

Facility	Units	Current Capacity	Ownership Share	
			Albany	Millersburg
Raw Water Intake & Pipeline	mgd	26	20	6
Raw Water Pump Station	mgd	12	10	2
Raw Water Pressure Main	mgd	26	20	6
Water Treatment Plant	mgd	12	10	2
Reservoir	mg	5.7	2.85	2.85
Finished Water Pipeline	mgd	26	20	6

4. **Water Rights Utilization.**

- (a) Existing water rights and water use permits shall remain in the name of the party that obtained them.
- (b) During times when there are no restrictions on surface water withdrawals at the affected diversion points, the parties agree that all existing water rights and water use permits shall be used to the benefit of both parties, without regard to ownership or current individual demands.
- (c) During times when there are partial restrictions on surface water withdrawals and some junior rights become unavailable, then the available surface water rights shall be applied for use of both communities to the extent allowed by the restriction.
- (d) During times when restrictions on surface water withdrawals are so severe even the most senior rights are affected, then allowed surface water withdrawals shall be applied first for use of the party that owns the surface water rights.
 - (i) Albany will utilize their 1878 water right at the A-M raw water intake to provide water during times of drought conditions for both communities, to the extent allowed by the Oregon Water Resources Department. Millersburg is entitled to access the portion of Albany's 1878 water right used at the A-M raw water intake, subject to the same user restrictions as apply to Albany.
- (e) Both parties agree to utilize their water use permits to allow for full certification of the individual Albany and Millersburg water use permits considering senior rights first.
- (f) The parties agree to coordinate water conservation and management plans and projected demands developed for their respective water supply systems.
- (g) If additional water rights are required or desired in the future to meet projected long-term needs or provide reserves for present and future users, the additional water rights shall be sought jointly to the extent possible.

5. **Water Supply during Emergency.** In the event of an emergency that causes the A-M Water Facilities to not be operable for an extended period of time, Albany will supply Millersburg with treated water from the Vine WTP through the emergency intertie at 3246 Salem Avenue NE. The amount of water provided from

the Vine WTP is subject to the same user restrictions as applied to Albany in the event that the Vine WTP does not have sufficient capacity to meet the demands of both parties at the time of the emergency. The cost of water provided during an emergency is subject to the rates in Section 7 Budgets, Rates, and Expenditures.

6. **Water Supply during Curtailment.** In the event of a severe or critical water supply shortage in one or both communities, and at one or both of the Water Plants, water curtailment measures will be activated as required to respond to a specific event. Millersburg agrees that its Curtailment Plans shall be at least as restrictive as that adopted by Albany. Depending on the circumstances, curtailment measures may apply to both communities, one community, or smaller, more localized portions of the water system. The parties agree to implement Water Curtailment Plans and measures for their respective water supply systems in the event of a severe or critical water supply shortage.
7. **A-M Water Facility Capacity Management and Expansion.** The build-out capacity and ownership share of the jointly owned A-M Water Facilities are listed in Table 4. Both parties agree to manage the available capacity and provide additional capacity in an efficient and cost-effective manner. The facilities should be expanded before the parties are projected to use all existing capacity. In determining the appropriate time to begin expansion of the system, the time required for environmental reviews, designs, permits, and construction should be considered.

TABLE 4: BUILD-OUT CAPACITY AND OWNERSHIP SHARE OF A-M WATER FACILITIES

Facility	Units	Build-Out Capacity	Ownership Share	
			Albany	Millersburg
Raw Water Intake & Pipeline	mgd	26	20	6
Raw Water Pump Station	mgd	26	20	6
Raw Water Pressure Main	mgd	26	20	6
Water Treatment Plant	mgd	26	20	6
Reservoir	mg	11.4	5.8	5.6
Finished Water Pipeline	mgd	26	20	6

8. **A-M Water Facility Governance.** The Albany-Millersburg Joint Water/Wastewater Management Committee (herein after called Management Committee) was established in 2002 to oversee the A-M Water Facilities covered by this Agreement.
 - (a) Each party shall appoint (and fill any subsequent vacancies) three persons to the Management Committee who shall serve at the pleasure of their respective elected Councils. Either party may appoint alternate members who may temporarily replace an absent member.
 - (b) The Management Committee shall hold meetings annually or as needed.
 - (c) Four members shall constitute a quorum for the transaction of business. An affirmative vote of four members of the Management Committee, with at least two (2) from each party, shall be necessary to decide any matter.
 - (d) The Management Committee shall elect from its membership a Chairperson and a Vice-Chairperson. Such election or reaffirmation shall occur annually and the Chairperson and Vice-Chairperson shall not be from the same party.
9. **A-M Water Facilities Operating Entity.** The parties agree that Albany shall supervise all A-M Water Facilities up to the point of delivery to the Millersburg public water distribution system. As the Operating Entity, Albany will:
 - (a) Employ the operator designated as the "Direct Responsible Charge" (DRC) for the A-M Water Facilities.
 - (b) Perform the day-to-day operations and maintenance services for all A-M Water Facilities.

- (c) Provide general administration, accounting, budgeting, records management, reporting, and such other duties as required for operations.
 - (d) Manage capital projects and approve contracts and change orders.
 - (e) Have the authority to take reasonable and prudent action to protect the water system assets, prevent or minimize liability to the parties, comply with permits, and otherwise act in good faith for the benefit of both parties.
 - (f) Take up such actions reasonably necessary during an emergency.
- 10. Budgets, Rates, and Expenditures.** Each party shall budget and appropriate its proportionate share of the costs to operate and maintain the A-M Water Facilities and emergency water facilities.
- (b) **Total Fiscal Year A-M Water Facility Budget:** Albany will prepare and deliver to Millersburg a line item budget for A-M Water Facilities personnel, materials and services, and capital project expenditures in the spring of each year. If needed, a meeting shall be called to discuss budget details.
 - (c) **Millersburg-Only Summary Budget:** To support Millersburg with their budgeting process, Albany will also prepare and deliver to Millersburg a summary exhibit of Millersburg's share of costs for the fiscal year. This summary will estimate operating costs based on Millersburg's average share of metered water use in the previous year and estimate capital costs based on Millersburg's ownership share of the budgeted expenses.
 - (d) **Capital Maintenance Costs:** There are anticipated and unanticipated capital maintenance costs. Costs for anticipated capital maintenance are budgeted and costs are shared according to the ownership share of the facility being improved. As soon as unanticipated capital maintenance items are identified, the need, total cost, and cost share will be provided to Millersburg and, depending on the magnitude, may require a meeting of the Management Committee to discuss.
 - (e) **Cost of Emergency Water:** The cost of emergency water includes the cost of readiness to provide service and the actual cost of providing emergency water.
 - (i) The additional cost incurred by Albany to provide a redundant water source at the Vine WTP and to maintain the emergency intertie valve at 3246 Salem Avenue NE ready to be opened during an emergency shall be reimbursed by Millersburg on a quarterly basis. This cost shall be the cost of maintaining the intertie on a time and material basis.
 - (ii) The cost of providing water to Millersburg through the emergency intertie shall be reimbursed by Millersburg on a quarterly basis when an emergency occurs within that quarter. The current rates at the time of the emergency will be applied to water use based on Millersburg's historic water use during the same time period. A surcharge of 10 percent (10%) will be applied to compensate for additional water system operational costs to boost production at the Vine WTP and to balance flows and pressures within the transmission and distribution pipe delivery system.
 - (f) **Quarterly Billing:** Albany shall prepare a quarterly invoice for Millersburg that includes Millersburg's share of the cost to produce water at the A-M Plant and pay for capital expenditures. Payments are due within 30 business days of receipt. Late payments shall bear interest at nine (9) percent per annum.
 - (i) **Cost of Water:** Millersburg is charged for their prorated share of producing water at the A-M Plant. The cost per gallon of treated water is determined using the total water produced at the A-M Plant and the total production cost for the quarter. This unit cost is multiplied by the amount of potable water delivered to Millersburg's public distribution system from the A-M Plant by way of a 12-inch water meter near the intersection of Century Drive NE and Berry Drive NE during that quarter.

- (ii) **Capital Costs:** Millersburg is charged for their share of major A-M Plant expenditures based on their ownership share of the facility being improved. The actual ownership share for each facility is applied to the actual capital expenditure for the quarter.

11. Other Terms and Conditions. The following terms and conditions apply to this agreement:

- (a) **Term and Termination.** This agreement begins upon execution and will be in force for a 10-year period unless amended or terminated as provided herein. At the end of the 10-year period, this agreement automatically extends for succeeding 5-year terms subject to the terms herein.
 - (i) **Amendment.** This Agreement may be amended if each party concurs to the proposed amendment in writing, signed by authorized representatives of each party.
 - (ii) **Termination for Breach.** Failure to make a payment when due or other material breach of this Agreement shall allow the nondefaulting party the opportunity to terminate the agreement. In the event of an election to terminate, the nondefaulting party shall give notice and a 30-day period for the defaulting party to cure. If cure cannot be accomplished within 30 days but is diligently begun, the nondefaulting party may grant additional cure time.
 - (iii) **Separation of Assets.** Upon termination, the parties will develop a plan of separation to sell or buy the interests in the assets that include a reasonable schedule to obtain suitable alternate facilities. In the absence of such a plan, the parties shall use Dispute Resolution.
- (b) **Withdrawal and Termination of Membership Sale of Assets.** Any party may elect to terminate its participation in this agreement by giving written notice of its desire to terminate to the other party and stating a date for termination that shall not be less than two years from the date of notice. The nonterminating party shall have the option to purchase the terminating interest, and the parties shall meet for the purpose of establishing the price. The price will be established within 90 days following receipt of notice of termination. If the price cannot be agreed upon, the matter shall be submitted to Dispute Resolution as outlined in this agreement.
- (c) **Water Quality:** Albany agrees to provide potable water to Millersburg that meets water quality standards. In the event of a temporary non-compliance, Albany will comply with all regulatory direction to restore its system to compliance. Albany makes no representations concerning the suitability of Albany's potable water for the Millersburg system or any customer thereof.
- (d) **Indemnification:** Millersburg agrees to indemnify and hold Albany harmless from any governmental or third party claims resulting in any manner from the provision of water from the A-M or Vine WTPs to Millersburg customers consistent with the terms of this agreement. This indemnification clause does not preclude Millersburg from pursuing breach of contract claims against Albany concerning the provision of Albany water to Millersburg.
- (e) **Dispute Resolution.** If a dispute arises between the parties regarding breach of this Agreement or interpretation of any term of this Agreement, or in the event of a three-to-three voting impasse of the Management Committee, the parties shall first attempt to resolve the dispute by negotiation, followed by mediation. If mediation is unsuccessful, the dispute shall be resolved through binding arbitration that shall take place in Linn County, and the prevailing party shall be entitled to such reasonable attorney's fees and costs as may be awarded by the arbitrator. In the absence of an agreement between the parties, either party may apply to the presiding judge of the Linn County Circuit Court for the appointment of suitable mediator(s) or arbitrator(s), and the persons so appointed shall establish the rules of procedure.
- (f) **City Council Approval Required.** No committee or entity created by this Agreement may obligate either city to expend any city funds or take any actions, other than expressly provided herein, without the approval of the respective City Council.

- (g) **Severability.** In case any one or more of the provisions contained in this Agreement shall be invalid, illegal, or unenforceable in any respect, the validity, legality, and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby.
- (h) **Notices.** Any notice herein required or permitted to be given shall be given in writing, shall be effective when actually received, and may be given by hand delivery or by United States mail, first class postage prepaid, addressed to the parties as follows:

If to Albany: City Manager
 City of Albany
 P.O. Box 490
 Albany, OR 97321

If to Millersburg: City Administrator
 City of Millersburg
 4222 NE Old Salem Road
 Albany, OR 97321

IN WITNESS WHEREOF the parties have caused this document to be executed pursuant to the authority of the respective City Councils, by the Mayor of Albany, and the Mayor of Millersburg.

CITY OF MILLERSBURG:

DATED this 16 day of MAY 2016.


 Clayton Wood, Mayor

ATTEST:


 Barbara Castillo, City Administrator/Recorder

APPROVED AS TO FORM:


 Forrest Reid, Millersburg City Attorney

CITY OF ALBANY:

DATED this 11 day of May 2016.


 Sharon Konopa, Mayor

ATTEST:


 Mary Dibble, City Clerk

APPROVED AS TO FORM:


 James DeJapoe, Albany City Attorney

EXHIBIT A

Albany-Millersburg Jointly Owned Water Facilities

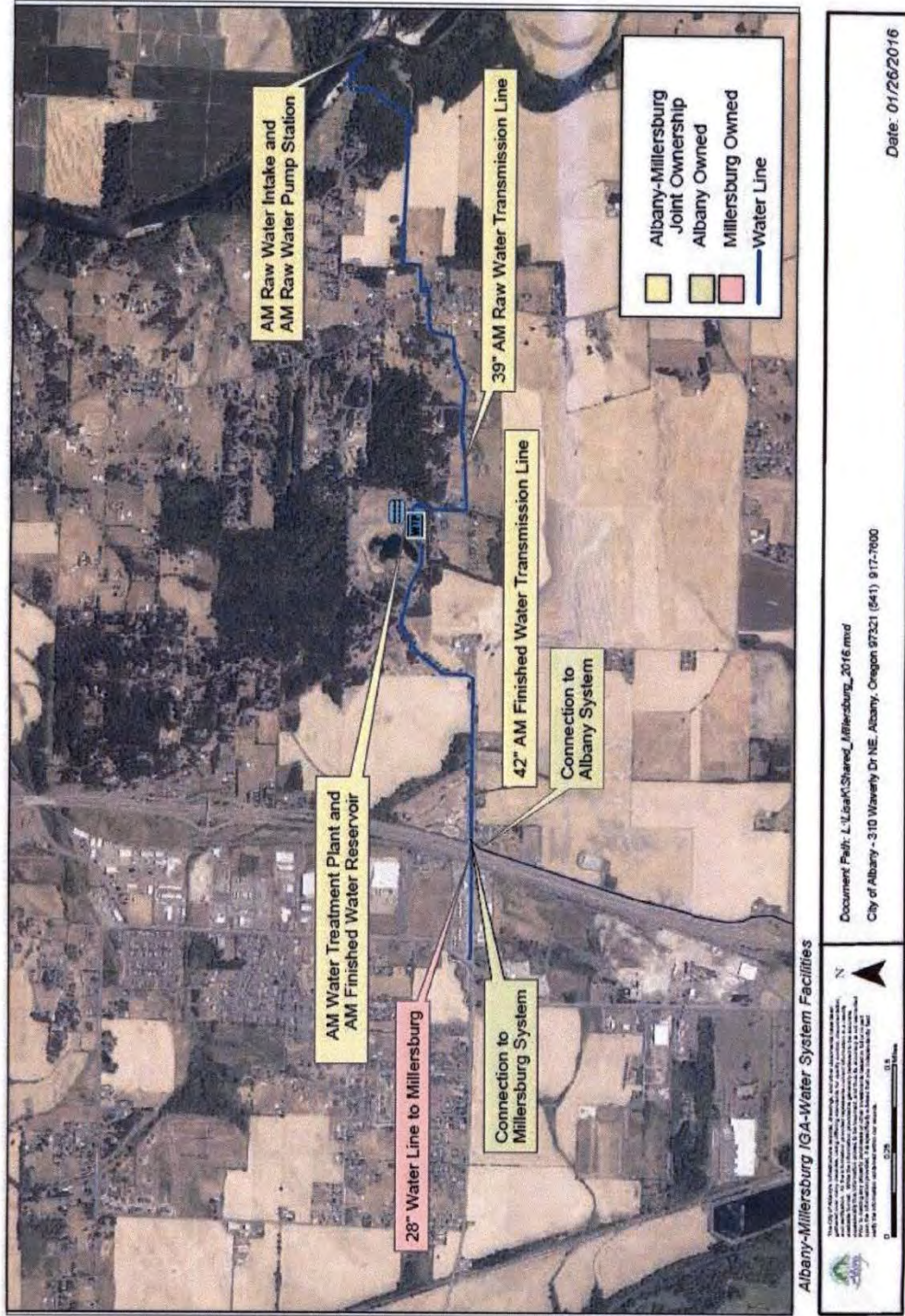


EXHIBIT B
Albany-Millersburg Emergency Inter tie Facilities



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APPENDIX F

5-YEAR CAPITAL

IMPROVEMENT PROGRAM

(WATER)

Capital Improvement Program 2018-2022**Funded Projects Summary & Detail**

The following projects have been identified for inclusion in this five-year Capital Improvement Program.

Each project shown below is explained in detail on the pages that follow. Projects are listed in the fiscal year order they are planned to occur, and in CIP ID# order within a given fiscal year set.

CIP #	Phase	Title	Projected Total
Plan Year: 2017 - 2018			
1606		LAFAYETTE, CLOVERDALE, PEACH TREE, CHERRY AND FAIRWAY AREA	\$1,300,000
2290		PINE MEADOWS WATERLINE REPLACEMENT	\$940,000
3319		VINE STREET WTP ACCELERATOR IMPROVEMENTS	\$542,000
2371		SANTA MARIA WATER LINE	\$329,700
Total for FY 2017 - 2018			\$3,111,700
Plan Year: 2018 - 2019			
1002	2	HILL STREET: 24TH AVENUE TO 34TH AVENUE	\$1,854,000
1596		LINCOLN STREET, 12TH AVENUE TO 15TH AVENUE	\$387,000
2220		16TH AVENUE: WAVERLY DRIVE TO WEST END	\$136,000
2221		BELMONT AVENUE AREA WATER LINE REPLACEMENTS	\$1,008,000
2372		ALBANY-MILLERSBURG WATER TREATMENT PLANT INTAKE GENERATOR	\$400,000
Total for FY 2018 - 2019			\$3,785,000
Plan Year: 2019 - 2020			
1594		WASHINGTON AND FERRY STREETS AREA: 9TH TO 14TH	\$1,097,000
2301		DAVIDSON WATER LINE - 14TH AVENUE TO 16TH AVENUE	\$199,000
2336		CANAL DREDGING - VINE STREET WTP TO 22ND AVENUE	\$530,000
2342		SANTIAM-ALBANY CANAL BANK REPAIR: 5TH AVENUE TO 6TH AVENUE	\$522,000
Total for FY 2019 - 2020			\$2,348,000
Plan Year: 2020 - 2021			
1587		6TH AVENUE, ELM TO MAPLE AND WALNUT STREET, 6TH TO 7TH	\$208,000
2003		24TH AVENUE WATER LINE, HILL TO GEARY STREET	\$699,000
2222		WILLAMETTE AREA WATER LINE	\$492,000
Total for FY 2020 - 2021			\$1,399,000
Plan Year: 2021 - 2022			
2188		JEFFERSON STREET WATERLINE REPLACEMENT	\$345,000
2302		ERMINE AREA WATER LINE - 22ND TO 27TH AVENUES & CLAY COURT TO WAVERLY DRIVE	\$2,251,000
Total for FY 2021 - 2022			\$2,596,000
Grand Total for Water:			\$13,239,700